

**National Technical and Vocational Qualification Framework**

**NTVQF**

**Competency Standards**

For

**Web Designer**

**NTVQ, Level 2-5**



**Bangladesh Technical Education Board**

Agargoan, Sher-E-Bangla Nagar

Dhaka-1207

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## Introduction

These Competency Standards were developed by the Standards and Curriculum Development Committee (SCDC) **for the occupation 'Web Designer'** that was established under the sub-sector Industry Skills Council (ISC) and with the assistance of the Technical and Vocational Education Reform project. This project is funded by the European Union, the International Labour Organization and the Government of Bangladesh.

The competency standards are the foundation on which new competency based curriculum will be developed that responds better to the needs of industry for skilled workers. The members of the SCDCs are primarily from industry but with representatives from the Bangladesh Technical Education Board (BTEB), Directorate of Technical Education (DTE), Bureau of Manpower Employment and Training (BMET), NGO, and Private Training providers. Persons who will successfully complete the new TVET programs based on these competency standards will receive a qualification in the new National Technical and Vocational Qualification Framework (NTVQF).

Endorsed by

Industry Skills Council

Date:

Bangladesh Technical Education Board  
(BTEB)

Date:

## Bangladesh NTVQF with Job Classifications

NTVQF LEVELS	EDUCATION SECTORS			Job Classification
	Pre-Vocation Education	Vocational Education	Technical Education	
NTVQF 6			Diploma in engineering or equivalent	Middle Level Manager /Sub Assistant Engr. etc.
NTVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
NTVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
NTVQF 3		National Skill Certificate 3 (NSC3)		Semi-Skilled Worker
NTVQF 2		National Skill Certificate 2 (NSC 2)		Medium-Skilled Worker
NTVQF 1		National Skill Certificate 1 (NSC 1)		Basic Skilled Worker
Pre-Voc 2	National Pre-Vocation Certificate NPVC 2			Pre-Vocation Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 NPVC 1			Pre-Vocation Trainee

## Annex 1: NTVQF level Descriptors

NTVQF Level	Knowledge	Skill	Responsibility	Job Class.
6	<ul style="list-style-type: none"> <li>Comprehensive actual and theoretical knowledge within a specific study area with an awareness of the limits of that knowledge.</li> </ul>	<ul style="list-style-type: none"> <li>Specialised and restricted range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems</li> </ul>	<ul style="list-style-type: none"> <li>Mange a team or teams in workplace activities where there is unpredictable change</li> <li>Identify and design learning programs to develop performance of team members</li> </ul>	Supervisor / Middle Level Manager /Sub Assistant Engr. etc.
5	<ul style="list-style-type: none"> <li>Very broad knowledge of the underlying, concepts, principles, and processes in a specific study area</li> </ul>	<ul style="list-style-type: none"> <li>Very broad range of cognitive and practical skills required to generate solutions to specific problems in one or more study areas.</li> </ul>	<ul style="list-style-type: none"> <li>Take overall responsibility for completion of tasks in work or study</li> <li>Apply past experiences in solving similar problems</li> </ul>	Highly Skilled Worker / Supervisor
4	<ul style="list-style-type: none"> <li>Broad knowledge of the underlying, concepts, principles, and processes in a specific study area</li> </ul>	<ul style="list-style-type: none"> <li>Range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information</li> </ul>	<ul style="list-style-type: none"> <li>Take responsibility, within reason, for completion of tasks in work or study</li> <li>Apply past experiences in solving similar problems</li> </ul>	Skilled Worker
3	<ul style="list-style-type: none"> <li>Moderately broad knowledge in a specific study area.</li> </ul>	<ul style="list-style-type: none"> <li>Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under supervision with some autonomy</li> </ul>	Semi-Skilled Worker

NTVQF Level	Knowledge	Skill	Responsibility	Job Class.
2	<ul style="list-style-type: none"> <li>Basic underpinning knowledge in a specific study area.</li> </ul>	<ul style="list-style-type: none"> <li>Basic skills required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under indirect supervision in a structured context</li> </ul>	Medium Skilled Worker
1	<ul style="list-style-type: none"> <li>Elementary understanding of the underpinning knowledge in a specific study area.</li> </ul>	<ul style="list-style-type: none"> <li>Limited range of skills required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under direct supervision in a structured context</li> </ul>	Basic Skilled Worker
Pre-Voc 2	<ul style="list-style-type: none"> <li>Limited general knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Very limited range of skills and use of tools required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Work or study under direct supervision in a well-defined, structured context.</li> </ul>	Pre-Vocation Trainee
Pre-Voc 1	<ul style="list-style-type: none"> <li>Extremely limited general knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Minimal range of skills required to carry out simple tasks</li> </ul>	<ul style="list-style-type: none"> <li>Simple work or study exercises, under direct supervision in a clear, well defined structured context</li> </ul>	Pre-Vocation Trainee

# NATIONAL COMPETENCY STANDARDS

## for

### National Certificate in Web Design (NTVQF Level 2, 3, 4 & 5)

S. No.	<i>Unit Code and Title</i>		<i>UoC Level</i>	<i>Nominal Duration (Hours)</i>
<b>Generic (5 UoCs required)</b>				<b>200</b>
1.	GN 1001A1	Use basic mathematical concepts <sup>2</sup>	1	40
2.	GN 1002A1	Apply OSH practices in the workplace <sup>2</sup>	1	30
3.	GN 2003A1	Use English in the workplace <sup>2</sup>	2	70
4.	GN 2004A1	Operate in a self-directed team <sup>4</sup>	2	30
5.	GN 2005A1	Present and apply workplace information <sup>3</sup>	2	30
<b>Sector Specific (5 UoCs required)</b>				<b>180</b>
6.	ITSS1006A1	Type Text and Documents in English and Bangla	1	90
7.	ITSS1007A1	Access Information Using Internet and Electronic Mail	1	20
8.	ITSS1008A1	Operate Office Application Software	1	10
9.	ITSS2009A1	Apply compliance and Ethics in IT work Place	2	20
10.	ITSS5030A1	Apply Soft Skills	5	40
<b>Occupation Specific – Compulsory (22 UoCs required)</b>				<b>1200</b>
11.	ITWEB1010A1	Create and Edit Webpage Using HTML	1	60
12.	ITWEB2011A1	Use Image Editing Software (Basic Level)	2	50
13.	ITWEB2012A1	Develop awareness of career opportunities in Web Designing and the IT sector	2	20
14.	ITWEB3013A1	Use web design and content guidelines	3	60
15.	ITWEB2014A1	Convert design to HTML	2	50
16.	ITWEB4015A1	Develop a dynamic website using server side language.	4	60
17.	ITWEB2016A1	Use Web Animation (Basic level)	2	10
18.	ITWEB3017A1	Develop Cascading Style Sheet (CSS)	3	60
19.	ITWEB4018A1	Create and Manage Rich Web Content	4	80
20.	ITWEB3019A1	Use Web Animation (Intermediate level)	3	40
21.	ITWEB3020A1	Use Image Editing Software (Intermediate Level)	3	60
22.	ITWEB4021A1	Develop theme from design for CMS (Content Management System) 89	4	80

23.	ITWEB2022A1	Develop a Client Side Dynamic Webpage using JavaScript (Basic Level)	2	60
24.	ITWEB3023A1	Develop a Client Side Dynamic Webpage using jQuery (Basic Level)	3	60
25.	ITWEB2024A1	Host the Website.	2	20
26.	ITWEB4025A1	Monitor and Compile Website Traffic	4	50
27.	ITWEB4026A1	Apply SEO techniques	5	60
28.	ITWEB5027A1	Develop online shopping system	5	60
29.	ITWEB5028A1	Maintain Website Security	5	60
30.	ITWEB5029A1	Configure plug-ins for CMS (Content Management System)	5	80
31.	ITWEB4031A1	Use Ajax and JSON	4	40
32.	ITWEB5032A1	Design and administer a Database (RDBMS)	5	80
<b>Total Nominal Learning Hours</b>				<b>1580</b>

**NOTE** As more and more UoCs are developed there may be the need and opportunities for compulsory and elective UoCs in generic, sector specific and occupation related clusters.

- \* Units of Competency marked with superscript 2 indicates that those Units of Competency will be successfully completed in National Certificate in Web Design (NTVQF Level 2)
- \* Units of Competency marked with superscript 3 indicates that those Units of Competency will be successfully completed in National Certificate in Web Design (NTVQF Level 3)
- \* Units of Competency marked with superscript 4 indicates that those Units of Competency will be successfully completed in National Certificate in Web Design (NTVQF Level 4)
- \* Units of Competency marked with superscript 5 indicates that those Units of Competency will be successfully completed in National Certificate in Web Design (NTVQF Level 5)



# Course Structure for National Certificate in Web Design (NTVQF Level 2)

S. No.	<i>Unit Code and Title</i>		<i>UoC Level</i>	<i>Nominal Duration (Hours)</i>
<b>Generic (3 UoCs required)</b>				<b>140</b>
1.	GN1001A1	Use basic mathematical concepts	1	40
2.	GN1002A1	Apply OSH practices in the workplace	1	30
3.	GN2003A1	Use English in the workplace	2	70
<b>Sector Specific (3 UoCs required)</b>				<b>120</b>
4.	ITSS1006A1	Type Text and Documents in English and Bangla	1	90
5.	ITSS1007A1	Access Information Using Internet and Electronic Mail	1	20
6.	ITSS1008A	Operate Office Application Software	1	10
<b>Occupation Specific – Compulsory (9 UoCs required)</b>				<b>390</b>
7.	ITWEB1010A1	Create and Edit web content using HTML	1	60
8.	ITWEB2011A1	Use Image Editing Software (Basic Level)	2	50
9.	ITWEB2012A1	Develop awareness of career opportunities in web designing and the IT sector	2	20
10.	ITWEB2014A1	Convert design to HTML	2	50
11.	ITWEB2016A1	Use web animation (Basic Level)	2	10
12.	ITWEB3017A1	Develop cascading style sheets(CSSs)	3	60
13.	ITWEB2022A1	Develop a Client Side Dynamic Webpage using JavaScript (Basic Level)	2	60
14.	ITWEB3023A1	Develop a Client Side Dynamic Webpage using jQuery (Basic Level)	3	60
15.	ITWEB2024A1	Host the Website.	2	20
<b>Total Nominal Learning Hours</b>				<b>650</b>

## Course Structure for National Certificate in Web Design (Level 3)

S. No.	<i>Unit Code and Title</i>		<i>UoC Level</i>	<i>Nominal Duration (Hours)</i>
<b>Generic (1 UoC required)</b>				<b>30</b>
1.	GN2005A1	Present and apply workplace information	2	30
<b>Sector Specific (2 UoC required)</b>				<b>60</b>
2.	ITSS2009A1	Apply compliance and Ethics in IT work Place	2	20
3.	ITSS5030A1	Apply Soft Skills	5	40
<b>Occupation Specific – Compulsory (4 UoCs required)</b>				<b>220</b>
4.	ITWEB3013A1	Use web design and content guidelines	3	60
5.	ITWEB4015A1	Develop a dynamic website using server side language.	4	60
6.	ITWEB3019A1	Use web animation (Intermediate Level)	3	40
7.	TWEB3020A1	Use Image Editing Software (Intermediate Level)	3	60
<b>Total Nominal Learning Hours</b>				<b>310</b>

Course Structure  
for  
**National Certificate in Web Design (NTVQF Level 4)**

<b>S. No.</b>	<b>Unit Code and Title</b>		<b>UoC Level</b>	<b>Nominal Duration (Hours)</b>
<b>Generic – Compulsory (1 UoC required)</b>				<b>30</b>
1	GN2004A1	Operate in a self-directed team	2	30
<b>Occupation Specific – Compulsory (4 UoCs required)</b>				<b>280</b>
2	ITWEB4018A1	Create and Manage Rich Web Content	4	80
3	ITWEB4021A1	Develop theme from design for CMS (Content Management System) 89	4	80
4	ITWEB5029A1	Configure plug-ins for CMS (Content Management System)	5	80
5	ITWEB4031A1	Use Ajax and JSON	4	40
<b>Total Nominal Learning Hours</b>				<b>310</b>

**Course Structure**  
**For**  
**National Certificate in Web Design (NTVQF Level 5)**

<b>S. No.</b>	<b>Unit Code and Title</b>		<b>UoC Level</b>	<b>Nominal Duration (Hours)</b>
<b>Occupation Specific – Compulsory (5 UoCs required)</b>				<b>310</b>
1.	ITWEB4025A1	Monitor and Compile Website Traffic	4	50
2.	ITWEB5026A1	Apply SEO Techniques	5	60
3.	ITWEB5027A1	Develop online shopping system	5	60
4.	ITWEB5028A1	Maintain Website Security	5	60
5.	ITWEB5032A1	Design and administer a Database (RDBMS)	5	80
<b>Total Nominal Learning Hours</b>				<b>310</b>

## **List of Abbreviations used in this Competency Standard**

### General

BMET – Bureau of Manpower Employment and Training  
BTEB – Bangladesh Technical Education Board  
DTE – Directorate of Technical Education  
ILO – International Labour Organization  
ISC – Industry Skills Council  
NPVC – National Pre-Vocation Certificate  
NTVQF – National Technical and Vocational Qualification Framework  
SSDC – Standards and Curriculum Development Committee  
TVET – Technical Vocational Education and Training  
UoC – Unit of Competency

### Occupation Specific Abbreviations

CMS – Content Management System  
CSS – Cascading Style Sheets  
DHTML – Dynamic Hyper Text Markup Language  
FTP – File Transfer Protocol  
HTML - Hyper Text Markup Language  
IT – Information Technology  
MS – Microsoft  
MSDS – Material Safety Data Sheet  
OSH – Occupational Safety and Health  
PPE – personal Protective Equipment  
SEO – Search Engine Optimization  
SOP – Standard Operating Procedures

## **GENERIC UNITS**

# National Technical and Vocational Qualification Framework for Bangladesh

## Unit of Competency

<b>Unit Code and Title</b>	<b>GN1001A1: Use Basic Mathematical Concepts</b>
Nominal Hours	40 hours
<b>Unit Descriptor</b>	This requires the knowledge, skill and attitude to apply mathematical methods such as addition, subtraction, multiplication, and division, among others, in the routine tasks of an organization.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify calculation requirements in the workplace	1.1 Calculation requirements are identified from <b><i>workplace information</i></b>
2. Select appropriate mathematical methods for the calculation	2.1. Appropriate <b><i>Mathematical methods</i></b> are selected to carry out the calculation. 2.2. <b><i>System and units of measurement</i></b> to be followed are determined.
3. Use basic mathematical concepts to calculate workplace calculation.	3.1. Calculations are completed using appropriate methods such as addition, subtraction, multiplication and division. 3.2. Systems and units of measurement for the task are applied to workplace calculation.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Equipment and tools	1.1 Calculator 1.2 Computer with office software
2. Mathematical methods	2.1. Addition 2.2. Subtraction 2.3. Division 2.4. Multiplication 2.5. Ratio on any types of real values (such as whole numbers, fractional numbers, percentages, numbers with exponents)

3. System and units of measurement	3.1. Measurement 3.2. Volume 3.3. Weight 3.4. Mass 3.5. Density 3.6. Percentage 3.7. Length / Breadth / Thickness 3.8. Capacity 3.9. Time 3.10. Temperature 3.11. Budget, Pay/ Wages, Leave entitlements 3.12. Material usage 3.13. Speed 3.14. Costing
4. Workplace information	4.1 Project documents 4.2 Graphs 4.3 Charts 4.4 Tables 4.5 Spread sheets 4.6 Item price quotations 4.7 Equipment manuals
5. Budget	5.1 Budget of consumables 5.2 Calculation for software components 5.3 Hardware equipment 5.4 Maintenance budget of a set-up 5.5 Cost estimation
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Applied mathematical methods such as addition, subtraction, division and multiplication to workplace calculations.
2. Underpinning knowledge	2.1. Calculation requirements in the workplace 2.2. Select appropriate mathematical methods 2.3. Equipment and tools 2.4. Mathematical language, symbols and terminology 2.5. Application of units 2.6. Workplace information 2.7. Using arithmetic processes to find solutions to simple mathematical problems



3. Underpinning skill	3.1. Ability to identify calculation requirements from workplace information 3.2. Ability to select appropriate mathematical methods 3.3. Ability to use appropriate technology 3.4. Ability to use mathematical language, symbols and terminology 3.5. Understanding of appropriate units of measurement (such as kg, meter) and application may include measurement, volume, weight, density, percentage etc. 3.6. Ability to include workplace information (project documents, graphs, charts, tables, spread sheets, item price quotations, equipment manuals) 3.7. Ability to use arithmetic processes to find solutions to simple mathematical problems 3.8. Ability to apply in the workplace.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>GN1002A1: Apply OSH practices in the workplace</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude required to identify and apply OSH in the workplace. This also covers identifying, controlling and reporting OSH hazards, conducting of work in a safe manner, following emergency response procedure and maintaining and improving health and safety in the workplace.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify, control and report OSH hazards	<p>1.1 Immediate work area is routinely checked for OSH hazards prior to commencing and during work.</p> <p>1.2 <b>Hazards</b> and unacceptable performance are identified and corrective action is taken within the level of responsibility.</p> <p>1.3 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.4 Safety Signs and symbols are identified and followed</p>
2. Conduct work safely	<p>2.1. Apply OSH practices in the workplace.</p> <p>2.2. Appropriate <b>personal protective equipment (PPE)</b> is selected and worn.</p>
3. Follow emergency response procedures	<p>3.1. Emergency situations are identified and reported according to workplace reporting requirements.</p> <p>3.2. Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.</p> <p>3.3. <b>Workplace procedures</b> for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.</p>
4. Maintain and improve health and safety in the work place	<p>4.1 Risks are identified and appropriate control measures are implemented in the work area.</p> <p>4.2 Recommendations arising from risk assessments are implemented within level of responsibility.</p>

	<p>4.3 Opportunities for improving OSH performance are identified and raised with relevant personnel.</p> <p>4.4 Safety records according to <b>company policies</b> are maintained.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Company policies	1.1. Job-related Standard Operating Procedures (SOPs) and OSH-specific procedures. Examples of OSH procedures include consultation and participation, emergency response, response to specific hazards, incident investigation, risk assessment, reporting arrangements and issue resolution procedures
2. Workplace procedures	<p>2.1. OSH system and related documentation including policies and procedures</p> <p>2.2. Standard Operating Procedures (SOPs)</p> <p>2.3. information on hazards and the work process, hazard alerts, safety signs and symbols</p> <p>2.4. Labels</p> <p>2.5. Material Safety Data Sheets (MSDSs) and manufacturers' advice.</p>
3. Hazards	<p>3.1 OSH incidents include near misses, injuries, illnesses and property damage, noise, handling hazardous substances, other hazards</p> <p>3.2 Working with and near moving equipment/load shifting equipment</p> <p>4.3 Broken or damaged equipment or materials</p>
4. Personal Protective equipment (PPE)	<p>4.1 Goggles</p> <p>4.2 Ear muffs</p> <p>4.3 Ear plugs</p> <p>4.4 Gloves</p> <p>4.5 Clothing</p> <p>4.6 Apron</p> <p>4.7 Helmet</p> <p>4.8 Boots</p>

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Identified, controlled and reported OSH hazards</li> <li>1.2 Followed work safety.</li> <li>1.3 Followed emergency response procedures.</li> <li>1.4 Maintained and improved health and safety in the workplace.</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Personal protective equipment - Hand gloves, safety shoes, safety goggles, masks, apron,</li> <li>2.2. Identification of tools and equipment</li> <li>2.3. Hazardous events</li> <li>2.4. Tools, equipment, machinery and relevant accessories.</li> <li>2.5. Communication</li> <li>2.6. Job roles, responsibilities and compliance</li> <li>2.7. Workplace laws</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Ability to use the appropriate PPE.</li> <li>3.2. Ability to identify tools and equipment.</li> <li>3.3. Ability to quick response and to take safety precautions for different hazardous situations.</li> <li>3.4. Ability to operate and use tools, equipment, machinery and accessories properly as per SOP (Company standards).</li> <li>3.5. Ability to communicate with peers and supervisors.</li> <li>3.6. Ability to apply in the workplace.</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>

5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

# National Technical and Vocational Qualification Framework for Bangladesh

## Unit of Competency

<b>Unit Code and Title</b>	<b>GN2003A1: Use English in the workplace</b>
<b>Nominal Hours</b>	<b>70 hours</b>
<b>Unit Descriptor</b>	This unit specifies knowledge, skills and attitude the competency required to able to read, write and understand basic English in the workplace.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Read and understand workplace documents in English	1.1 <b>Workplace documents</b> are read and understood. 1.2 <b>Visual information</b> is interpreted.
2. Write simple routine workplace documents in English	2.1 Simple routine workplace documents are prepared using key words, phrases, simple sentences and visual aids where appropriate. 2.2 Key information is written in the appropriate places in standard forms.
3. Listen to conversation in English	3.1 Active listening in English language is demonstrated to the required workplace standard.
4. Perform conversation in English	4.1 Conversation is performed in English with peers, customers and management to the required workplace standard.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Workplace documents	1.1 Schedules and itineraries 1.2 Agenda 1.3 Simple reports such as progress and incident reports 1.4 Job sheets 1.5 Operational manuals 1.6 Brochures and promotional material 1.7 Visual and graphic materials 1.8 Standards 1.9 OSH information

2. Visual information	2.1 Signs 2.2 Maps 2.3 Diagrams 2.4 Forms 2.5 Labels 2.6 Graphs 2.7 Charts
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Used basic English in the workplace 1.2 Read and understood workplace documents in English 1.3 Constructed simple routine workplace documents in English 1.4 Listened to conversation in English 1.5 Communicated with peers, customers and management using English to the required workplace standard
2. Underpinning knowledge	2.1. Read workplace documents in English 2.2. Write simple routine workplace documents in English 2.3. Listen to conversation in English 2.4. Perform conversation in English 2.5. Interaction skills (i.e., teamwork, interpersonal skills, etc.) 2.6. Job roles, responsibilities and compliances
3. Underpinning skill	3.1. Ability to read and understand workplace documents in English, using appropriate vocabulary and grammar, and standard spelling and punctuation. 3.2. Ability to write simple routine workplace documents in English, such as: Schedules and agendas, job sheets, operational manuals and brochures, and promotional material. 3.3. Ability in active listening in English language is demonstrated to the required workplace standard. 3.4. Ability to perform conversation in English with peers, customers and management, to the required workplace standard.

	<p>3.5. Work effectively with others:</p> <ul style="list-style-type: none"> <li>○ listening and questioning skills</li> <li>○ ability to follow simple directions</li> </ul>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>GN2004A1: Operate in a self-directed team</b>
Nominal Hours	30 hours
Unit Descriptor	This unit specifies the knowledge, skills and attitude to communicate and work within a team in an interactive work environment as per the workplace standard.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify team goals and processes	<p>1.1 <b><i>Team goals and processes</i></b> are identified.</p> <p>1.2 Roles and responsibilities of team members are identified</p> <p>1.3 Relationships within team and with other work areas are identified</p>
2. Communicate and cooperate with team members	<p>2.1. Effective interpersonal skills are used to interact with team members and to contribute to activities and objectives.</p> <p>2.2. Formal and informal forms of communication are used effectively to support team achievement.</p> <p>2.3. Diversity is respected and valued in team functioning.</p> <p>2.4. Views and opinions of other team members are understood and reflected accurately.</p> <p>2.5. <b><i>Workplace staff regulation</i></b> is used correctly to assist communication.</p>
3. Work as a team member	<p>3.1. Duties, responsibilities, authorities, objectives and task requirements are identified and clarified with team.</p> <p>3.2. Tasks are performed in accordance with organizational and team requirements, specifications and workplace procedures.</p> <p>3.3. Team members support other members as required to ensure team achieves goals and requirements.</p> <p>3.4. Agreed reporting lines are followed using standard operating procedures</p>

4. Solve problems as a team Member	4.1 Current and potential problems faced by team are identified. 4.2 Procedures for avoiding and managing problems are identified. 4.3 Problems are solved effectively and in a manner that supports the team.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Team goals and processes	1.1 Identifying the problem 1.2 Consider solutions 1.3 Action 1.4 Follow-up.
2. Workplace staff regulation	2.1. Organization/company's code of conduct, complaint handling/grievance policies and procedures
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Communicated and worked within a team in an interactive work environment as per workplace standard. 1.2 Dealt with a range of communication/ information at one time. 1.3 Made constructive contributions in workplace issues 1.4 Presented information clearly and effectively in written form 1.5 Asked appropriate questions 1.6 Provided accurate information
2. Underpinning knowledge	2.1. Organization requirements for written and electronic communication methods 2.2. Effective verbal communication methods
3. Underpinning skill	3.1. Organize information 3.2. Understand and convey intended meaning 3.3. Participate in a variety of workplace discussions 3.4. Comply with Organization's requirements in the use of written and electronic communication methods

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>GN2005A1: Present and apply workplace information</b>
<b>Nominal Hours</b>	<b>30 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitude to communicate and deliver up-to-date information in an interactive work environment as per workplace standard.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Identify information requirements	1.1 <b>Sources of Information</b> requirements in the workplace are identified
2. Process Data	2.1. Data is collected and correlated as per prescribed <b>method</b> . 2.2. Relevant data is used as references in accordance with the objectives of the program. 2.3. Information is applied according to workplace requirements.
3. Analyse, interpret and organize information	3.1. Collected information is analysed, interpret and organize as required for workplace.
4. Apply and present workplace information	4.1 Findings and recommendations are summarized and presented in a user-friendly manner. 4.2 Draft report/ <b>forms</b> are prepared based on standard format. 4.3 Graphs and other visual presentations are prepared to highlight <b>analysis</b> /interpretation of information. 4.4 Reports/forms are submitted and distributed to relevant departments/persons.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. Sources of information	1.1 Daily job instructions 1.2 Specifications 1.3 Standard operating procedures 1.4 Charts

	<ul style="list-style-type: none"> <li>1.5 Lists</li> <li>1.6 Documents</li> <li>1.7 Computer data</li> <li>1.8 Drawings</li> <li>1.9 Sketches</li> <li>1.10 Tables</li> <li>1.11 Technical manuals and/or charts</li> <li>1.12 Surveys</li> <li>1.13 Interviews</li> <li>1.14 Front-end analysis</li> <li>1.15 Functional analysis</li> </ul>
2. Forms	<ul style="list-style-type: none"> <li>2.1. Questionnaires</li> <li>2.2. Profile</li> <li>2.3. Accident/incident report form</li> <li>2.4. Work order</li> <li>2.5. Purchase order,</li> </ul>
3. Methodologies	<ul style="list-style-type: none"> <li>3.1. Qualitative</li> <li>3.2. Quantitative</li> </ul>
4. Statistical analysis	<ul style="list-style-type: none"> <li>4.1 Average (mean, median, mode)</li> <li>4.2 Percentage</li> <li>4.3 Frequency distribution</li> </ul>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Communicated and delivered current information in an interactive work environment as per workplace standard.</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Identify information</li> <li>2.2. Identify data</li> <li>2.3. Workplace standard</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Collecting information</li> <li>3.2. Collecting data</li> <li>3.3. Demonstrating, interpreting and/or following data sheet or instruction</li> <li>3.4. Performing task as per data sheet or instruction</li> <li>3.5. Keeping records and reports</li> </ul>

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

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## **SECTOR SPECIFIC UNITS**

# National Technical and Vocational Qualification Framework for Bangladesh

## Competency Standard

<b>Unit Code and Title</b>	<b>ITSS1006A1: Type documents in English and Bangla.</b>
<b>Nominal Hours</b>	<b>20 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to type text and documents systematically both in English and Bangla
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Follow OSH practices	1.1 Safe work practices are observed according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.
2. Preparation	2.1. Check word processing <b>software</b> is installed. 2.2. Ensure required software is installed for Bangla typing 2.3. Ensure <b>required fonts</b> for typing of Bangla and English are installed.
3. Create document	3.1 New document is Created 3.2 <b>Margin and layout</b> are confirmed as per instructions 3.3 Document is typed as per instructions
4. Format and save document	4.1 All formatting used as per instructions. 4.2 Check spell (for English) as per requirement. 4.3 All the documents are saved
5. Review and finalized	5.1 Documents are Reviewed against job specification 5.2 Print preview is displayed 5.3 All the documents are Finalized and saved
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( May include but not limited to)
1. Software	2.1. Microsoft Office application 2.2. OpenOffice.org 2.3. Typing Tutor 2.4. Bangla Typing Software
2. Margin and layout	Margin 2.1. Narrow 2.2. Moderate 2.3. wide 2.4. Mirrored Layout 2.1. Page Setup 2.2. Page Background 2.3. Paragraph 2.4. Arrange
3. Required fonts	May include but not limited to For English (Arial, Calibri, Agency FB, Tohoma) For Bangla (Sutunymj, TonnyBanglaMJ, Nikoshban)



Legislation relevant to this unit standard	5.1 Copyright Act 2005 5.2 National Cyber Policy 5.3 Intellectual Property Rights law 5.4 and their subsequent amendments
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1. Intermediate level typing speed (30 cps) in English and (20 cps) in Bangla are achieved
2. Underpinning knowledge	Computer, Home key, Function key.
3. Underpinning skill	1. Identify PC components and devices 2. Start and enter PC to work,
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Hardware and software tools and physical facilities appropriate to perform activities. 5.2 Learning Materials, consumables needed to perform activities.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place.
<b>Accreditation Requirements</b>	
Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITSS1007A1: Access Information using Internet and Electronic mail.</b>
<b>Nominal Hours</b>	<b>10 hours</b>
<b>Unit Descriptor</b>	This unit covers the Knowledge, skills and attitude required to access information using internet, Use internet to search, find and manage resources as well as use electronic mail for information transfer effectively.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable.
1. Access resources from internet	<p>1.1 Appropriate internet <b>browsers</b> are selected and installed.</p> <p>1.2 Internet browser is opened and web address / URL is written/selected in /from address bar to access <b>information</b>.</p> <p>1.3 <b>Search engines</b> are used to access information</p> <p>1.4 Video / Information are Shared /downloaded / uploaded from / to web site/<b>social media</b>.</p> <p>1.5 <b>Web based resources</b> are used.</p> <p>1.6 Netiquette' (or web etiquette) principles are searched and followed.</p>
2. Use and manage Electronic mail	<p>2.1. <b>Email services</b> are identified and selected to create a new email address</p> <p>2.2. Email account is created.</p> <p>2.3. Document is prepared, attached and sent to different types of recipient.</p> <p>2.4. Email is read, forwarded, replied and deleted as per requirement.</p> <p><b>2.5.</b> Custom email folders are created and <b>manipulated</b>.</p> <p><b>2.6.</b> Email message is printed.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to:)
1.Browsers	<p>1.1 Mozilla Firefox</p> <p>1.2 Google chrome</p> <p>1.3 Internet explorer</p> <p>1.4 Opera</p>
2. Information	<p>2.1. Text information</p> <p>2.2. Graphics</p> <p>2.3. Video</p>
3. Search engines	<p>3.1. Google</p> <p>3.2. Yahoo</p> <p>3.3. AltaVista</p> <p>3.4. Msn</p> <p>3.5. Bing</p>

4. Social media.	4.1 Face book 4.2 Twitter 4.3 LinkedIn 4.4 YouTube
5. Web based services	5.1 Drive 5.2 Calendar 5.3 Map 5.4 Translator 5.5 Docs 5.6 search
6. Email services	6.1 Free mail services –Gmail, Yahoo, Hotmail 6.2 Web mail services.
7. Manipulated	7.1 Delete 7.2 Copy 7.3 Move 7.4 Sort 7.5 Archive
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Video / Information are downloaded / uploaded from / to web site 1.2 Documents are prepared, attached and sent to different types of recipient.
2. Underpinning knowledge	2.1. <b>Internet</b> 2.2. <b>www</b> 2.3. <b>web site</b> 2.4. <b>web address</b> 2.5. <b>URL</b> 2.6. <b>Web browsers</b> 2.7. <b>Search engines</b> 2.8. <b>Information</b> 2.9. <b>Social media</b> 2.10. <b>Web based services</b> 2.11. <b>Folder manipulation</b>
3. Underpinning skill	3.1 Access and share resources from internet 3.2 Download /upload file, documents and video from /to web sites 3.3 Send and receive mail through mail service.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace

5. Resource implication	<b>Following Resources must be provided-</b> 5.1 Relevant tools, Equipment, software and facilities needed to perform the activities. 5.2 Required learning materials.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<b>Accreditation Requirements</b> Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITSS1008A1: Operate office application software</b>
<b>Nominal Hours</b>	<b>90 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to operate a personal computer, Use word processor to create documents, use common spread sheets, create presentation using office applications, save works and print documents.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Follow OSH practices	<p>1.1 Safe work practices are observed according to IT workplace guideline.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Safe workplace environment are assured.</p>
2. Operate computer	<p>2.1. <b>Peripherals</b> are checked and connected with computer properly.</p> <p>2.2. Power cords / adapter are connected properly with computer and power outlets socket safely.</p> <p>2.3. Computer is switched on gently.</p> <p>2.4. PC <b>desktop / GUI settings</b> are arranged and customized as per requirement.</p> <p>2.5. Files and folders are created, opened, copied, renamed, deleted and sorted as per requirement.</p> <p>2.6. Properties of files and folders are viewed and searched.</p> <p>2.7. Disks are defragmented, formatted as per requirement.</p>
3. Install application software	<p><b>3.1</b> Installation requirements of <b>software</b> are identified and listed.</p> <p><b>3.2</b> <b>Software sources</b> and CD key/ password are assured.</p> <p><b>3.3</b> Appropriate <b>Software</b> are collected and selected as per requirement.</p> <p><b>3.4</b> Software installation is started.</p> <p><b>3.5</b> Customization is done as per requirement.</p> <p><b>3.6</b> Steps of installation are followed as per installation Instructions.</p> <p><b>3.7</b> Installations are completed properly.</p> <p><b>3.8</b> Correctness of Installation is checked.</p>
4. Use application packages to prepare/create documents	<p><b>4.1</b> Appropriate <b>application software packages</b> are selected and started.</p> <p><b>4.2</b> <b>Documents</b> are created as per requirement in personal use and office environment.</p> <p><b>4.3</b> <b>Contents</b> are entered.</p> <p><b>4.4</b> Documents are <b>formatted</b>.</p> <p><b>4.5</b> Paragraph and page settings are completed.</p> <p><b>4.6</b> Document is previewed</p>

5. Use spread sheet packages to create /prepare worksheets	<p><b>5.1</b> <i>Spread sheet</i> packages are selected and started.</p> <p><b>5.2</b> Worksheets are created as per requirement in personal use and office environment.</p> <p><b>5.3</b> Data are <i>entered</i></p> <p><b>5.4</b> <b>Functions</b> are used for calculating and editing logical operation</p> <p><b>5.5</b> <b>Sheets</b> are formatted as per requirement.</p> <p><b>5.6</b> <b>Charts</b> are created.</p> <p><b>5.7</b> Charts/ Sheets are previewed.</p>
6. Use presentation packages to create / prepare presentation.	<p><b>6.1</b> Appropriate <b>presentation software packages</b> are selected and started</p> <p>6.2 Presentation are created as per requirement in personal use and office environment</p> <p>6.3 Image, Illustrations, text, table ,symbols and media are entered as per requirements.</p> <p>6.4 Presentations are formatted and animated.</p> <p>6.5 Presentations are previewed.</p>
7. Print information and Shutdown computer.	<p>6.1 <b>Printer</b> is connected with computer and power outlet properly.</p> <p>6.2 Power is switched on at both the power outlet and printer.</p> <p>6.3 Printer is installed and added.</p> <p>6.4 Correct printer settings are selected and document is printed.</p> <p>6.5 Print from the printer spool is viewed or cancelled and unsaved data is saved as per requirements.</p> <p>6.6 Open software is closed and computer hardware devices are shut downed.</p> <p>6.7 Power at the respective power outlets is switched off.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> ( May include but not limited to: )
1. Peripherals	<p>1.1 Monitor</p> <p>1.2 Keyboard</p> <p>1.3 Mouse</p> <p>1.4 Modem</p> <p>1.5 Scanner</p> <p>1.6 Printer</p>
2. Desktop settings	<p>2.1. Icons</p> <p>2.2. Taskbar</p> <p>2.3. View</p> <p>2.4. Resolutions</p>
3. <b>Typing tutors</b>	<p>3.1. English typing tutor</p> <p>3.2. Bangla typing tutor</p>
4. <b>Bangla Keyboard layout</b>	<p>may include but is not limited to the:</p> <p>4.1 Avro</p> <p>4.2 Bijoy</p>

5. Different Software	MS office or Open office but limited to 5.1 Word processor software. 5.2 Spread sheet software. 5.3 Presentation software.
6. <b>Application Packages</b>	6.1 MS Word or open office word processor 6.2 MS Excel or open office spread sheet 6.3 MS Power Point or prezi
7. <b>Software sources</b>	7.1 CD/DVD/ 7.2 Flash drive 7.3 Internet 7.3 Flash memory
8. <b>Documents</b>	May include but not limited to: 8.1 Word documents 8.1 Standard CV / Bio-Data with different text & fonts, image and table. 8.2 Application / Official letter with proper paragraph and indenting, spacing, styles, Illustrations, Tables, Header & Footers and symbols. 8.3 Standard report / newspaper items with column, footnote and endnote, drop cap, indexing and page numbering.
9. <b>Contents</b>	9.1 Illustrations and styles 9.2 Text 9.3 table 9.4 Symbols 9.5 Header & Footer
10. <b>Sheets</b>	May include but not limited to: 10.1 Salary sheet with sorting, filtering and chart 10.2 Mark/Grade /Tabulation sheets for simple result processing
11. <b>Charts</b>	11.1 Column 11.2 Pie 11.3 line 11.4 bar
12. <b>Functions</b>	May include but not limited to: 12.1 mathematics 12.2 Logical 12.3 simple Statistical
13. <b>Formatted.</b>	13.1 Bold 13.2 Italic 13.3 Underline 13.4 Font size, colour, 13.5 Change case 13.6 Alignment and intend
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	

1. Critical aspects of competency	<p>1.1 Files and folders are created, opened, copied, renamed, deleted and sorted as per requirement.</p> <p>1.2 Operating system Installations are completed properly.</p> <p>1.3 Application software Installations are completed properly.</p> <p>1.4 Functions are used for calculating and editing logical operation in spread sheet.</p> <p>1.5 Image, Illustrations, text, table ,symbols and media are entered into presentation slide and animation is shown as per requirements.</p> <p>1.6 Appropriate printer settings are configured and Document is printed.</p>
2. Underpinning knowledge	<p>2.1 Desktop items</p> <p>2.2 Type of Bangla keyboard layout</p> <p>2.3 Different type of software and application packages</p> <p>2.4 Use of word processor, spread sheet and presentation software,</p> <p>2.5 Type of printers</p> <p>2.6 Type of charts, Impotence of chart</p> <p>2.7 Different type of math and logical functions.</p>
3. Underpinning skill	<p>3.1 Start computer</p> <p>3.2 Run application software</p> <p>3.3 Manage desktop item</p> <p>3.4 Manipulate files and folders</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p><b>Following Resources must be provided-</b></p> <p>5.1 Relevant tools, Equipment, software and facilities needed to perform the activities.</p> <p>5.2 Required learning materials.</p>
Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
6 Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place environment.</p>

### Accreditation Requirements

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.



## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>ITSS2009A1: Apply Compliance and Ethics in IT Work Place</b>
<b>Nominal Hours</b>	<b>20 hours</b>
<b>Unit Descriptor</b>	This unit defines Knowledge, Skills and attitude the competency required to maintain professional and ethical conduct when dealing with colleagues, clients and employers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Follow OSH practices	1.1 Safe work practices are observed according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.
2. Protect the interests of clients	2.1. Integrity and security of other information is demonstrated, as required by organisational policies, legislation and standards. 2.2. Potential conflicts of interest are identified and relevant parties of potential conflicts are notified. 2.3. Confidentiality and proprietary rights of client interest are maintained.
3. Produce quality products and services	3.1. Products and services are provided that match the operational and financial needs of clients. 3.2. Work is completed to industry and international standards. 3.3. Quality processes are implemented when developing products and services.
4. Demonstrate correct representation	4.1 Skills, knowledge and qualifications are presented in a professional manner. 4.2 Services and products developed by self and others are correctly acknowledged. 4.3 Unbiased and objective information are provided to clients. 4.4 Realistic estimates are demonstrated of time/money for work completed.
5. Follow workplace code of conduct.	5.1 Workplace code of conduct is followed.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to: )
1. Legislation and standards	1.1 OSH 1.2 BSTI Legislation 1.3 Industry codes of practice, such as the Bangladesh computer council Code of Ethics

	<ul style="list-style-type: none"> <li>1.4 International Guidelines for Consumer Protection in E-commerce</li> <li>1.5 Access and equity</li> <li>1.6 Copyright laws</li> <li>1.7 Defamation laws</li> <li>1.8 Privacy legislation</li> <li>1.9 Intellectual property, confidentiality requirements</li> <li>1.10 Legal and regulatory policies affecting e-business.</li> </ul>
2. Clients	<ul style="list-style-type: none"> <li>2.1. Internal departments</li> <li>2.2. External organisations</li> <li>2.3. Individual people</li> <li>2.4. Colleagues</li> <li>2.5. Employer and internal employees.</li> </ul>
3. Standards	<ul style="list-style-type: none"> <li>3.1. ISO standards</li> <li>3.2. IEC standards</li> <li>3.3. AS standards</li> <li>3.4. BSTI Standard</li> <li>3.5. Organisational standards</li> <li>3.6. Project standards (for further information refer to the Standards Australia website at: <a href="http://www.standards.com.au">www.standards.com.au</a>)</li> </ul>
4. Guidelines	<ul style="list-style-type: none"> <li>4.1 Legal, ethical and security issues</li> <li>4.2 Pre-requisites for membership</li> <li>4.3 Conflict of interest guidelines</li> <li>4.4 Customer service guidelines</li> </ul>
5. Indicators of personal ethical behaviour	<ul style="list-style-type: none"> <li>5.1 Must not allow dishonesty, personal prejudice or bias to influence conduct of employment.</li> <li>5.2 Should not accept gifts, benefits or hospitality if their nature and value may be seen as compromising objectivity and influencing in official capacity.</li> <li>5.3 Actions should be fair, honest, and truthful.</li> <li>5.4 Should avoid actual or perceived conflicts of interest.</li> <li>5.5 Should not condone the use of any statement that is misleading, false or deceptive.</li> <li>5.6 Should conduct self with care and skill, and ensure actions do not conflict with the requirements of integrity and objectivity.</li> <li>5.7 Should not use confidential or other information for personal advantage or for the advantage of another.</li> </ul>
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Confidentiality and proprietary rights of client interest are maintained..</li> <li>1.2 Quality processes are implemented when developing products and services</li> <li>1.3 Realistic estimates are demonstrated of time/money for work completed.</li> </ul>

2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. Computer Society Code of Ethics</li> <li>2.2. Organisational requirements for customer service</li> <li>2.3. OSH legislation</li> <li>2.4. Copyright and intellectual property legislation and principles</li> <li>2.5. Relevant privacy legislation and principles</li> <li>2.6. Access and equity legislation and principles</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Application of standards and legislation to policy and procedure development and monitoring</li> <li>3.2. Professional development skills in relation to identifying personal skills requiring</li> <li>3.3. Upgrading and updating</li> <li>3.4. Researching and identifying relevant courses, seminars or industry information to maintain currency</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p><b>Following Resources must be provided-</b></p> <ul style="list-style-type: none"> <li>5.1 Relevant tools, software and facilities needed to perform the activities.</li> <li>5.2 Required learning materials.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> <li>6.4 Portfolio</li> <li>6.5 Log book</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>

**Accreditation Requirements**

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## National Technical and Vocational Qualification Framework for Bangladesh

### Unit of Competency

<b>Unit Code and Title</b>	<b>ITSS5030A1: Apply Soft Skills</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit describes the performance outcomes of knowledge, skills and attitude required for applying soft skills in the working environment (including time management, planning & organization, interpersonal skills)
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the Range of Variable Training Components
1. Follow OSH practices	<p>1.1 Safe work practices are observed according to workplace procedures.</p> <p>1.2 <b>OSH hazards and incidents</b> are reported to appropriate personnel according to workplace procedures.</p>
2. Demonstrate good communication	<p>2.1. <b>Verbal and non-verbal communication</b> to respond to client/colleague requests and enquiries effectively is demonstrated.</p> <p>2.2. Appropriate <b>questioning and active listening techniques</b> are demonstrated, to understand colleagues and client needs and determine support requirements.</p> <p>2.3. Accommodation of <b>cultural differences</b> in the workplace is demonstrated</p>
3. Plan and organise work of self and team members	<p>3.1. Ability to plan and organise work of self and team is demonstrated.</p> <p>3.2. Enquiries are answered promptly and appropriately.</p> <p>3.3. Information, messages and job requests are recorded and referred to the appropriate person in accordance with organisational procedures.</p> <p>3.4. Investigation of organisational follow-up procedure or policy, and recording of follow-up action taken, in regard to the job request or enquiry.</p>
4. Create professional networks	<p>4.1 Professional networks within the design industry are identified and developed.</p> <p>4.2 Professional development is incorporated in work practice and career planning</p>
5. Practice and implement the Code of Ethics	5.1 Company Code of Ethics is implemented and practiced.
6. Demonstrate time management skills	6.1 Time management skills are demonstrated according to workplace standards.

7. Document and disseminate OSH requirements	7.1 Report issues/OSH problems within the workplace to the appropriate person 7.2 Determine and document the OSH standards which impact upon the workplace
8. Evaluate work of self and team and apply continuous improvement strategy.	8.1 Work of self and team is evaluated and a continuous improvement strategy applied.
<b>Range of Variables</b>	<b>Range</b>
<b>1. OSH hazards and incidents</b>	( May include but not limited to:) <b>1. Physical hazards and incidents</b> <b>2. Environmental hazard</b>
<b>2. Verbal and non-verbal communication</b>	( May include but not limited to:) <b>1. Written communication</b> <b>2. Electronic Communication</b> <b>3. Body language</b>
<b>3. Questioning and active listening techniques</b>	( May include but not limited to:)
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1. Appropriate questioning and active listening techniques are demonstrated, to understand colleagues and client needs and determine support requirements. 2. Information, messages and job requests are recorded and referred to the appropriate person in accordance with organisational procedures. 3. Time management skills are demonstrated according to workplace standards.
2. Underpinning knowledge	<b>List of OSH hazards and incidents</b> 2.1 Type of Verbal and non-verbal communication 2.2 <b>Questioning and active listening techniques</b> 2.3 Attributes of an efficient graphic designer 2.4 Type of interpersonal skills
3. Underpinning skill	3.1 Ability to take stress 3.2 Ability to think critically
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace

5. Resource implication	<b>Following Resources must be provided-</b> 5.1 Relevant tools, software and facilities needed to perform the activities. 5.2 Required learning materials.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<b>Accreditation Requirements</b> Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.	

## **OCCUPATION SPECIFIC UNITS**

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

Unit Code and Title	<b>ITWEB1010A1: Create and Edit Webpage Using HTML</b>
<b>Nominal Hours</b>	<b>60 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to enter text and graphic medias for the webpage using HTML (Hypertext Mark-up Language) and check the completed website for QA (Quality Assurance) using latest common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	<p>1.1 Safe work practices are observed as according to workplace procedures.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Turn on your <b>PC</b> properly.</p>
2. Plan a website to meet client requirements.	<p>2.1. The purpose and intended audience of the website are identified.</p> <p>2.2. The design requirements and constraints are identified.</p> <p>2.3. A conceptual design is developed.</p> <p>2.4. Necessary <b>software</b> installed and checks <b>other requirement</b>.</p>
3. Create the website using hypertext mark-up language in accordance with the design specifications.	<p>3.1. Structure and element tags are added and attributes are assigned to meet client requirements in terms of the layout and formatting of the pages and enhancements using given templates and follow the web <b>standards</b>.</p> <p>3.2. Webpage <b>content</b> are added to the site, and also formatted in accordance with client requirements and be aware of <b>legislation</b>.</p> <p>3.3. Hyperlinks are added to allow successful navigation between the pages of the website.</p> <p>3.4. A sitemap is created that allows for ease of access to content</p> <p>3.5. The website is saved to a file by use of the program tools available for the task.</p>
4. Test the website.	<p>4.1 The website is tested to ensure functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b>.</p> <p>4.2 The website is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b>, readability, legibility and presentation in accordance with client requirements.</p> <p>4.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.</p>



<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (May include but not limited to)</b>
1. PC	1.1 Personal Computer
2. Software	2.1. Operating System 2.2. Application Server 2.3. Anti-virus Software
3. Other Requirements	3.1. Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.
6. Browsers	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. Testing (Website)	Coding conventions must be consistently applied in developing the website. This may include but is not limited to: 7.1 Correct case 7.2 End tags 7.3 Source code formatting. 7.4 Comments 7.5 Style sheets may be used for formatting.
8. A <i>plan</i>	8.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 8.2 Key milestone outcomes; 8.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 8.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
9. Accessibility considerations	9.1 Cultural awareness 9.2 Ethnicity 9.3 Physical impairments 9.4 Remote locations.

10. Contents	<p>Can include information and interactive features such as:</p> <ul style="list-style-type: none"> <li>10.1 Graphic medias</li> <li>10.2 Table</li> <li>10.3 List</li> <li>10.4 Form &amp; button</li> <li>10.5 Text formatting</li> <li>10.6 Website content typography</li> <li>10.7 Site map</li> <li>10.8 Hyperlink titles.</li> </ul>
<p><b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent, and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<ul style="list-style-type: none"> <li>1.1 Proper file name based on web standard.</li> <li>1.2 Correct linking to other pages.</li> <li>1.3 Ability to create and edit webpage using Hyper Text Mark-up Language (HTML).</li> </ul>
2. Underpinning knowledge	<ul style="list-style-type: none"> <li>2.1. How to use pc, tools and devices to combat OSH hazards and incidents according to workplace procedures.</li> <li>2.2. Knowledge on analytical methodologies, techniques and procedures</li> <li>2.3. To understand client requirements.</li> <li>2.4. To identify the design requirements and constraints.</li> <li>2.5. Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</li> <li>2.6. Knowledge on well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions</li> <li>2.7. Syntax and variations of using HTML element tags and attributes.</li> <li>2.8. Adding text and graphics to the website.</li> <li>2.9. Formatting the website in accordance with the specifications of the brief.</li> <li>2.10. Importance and use of different formats of website code files.</li> <li>2.11. Required components and dependencies of running a website successfully.</li> <li>2.12. Importance and structures of developing site map of the website.</li> <li>2.13. Developing test cases and procedures to test the website according to the testing procedures.</li> </ul>
3. Underpinning skill	<ul style="list-style-type: none"> <li>3.1. Use pc, tools and devices to combat OSH hazards and incidents according to workplace procedures.</li> <li>3.2. Analytical skills required</li> <li>3.3. To create a webpage template based on client requirements.</li> <li>3.4. Skills to develop a conceptual model.</li> </ul>

	<ul style="list-style-type: none"> <li>3.5. Skills to develop the logical model or diagram of website using any suitable tool.</li> <li>3.6. Can develop well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions</li> <li>3.7. Write HTML element tags and attributes using notepad.</li> <li>3.8. Use a common tool to develop HTML codes.</li> <li>3.9. Add text and graphics to the website.</li> <li>3.10. Format the website in accordance with the specifications of the brief.</li> <li>3.11. Save the designed website in required format.</li> <li>3.12. Add hyperlinks to allow successful navigation between the pages of the website.</li> <li>3.13. Create site map of the website.</li> <li>3.14. Can test the website according to the testing procedures</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Materials relevant to the proposed activity.</li> <li>5.2 Measuring instrument.</li> <li>5.3 Relevant drawing, manuals, charts and diagram.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> <li>6.4 Portfolio</li> <li>6.5 Log book</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

Unit Code and Title	<b>ITWEB2011A1: Use Image Editing Software (Basic Level)</b>
<b>Nominal Hours</b>	<b>50 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to edit images for website using common image editing software.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Select the image editing tool	2.1. Appropriate image editing <b>software</b> is started 2.2. Necessary plug-ins are installed and checks <b>other requirement</b> .
3. Edit image using editing tool	3.1. <b>Image</b> is opened in layer and be aware of <b>legislation</b> . 3.2. Layers are added to the image 3.3. Formatting, color, brushes, effects and swatches are applied 3.4. Optimized and previewing of Image is demonstrated 3.5. Image is exported.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software	1.1 Operating System 1.2 Image Editing Software (i.e. Adobe Photoshop, Adobe Illustrator) 1.3 Anti-virus Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	5.1 Legislation relevant to this unit standard includes but is not limited to the: <ul style="list-style-type: none"> <li>• Copyright Act 2005,</li> <li>• National Cyber Policy</li> <li>• Intellectual Property Rights law</li> <li>• And their subsequent amendments.</li> </ul>

6. Images	Can include information and interactive features such as: 6.1 Images are variety of format such as jpg, png, gif and .psd or other image format.
7. Accessibility considerations	7.1 Cultural awareness, ethnicity, physical impairments, and remote locations .
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to create, edit and save images in different format using common image editing software.
2. Underpinning knowledge	2.1. How to use pc, tools and devices to combat OSH hazards and incidents according to workplace procedures 2.2. Knowledge on analytical methodologies, techniques and procedures 2.3. To identify the purpose and intended audience of the image 2.4. To identify the design requirements and constraints 2.5. Image design standards, conventions and industry best practices 2.6. Formatting the image in accordance with the specifications of the brief 2.7. Importance and use of different formats of image 2.8. Required components and dependencies of designing an image successfully
3. Underpinning skill	3.1. Use tools and devices to combat OSH hazards and incidents according to workplace procedures 3.2. Analytical skills required 3.3. to identify the purpose and intended audience of the image 3.4. to identify the design requirements and constraints 3.5. Skills to visualize target image 3.6. Skills to develop the image using suitable tools 3.7. Design the image in accordance with the specifications of the brief 3.8. Save the designed image in required format
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness

	<p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, charts and diagram.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

Unit Code and Title	<b>ITWEB2012A1: Develop awareness of career opportunities in Web Designing and the IT sector</b>
<b>Nominal Hours</b>	<b>20 hours</b>
Unit Descriptor	This unit covers knowledge, skills, and attitudes to demonstrate the understanding of trends and career opportunities in web designing and the IT sector in Bangladesh.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.
2. Identify the purpose and objectives	2.1 Career objectives are set and purpose is identified.
3. Analyze and map personal strengths and weaknesses	3.1 Personal strengths and weaknesses are identified and analyzed. 3.2 Personal strengths and weaknesses are mapped according to purpose and objectives.
4. Know the industry trends and career opportunities in web designing sector	4.1 The trends of IT industry - its past, present and future are identified. 4.2 The career opportunities of a web designer in the IT industry are identified.
5. Maintain a consistent pattern to update the knowledge of industry trends and career opportunities	5.1 The knowledge of IT industry trends and career opportunities in web designing sector is updated regularly.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer 1.2 Modem
2. Software Requirements	1.1 Operating System 1.2 Application Server 1.3 Anti-virus Software
3. Other Requirements	3.1 Fair speed Internet Connectivity
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to understand the trends and career opportunities in web designing and the IT sector in Bangladesh.

<p>2. Underpinning knowledge</p>	<p>2.1. How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2. Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and objectives of career</li> <li>• To identify industry trends in web designing sector</li> </ul> <p>2.3. Knowledge to analyze SWOT(Strengths, Weakness, Opportunities and Threats) of an individual</p> <p>2.4. Knowledge to map personal SWOT with career purpose and objectives</p> <p>2.5. Knowledge to analyze the gap between self-strengths and required capabilities to fulfill the purpose</p> <p>2.6. Knowledge to analyze the trend of job markets in web designing sector</p> <p>2.7. Knowledge to maintain a consistent pattern of self-development</p>
<p>3. Underpinning skill</p>	<p>3.1. Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2. Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and objectives of career</li> <li>• To identify industry trends in web designing sector</li> </ul> <p>3.3. Skills to analyze SWOT(Strengths, Weakness, Opportunities and Threats) of an individual</p> <p>3.4. Skills to map personal SWOT with the career purpose and objectives</p> <p>3.5. Skills to analyze the gap between self-strengths and required capabilities to fulfill the purpose</p> <p>3.6. Skills to analyze the trend of job markets in web designing sector</p> <p>3.7. Skills to maintain a consistent pattern of self-development</p>
<p>4. Required attitude</p>	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>



5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB3013A1: Use web design and content guidelines</b>
<b>Nominal Hours</b>	<b>60 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to use advanced web editing softwares to design and develop interactive websites and check the completed website for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	<p>1.1 Safe work practices are observed as according to workplace procedures.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Turn on your <b>PC</b> properly.</p>
2. Plan a website to meet the client requirements.	<p>2.1 The purpose and intended audience of the website are identified.</p> <p>2.2 The design requirements and constraints are identified.</p> <p>2.3 A conceptual design is developed.</p> <p>2.4 Necessary <b>software</b> installed and checks <b>other requirement</b>.</p>
3. Select web editing softwares	<p>3.1 Appropriate web editing software is started.</p> <p>3.2 A virtual web folder is created in application server</p> <p>3.3 A website project is created in editing tool</p>
4. Create the website using templates	<p>1.1 Use appropriate front end design framework i.e. Twitter bootstrap, Zurb Foundation, uikit etc.</p> <p>1.2 Structure and element tags are added and attributes are assigned to meet client requirements in terms of the layout and formatting of the pages and enhancements using given design templates.</p> <p>4.2 <b>Contents</b> (Text and graphics) are added to the site, and also formatted in accordance with client requirements by maintain <b>standards</b> and be aware of <b>legislation</b>.</p> <p>4.3 Hyperlinks are added to allow successful navigation between the pages of the website.</p> <p>4.4 A sitemap is created that allows for ease of access to content</p> <p>4.5 The website is saved to a file by use of the program tools available for the task.</p>

5. Test the website.	<p>5.1 The website is tested to ensure functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b>.</p> <p>5.2 The website is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b>, readability, legibility and presentation in accordance with client requirements.</p> <p>5.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	<p>2.1. Operating System</p> <p>2.2. Application Server</p> <p>2.3. IDE (Dream Weaver, NetBeans, Sublime Text, Notepad++, etc)</p>
3. Other Requirements	3.1. Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	<p>Legislation relevant to this unit standard includes but is not limited to the:</p> <p>5.1 Copyright Act 2005,</p> <p>5.2 National Cyber Policy,</p> <p>5.3 Intellectual Property Rights law,</p> <p>5.4 And their subsequent amendments.</p>
6. Testing (Browsers)	<p>6.1 Google Chrome</p> <p>6.2 Internet Explorer (Last three version)</p> <p>6.3 Mozilla Firefox</p> <p>6.4 Opera</p> <p>6.5 Safari</p>
7. Range	<p>Coding conventions must be consistently applied in developing the website. This may include but is not limited to:</p> <p>7.1 Correct case</p> <p>7.2 end tags</p> <p>7.3 Comments</p> <p>7.4 Source code formatting.</p> <p>7.5 Style sheets may be used for formatting.</p>
8. A plan	8.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:

	<p>8.2 Key milestone outcomes;</p> <p>8.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</p> <p>8.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</p>
10. Contents	<p>Can include information and interactive features such as:</p> <p>10.1 HTML 5 or latest tags</p> <p>10.2 Use typography and components of front end design framework.</p>
11. Accessibility considerations	<p>11.1 Cultural awareness</p> <p>11.2 Ethnicity</p> <p>11.3 Physical impairments</p> <p>11.4 Remote locations</p>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	1.1 Must confirm the ability to create and edit web contents using web-editing software.
2. Underpinning knowledge	<p>2.1. How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2. Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>2.3. Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.4. Knowledge on well-structured and well-formed HTML5 or latest structures according to W3C HTML5 or latest coding guidelines and conventions</p> <p>2.5. Knowledge on creating a virtual folder in application server</p> <p>2.6. Knowledge on creating a web project using web editing software.</p> <p>2.7. Knowledge of features and functionalities of web editing software</p> <p>2.8. Syntax and variations of using HTML5 or latest element tags and attributes.</p> <p>2.9. Adding text and graphics to the website using web editing software.</p> <p>2.10. Formatting the website using web editing software in accordance with the specifications of the brief.</p>

	<p>2.11. Importance and use of different formats of website code files.</p> <p>2.12. Required components and dependencies of running a website successfully.</p> <p>2.13. Importance and structures of developing site map of the website.</p> <p>2.14. Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1. Use tools and devices to combat OSH hazards and incidents according to workplace procedures</p> <p>3.2. Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website</li> <li>• To identify the design requirements and constraints</li> </ul> <p>3.3. Skills to develop a conceptual model</p> <p>3.4. Skills to develop the logical model or diagram of website using any suitable tool</p> <p>3.5. Skills to create a virtual folder in application server</p> <p>3.6. Knowledge on creating a web project using web editing software.</p> <p>3.7. Knowledge of features and functionalities of web editing software</p> <p>3.8. Syntax and variations of using HTML5 element tags and attributes.</p> <p>3.9. Adding text and graphics to the website using web editing software.</p> <p>3.10. Format the website using web editing software in accordance with the specifications of the brief</p> <p>3.11. Save the designed website in required format</p> <p>3.12. Add hyperlinks to allow successful navigation between the pages of the website</p> <p>3.13. Create site map of the website using web editing tool</p> <p>3.14. Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>

5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB2014A1 – Convert design to HTML</b>
<b>Nominal Hours</b>	<b>50 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to convert design (.psd, indesign, image etc) to HTML and check the completed HTML for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	<p>1.1 Safe work practices are observed as according to workplace procedures.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Turn on your <b>PC</b> properly.</p>
2. Plan a website to meet client requirements.	<p>2.1 The purpose and intended audience of the website are identified.</p> <p>2.2 The design requirements and constraints of using provided templates are identified.</p> <p>2.3 Required design is developed.</p> <p>2.4 Necessary <b>software</b> installed and checks <b>other requirement</b>.</p>
3. Convert design to HTML.	<p>3.1 The given design template is converted into the required format (image, text etc).</p> <p>3.2 Website layout developed.</p> <p>3.3 Web <b>content</b> (image, text etc) placed into the right position by using proper HTML tags.</p> <p>3.4 Content is formatted properly by maintain <b>standards</b> and be aware of <b>legislation</b>.</p> <p>3.5 Structure and element tags are added and attributes are assigned to meet the specifications of the brief in terms of the enhancements, layout and formatting of the pages using given design.</p> <p>3.6 Hyperlinks are added to allow successful navigation between the pages of the website.</p> <p>3.7 The HTML file is named properly and saved in a proper location.</p>
4 Test the website.	<p>4.1 The website is tested to ensure functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b>.</p> <p>4.2 The website is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b>, readability, legibility and presentation in accordance with client requirements.</p> <p>4.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.</p>

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Contents	Can include information and interactive features such as: 4.1 Graphic medias 4.2 Table 4.3 List 4.4 Form & button 4.5 Text formatting 4.6 Website content typography 4.7 Site map 4.8 Hyperlink titles.
5. Standards	5.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
6. Legislation	6.1 Legislation relevant to this unit standard includes but is not limited to the: <ul style="list-style-type: none"> <li>• Copyright Act 2005,</li> <li>• National Cyber Policy,</li> <li>• Intellectual Property Rights law, and</li> <li>• Their subsequent amendments.</li> </ul>
7. Testing (Browsers)	1.1 Google Chrome 1.2 Internet Explorer (Last three version) 1.3 Mozilla Firefox 1.4 Opera 1.5 Safari
8. A plan	8.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 8.2 Key milestone outcomes; 8.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 8.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.



9. Accessibility considerations	9.1 Cultural awareness, 9.2 Ethnicity, 9.3 Physical impairments, 9.4 And remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to convert given design templates into HTML and check the completed website for accuracy using common browsers.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures • To identify the design requirements and constraints. 2.3 Website design standards and conventions recommended from W3C ( <a href="http://www.w3c.org">www.w3c.org</a> ) 2.4 Knowledge on well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions 2.5 Syntax and variations of using HTML element tags and attributes. 2.6 Converting template into any required format 2.7 Adding template slices and texts to the website. 2.8 Formatting the website in accordance with the specifications of the brief. 2.9 Importance and use of different formats of website code files. 2.10 Required components and dependencies of running a website successfully. 2.11 Importance and structures of developing site map of the website. 2.12 Developing test cases and procedures to test the website according to the testing procedures
3. Underpinning skill	3.1. Use tools and devices to combat OSH hazards and incidents according to workplace procedures. 3.2. Analytical skills required • To identify the design requirements and constraints. 3.3. Able to develop well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions 3.4. Write HTML element tags and attributes for using templates using notepad 3.5. Use a common tool to develop HTML codes for using templates 3.6. Convert template into any required format

	<ul style="list-style-type: none"> <li>3.7. Add template slices and texts to the website</li> <li>3.8. Format the website in accordance with the specifications of the brief</li> <li>3.9. Save the designed website in required format.</li> <li>3.10. Add hyperlinks to allow successful navigation between the pages of the website</li> <li>3.11. Create site map of the website</li> <li><b>3.12.</b> Able to test the website according to the testing procedures</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Materials relevant to the proposed activity.</li> <li>5.2 Measuring instrument.</li> <li>5.3 Relevant drawing, manuals, codes, standard and reference material.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> <li>6.4 Portfolio</li> <li>6.5 Log book</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB4015A1: Develop a dynamic website using server side language.</b>
<b>Nominal Hours</b>	<b>60 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to develop a dynamic website using server side language.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan a website to meet the client requirements.	2.1 The purpose and intended audience of the website are identified. 2.2 The design requirements and constraints are identified. 2.3 A conceptual design is developed. 2.4 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Select web editing softwares	3.1 Appropriate web editing software is started. 3.2 A virtual web folder is created in application server 3.3 A website project is created in editing tool
4. Create the dynamic website using server side language	4.4 Develop dynamic website based on client requirements. 4.5 Structure and element tags are added and attributes are assigned to meet client requirements in terms of the layout and formatting of the pages and enhancements using given design templates. 4.6 <b>Contents</b> (Text and graphics) are added to the site, and also formatted in accordance with client requirements by maintain <b>standards</b> and be aware of <b>legislation</b> . 4.7 The website is saved to a file by use of the program tools available for the task.
5. Test the website.	1.1 The website is tested to ensure functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 1.2 The website is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 1.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.

<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.2 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 IDE (Dream Weaver, NetBeans, Sublime Text, Notepad++, etc)
3. Other Requirements	3.2 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 1.1 Copyright Act 2005, 1.2 National Cyber Policy, 1.3 Intellectual Property Rights law, 1.4 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the requirements of the client will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.2 Key milestone outcomes; 7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Contents	Can include information and interactive features such as: 8.1 HTML 5 or latest tags 8.2 Use typography and components of front end design framework.
9. Accessibility considerations	9.1 Cultural awareness 9.2 Ethnicity 9.3 Physical impairments 9.4 Remote locations
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	

1. Critical aspects of competency	1.1 Must confirm the ability to develop a dynamic website using server side language.
2. Underpinning knowledge	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <p>2.3 To identify the purpose and intended audience of the website.</p> <p>2.4 To identify the design requirements and constraints.</p> <p>2.5 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.6 Knowledge on well-structured and well-formed HTML5 or latest structures according to W3C HTML5 or latest coding guidelines and conventions</p> <p>2.7 Knowledge on creating a virtual folder in application server</p> <p>2.8 Knowledge on creating a web project using web editing software.</p> <p>2.9 Knowledge of features and functionalities of web editing software</p> <p>2.10 Syntax and variations of using HTML5 or latest element tags and attributes.</p> <p>2.11 Adding text and graphics to the website using web editing software.</p> <p>2.12 Formatting the website using web editing software in accordance with the specifications of the brief.</p> <p>2.13 Importance and use of different formats of website code files.</p> <p>2.14 Required components and dependencies of running a website successfully.</p> <p>2.15 Importance and structures of developing site map of the website.</p> <p><b>2.16</b> Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website</li> <li>• To identify the design requirements and constraints</li> </ul> <p>3.3 Skills to develop a conceptual model</p> <p>3.4 Skills to develop the logical model or diagram of website using any suitable tool</p>

	<p>3.5 Skills to create a virtual folder in application server</p> <p>3.6 Knowledge on creating a web project using web editing software.</p> <p>3.7 Knowledge of features and functionalities of web editing software</p> <p>3.8 Syntax and variations of using HTML5 element tags and attributes.</p> <p>3.9 Adding text and graphics to the website using web editing software.</p> <p>3.10 Format the website using web editing software in accordance with the specifications of the brief</p> <p>3.11 Save the designed website in required format</p> <p>3.12 Add hyperlinks to allow successful navigation between the pages of the website</p> <p>3.13 Create site map of the website using web editing tool</p> <p><b>3.14</b> Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>• Materials relevant to the proposed activity.</li> <li>• Measuring instrument.</li> <li>• Relevant drawing, manuals, codes, standard and reference material.</li> </ul>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB2016A1: Use Web Animation (Basic level)</b>
<b>Nominal Hours</b>	<b>10</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to add animations for website using CSS3, HTML5 or latest.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Select appropriate language to create animation.	2.1 Appropriate animation language file is attached. 2.2 Necessary plug-ins are installed. (animate.css) 2.4. Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Use animation in the website	3.1 Appropriate style sheet is added to the project. 3.2 Animation is applied onto the website by maintain <b>standards</b> and be aware of <b>legislation</b> .
4. Animation test	4.1 The animation is tested to ensure functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 4.2 The website is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the:

	<p>5.1 Copyright Act 2005,  5.2 National Cyber Policy,  5.3 Intellectual Property Rights law,  5.4 And their subsequent amendments.</p>
6. Testing (Browsers)	<p>6.1 Google Chrome  6.2 Internet Explorer (Last three version)  6.3 Mozilla Firefox  6.4 Opera  6.5 Safari</p>
7. A plan	<p>7.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</p> <ul style="list-style-type: none"> <li>• Key milestone outcomes;</li> <li>• How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</li> <li>• How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</li> </ul>
8. Accessibility considerations	8.1 Cultural awareness, ethnicity, physical impairments, and remote locations.
<p><b>Evidence Guide</b>  The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	1.1 Must confirm the ability to create and edit web animation using appropriate language.
2. Underpinning knowledge	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>2.3 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.4 Knowledge on well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions</p> <p>2.5 Knowledge on creating a web project using web editing Software</p>



	<p>2.6 Knowledge of features and functionalities of web editing Software</p> <p>2.7 Syntax and variations of using HTML and CSS3 or latest element tags and attributes.</p> <p>2.8 Adding text and graphics to the website using web editing Software.</p> <p>2.9 Formatting the website using web editing Software in accordance with the client requirements.</p> <p>2.10 Importance and use of different formats of website code files.</p> <p>2.11 Required components and dependencies of running a website successfully.</p> <p>2.12 Importance and structures of developing site map of the website.</p> <p>2.13 Developing test cases and procedures to test the website according to the testing procedures</p>
<p>3. Underpinning skill</p>	<p>3.1 Use Softwares and devices to combat OSH hazards and incidents according to workplace procedures</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• to identify the purpose and intended audience of the website</li> <li>• to identify the design requirements and constraints</li> </ul> <p>3.3 Skills to develop a conceptual model</p> <p>3.4 Skills to develop the logical model or diagram of website using any suitable Software</p> <p>3.5 Skills to create a virtual folder in application server</p> <p>3.6 Skills to create a web project using web editing Software</p> <p>3.7 Can develop well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions</p> <p>3.8 Syntax and variations of using HTML and CSS3 or latest element tags and attributes.</p> <p>3.9 Adding text and graphics to the website using web editing Software.</p> <p>3.10 Formatting the website using web editing Software in accordance with the client requirements.</p> <p>3.11 Save the designed website in required format</p> <p>3.12 Add hyperlinks to allow successful navigation between the pages of the website</p> <p>3.13 Create site map of the website using web editing Software</p> <p>3.14 Can test the website according to the testing procedures</p>

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB3017A1: Develop Cascading Style Sheet (CSS)</b>
<b>Nominal Hours</b>	<b>60</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to develop Cascading Style Sheets (CSS) that are linked to a HTML document in order to externally define and control styles and structure to enhance and achieve commonality among web documents, and check compatibility of the completed CSS with common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Determine Purpose and Accessibility	2.1 <b>Plan</b> to purpose of the HTML document is identified. 2.2 The IDE where the CSS will be used is identified and necessary <b>software</b> installed and checks <b>other requirement</b> . 2.3 <b>Accessibility</b> options are identified and determine for visually, physically or otherwise impaired persons.
3. Set styles	3.1 Appropriate styles that are to be controlled by the CSS are identified. 3.2 The styles are defined and documented in accordance with established design principles or business guidelines.
4. Create CSS	4.1 CSS is created using the determined styles by maintain <b>standards</b> and be aware of <b>legislation</b> . 4.2 CSS is edited and changes are confirmed in linked HTML document 4.3 CSS is <b>tested</b> / validated according to established design principles or business guidelines. ( <a href="https://jigsaw.w3.org/css-validator">https://jigsaw.w3.org/css-validator</a> )
5. Link CSS to HTML documents	5.1 CSS is linked to the HTML document 5.2 CSS styles are applied to the mark-up language document.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer

2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 IDE (Dream Weaver, NetBeans, Sublime Text, Notepad++, etc)
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	5.1 Legislation relevant to this unit standard includes but is not limited to the: 5.2 Copyright Act 2005, 5.3 National Cyber Policy, 5.4 Intellectual Property Rights law, 5.5 and their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: <ul style="list-style-type: none"> <li>• Key milestone outcomes;</li> <li>• How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</li> <li>• How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</li> </ul>
8. Accessibility considerations	8.1 Cultural awareness, ethnicity, physical impairments, and remote locations
9. Contents	Can include information and interactive features such as: 9.1 Graphic medias 9.2 Table 9.3 List 9.4 Form & button 9.5 Text formatting 9.6 Website content typography 9.7 Site map 9.8 Hyperlink titles.
<b>Evidence Guide</b>	

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

<p>1. Critical aspects of competency</p>	<p>1.1 Must confirm the ability to develop Cascading Style Sheets (CSS) that are linked to a HTML document in order to externally define and control styles and structure, to enhance and achieve commonality among web documents, and check compatibility of the completed CSS with common browsers.</p>
<p>2. Underpinning knowledge</p>	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>2.3 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.4 Knowledge on well-structured and well-formed CSS structures according to W3C CSS coding guidelines and conventions</p> <p>2.5 Syntax and variations of using CSS element tags and attributes.</p> <p>2.6 Attaching CSS to HTML documents</p> <p>2.7 Formatting the website in accordance with client requirement.</p> <p>2.8 Use of CSS in different ways (as inline, embedded or external file)</p> <p>2.9 Required components and dependencies of running a website successfully.</p> <p>2.10 Developing test cases and procedures to test the website according to the testing procedures</p>
<p>3. Underpinning skill</p>	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>3.3 Skills to develop the logical model or diagram of website using any suitable tool.</p> <p>3.4 Can develop well-structured and well-formed CSS structures according to W3C CSS coding guidelines and conventions</p> <p>3.5 Write CSS element tags and attributes using notepad.</p> <p>3.6 Use a common tool to develop CSS codes.</p>

	3.7 Attach CSS to HTML documents 3.8 Validate CSS according to established design principles or business guidelines 3.9 Format the website in accordance with client requirement. 3.10 Save the designed website in required format. 3.11 Can test the website according to appropriate testing procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<b>Accreditation Requirements</b> Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

Unit Code and Title	<b>ITWEB4018A1: Create and Manage Rich Web Content</b>
<b>Nominal Hours</b>	<b>80</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to create and manage rich web content including jQuery plugins, images, CSS3 animation, audio and video within a website.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan a website to meet client requirements.	2.1 The purpose and intended audience of the website are identified. 2.2 The design requirements and constraints are identified. 2.3 A conceptual design is developed. 2.4 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Create rich content and add to a website in accordance with design specifications.	3.1 Any special code, files required to add the rich to a website is derived. 3.2 Element tags are added and attributes are assigned to add the rich content by maintain <b>standards</b> and be aware of <b>legislation</b> . 3.3 Audio and Video content is embedded in accordance with client requirement.
4. Test the website.	4.1 The website is tested to ensure functionality, correct any errors and log in according to the testing procedures in the plan. 4.2 The website is opened in a variety of common browsers and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of the given requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 IDE (Dream Weaver, Net Beans, Sublime Text, Notepad++, etc)

3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 and their subsequent amendments
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.2 Key milestone outcomes; 7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 And remote locations
9. Contents	Can include information and interactive features such as: 9.1 Graphic medias 9.2 Table 9.3 List 9.4 Form & button 9.5 Text formatting 9.6 Website content typography 9.7 Site map 9.8 Hyperlink titles.
<p><b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	



1. Critical aspects of competency	1.1 Must confirm the ability to create and manage rich web content including jQuery plugins, images, CSS3 animation, audio and video within a website.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge of analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 2.3 Website design standards and conventions recommended from W3C ( <a href="http://www.w3c.org">www.w3c.org</a> ) 2.4 Knowledge on well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions 2.5 Knowledge on creating and editing rich web content using any suitable tool. 2.6 Knowledge on generating any required code files or includes files using any suitable tool. 2.7 Adding rich web content to the website. 2.8 Formatting the website in accordance with the specifications of the brief. 2.9 Required components and dependencies of running a website successfully. 2.10 Developing test cases and procedures to test the website according to the testing procedures
3. Underpinning skill	3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures. 3.2 Analytical skills required <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 3.3 Skills to create and edit rich web content using any suitable tool. 3.4 Skills to generate any required code files or include files using any suitable tool. 3.5 Add rich web content to the website. 3.6 Save the designed website in required format. 3.7 Can test the website according to the testing procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn

	<ul style="list-style-type: none"> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Materials relevant to the proposed activity.</li> <li>5.2 Measuring instrument.</li> <li>5.3 Relevant drawing, manuals, codes, standard and reference material.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> <li>6.4 Portfolio</li> <li>6.5 Log book</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB3019A1: Use Web Animation (Intermediate level)</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to add and edit animations for website using common front end framework.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Select the animation editing tool	2.1 Appropriate front end framework (slick slider, cycle slider, wow.js, <a href="http://zurb.com/playground/motion-ui">http://zurb.com/playground/motion-ui</a> , bootstrap component jQuery or relevant) is determined. 2.2 Appropriate animation tool is started 2.3 Necessary plug-ins are installed by maintain <b>standards</b> and be aware of <b>legislation</b> .
3. Prepare animation using editing tool	3.1 <b>Plan</b> a conceptual animation flow is determined. 3.2 Animation is edited and prepared to be implement in the webpage 3.3 Necessary <b>software</b> installed and checks <b>other requirement</b> .
4. Use animation in the website	4.1 Required and accompanying files are included at right place and appropriate class or id declared plus properly activated. 4.2 The website is opened in a variety of common browsers and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	5.1 Legislation relevant to this unit standard includes but is not limited to the:

	5.2 Copyright Act 2005, 5.3 National Cyber Policy, 5.4 Intellectual Property Rights law, 5.5 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the requirements of the brief will be realized. The plan must include the specifications and/or features required by the brief to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.2 Key milestone outcomes; 7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations.
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to add and edit animations for website using common front end framework.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge of analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 2.3 Website design standards and conventions recommended from W3C ( <a href="http://www.w3c.org">www.w3c.org</a> ) 2.4 Knowledge of well-structured and well-formed HTML structures according to W3C HTML coding guidelines and conventions 2.5 Knowledge of creating and editing animation using any suitable tool. 2.6 Knowledge of generating any required code files or includes files using any suitable tool.

	<p>2.7 Formatting the website in accordance with the client requirement.</p> <p>2.8 Required components and dependencies of running a website successfully.</p> <p>2.9 Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>3.3 Skills to create and edit animation using any suitable tool.</p> <p>3.4 Skills to generate any required code files or include files using any suitable tool.</p> <p>3.5 Save the designed website in required format.</p> <p>3.6 Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>

#### **Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB3020A1: Use Image Editing Software (Intermediate Level)</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to develop graphics incorporating a range of features for cross-media publishing based on a client requirement using an image editing software.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Select the image editing software	2.1 Appropriate image editing tool is started 2.2 Necessary plug-ins are installed. 2.3 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3 Edit image using editing software	3.1 Image is opened in layer. 3.2 Slices are created from objects, layers or groups and update as required 3.3 Type anti-aliasing is applied to keep small text easy to read 3.4 Complex shapes are created by combining shapes into compounds and if required, edit compounds 3.5 Formatting, color, brushes, effects and swatches are applied 3.6 Image is optimized and previewed for <b>accessibility</b> . 3.7 Image is exported by maintain <b>standards</b> and be aware of <b>legislation</b> .
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range (may include but are not limited to)</b>
1. PC	1.1 Personal Computer
2. Software Requirements	2.1. Operating System 2.2. Image Editing software (Photoshop, Illustrator, In Design etc )
3. Other Requirements	3.1. Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.

5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.
6. Accessibility considerations	6.1 Cultural awareness 6.2 Ethnicity 6.3 Physical impairments 6.4 Remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to create and edit images for cross-media publishing using an advanced image editing software.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the image.</li> <li>• To identify the design requirements and constraints.</li> </ul> 2.3 Image design standards, conventions and industry best practices. 2.4 Formatting the image in accordance with the client requirements. 2.5 Importance and use of different formats of image. 2.6 Required components and dependencies of designing an image successfully
3. Underpinning skill	3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures. 3.2 Analytical skills required <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the image.</li> <li>• To identify the design requirements and constraints.</li> </ul> 3.3 Skills to visualize target image. 3.4 Skills to develop the image using any suitable software. 3.5 Skill to blend and group images 3.6 Skill to shape images in any form using an image editing software. 3.7 Design the image in accordance with client specification. 3.8 Save the designed image in required format

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB4021A1: Develop theme from design for CMS (Content Management System)</b>
<b>Nominal Hours</b>	<b>80 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to convert design to theme for CMS and check the completed theme for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan to develop a CMS theme.	2.1 <b>Plan</b> the purpose and intended audience of the website are identified. 2.2 The design requirements and constraints are identified. 2.3 A conceptual design is developed. 2.4 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Develop theme in accordance with the design specifications.	4.2 Convert <b>design</b> to HTML document. 4.3 Structure, element tags, necessary files are added and attributes are assigned to meet client requirements in terms of the layout and formatting of the theme and enhancements using given templates design and follow the web and <b>CMS standards</b> . 4.4 <b>Content</b> are added to the site, and also formatted in accordance with client requirements and be aware of <b>legislation</b> .
4. Test the theme.	4.1 The theme is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 4.2 The theme is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.3 The theme is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer

2. Software Requirements	<ul style="list-style-type: none"> <li>2.1 Operating System</li> <li>2.2 Application Server</li> <li>2.3 Anti-virus Software</li> <li>2.4 FTP Client Software</li> <li>2.5 CMS packages</li> </ul>
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	<ul style="list-style-type: none"> <li>4.1 For this unit standard candidates will have to follow World Wide Web (<a href="http://www.w3c.org">www.w3c.org</a>) standards as well as any design or business guidelines given by the owner of website.</li> <li>4.2 Each CMS has it own rule to develop theme, ensure these rules are applied while developing a theme for CMS.</li> </ul>
5. Legislation	<p>Legislation relevant to this unit standard includes but is not limited to the:</p> <ul style="list-style-type: none"> <li>5.1 Copyright Act 2005,</li> <li>5.2 National Cyber Policy,</li> <li>5.3 Intellectual Property Rights law,</li> <li>5.4 Be aware of GNU CMS rules.</li> <li>5.5 And their subsequent amendments.</li> </ul>
6. Testing (Browsers)	<ul style="list-style-type: none"> <li>6.1 Google Chrome</li> <li>6.2 Internet Explorer (Last three version)</li> <li>6.3 Mozilla Firefox</li> <li>6.4 Opera</li> <li>6.5 Safari</li> </ul>
7. Design	<p>(May include but not limited to)</p> <ul style="list-style-type: none"> <li>7.1 .psd</li> <li>7.2 inDesign</li> <li>7.3 image</li> </ul>
8. A plan	<ul style="list-style-type: none"> <li>8.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</li> <li>8.2 Key milestone outcomes;</li> <li>8.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</li> <li>8.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</li> </ul>
9. Accessibility considerations	<ul style="list-style-type: none"> <li>9.1 Cultural awareness</li> <li>9.2 Ethnicity</li> <li>9.3 Physical impairments</li> <li>9.4 Remote locations</li> </ul>

10. Contents	<p>Can include information and interactive features such as:</p> <p>10.1 Graphic medias</p> <p>10.2 Table</p> <p>10.3 List</p> <p>10.4 Form &amp; button</p> <p>10.5 Text formatting</p> <p>10.6 Website content typography</p> <p>10.7 Site map</p> <p>10.8 Hyperlink titles.</p>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	1.1 Must confirm the ability to convert design to theme for CMS and check the completed theme for accuracy using common browsers.
2. Underpinning knowledge	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <p>2.3 To identify the purpose and intended audience of the website.</p> <p>2.4 To identify the design requirements and constraints.</p> <p>2.5 Required components and dependencies of running a website successfully.</p> <p>2.6 Knowledge to develop theme for CMS (Content Management System)</p> <p>2.7 Knowledge to configure the CMS Content Management System and File Transfer Protocol client</p> <p>2.8 Use content management system application in accordance with the specifications of the brief.</p> <p>2.9 Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>•To identify the purpose and intended audience of the website.</li> <li>•To identify the design requirements and constraints.</li> </ul> <p>3.3 Skills to develop theme for CMS (Content Management System)</p> <p>3.4 Skills to configure the Content Management System and File Transfer Protocol client</p> <p>3.5 Use content management system application in accordance with the specifications of the brief.</p> <p>3.6 Can test the website according to the testing procedures</p>

4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB2022A1: Develop a Client Side Dynamic Webpage using JavaScript (Basic Level)</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to enter dynamic features for the Client Side Dynamic Web page using JavaScript and check the completed website for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	<p>1.1 Safe work practices are observed as according to workplace procedures.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Turn on your <b>PC</b> properly.</p>
2. Plan the dynamic features to be added to a website to meet client requirements.	<p>2.1 <b>Plan</b> the purpose and intended audience of the website are identified.</p> <p>2.2 The design requirements and constraints are identified.</p> <p>2.3 A conceptual design is developed.</p> <p>2.4 Necessary <b>software</b> installed and checks <b>other requirement</b>.</p>
3. Add JavaScript to the website in accordance with the design specifications.	<p>3.1 JavaScript element is added and attributes are assigned to meet client requirements in terms of the layout and formatting of the pages and enhancements.</p> <p>3.2 Interactivity is added, edited and formatted to the website in accordance with client requirements.</p> <p>3.3 Dynamic <b>content</b> is added in each and every page, if required, in accordance with client requirements.</p> <p>3.4 The website is saved to a file by use of the program tools available for the task.</p>
4. Test the website.	<p>4.1 The theme is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b>.</p> <p>4.2 The theme is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b>, readability, legibility and presentation in accordance with client requirements.</p> <p>4.3 The theme is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)

1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 8. Key milestone outcomes; 9. How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 10. How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations
9. Contents	Can include information and interactive features such as: 9.1 Graphic medias 9.2 Table 9.3 List 9.4 Form & button 9.5 Text formatting 9.6 Website content typography 9.7 Site map 9.8 Hyperlink titles.

**Evidence Guide**

The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.

1. Critical aspects of competency	1.1 Must confirm the ability to create and edit web contents using JavaScript and check the completed website for accuracy using common browsers.
2. Underpinning knowledge	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>2.3 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.4 Knowledge on well-structured and well-formed JavaScript structures according to W3C JavaScript coding guidelines and conventions</p> <p>2.5 Syntax and variations of using JavaScript element tags and attributes.</p> <p>2.6 Adding text and graphics to the website.</p> <p>2.7 Formatting the website in accordance with client requirements.</p> <p>2.8 Importance and use of different formats of website code files.</p> <p>2.9 Required components and dependencies of running a website successfully.</p> <p>2.10 Importance and structures of developing site map of the website.</p> <p>2.11 Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>3.3 Skills to develop a conceptual model.</p> <p>3.4 Skills to develop the logical model or diagram of website using any suitable tool.</p> <p>3.5 Can develop well-structured and well-formed JavaScript structures according to W3C JavaScript coding guidelines and conventions</p> <p>3.6 Write JavaScript element tags and attributes using notepad.</p>

	<ul style="list-style-type: none"> <li>3.7 Use a common tool to develop JavaScript codes.</li> <li>3.8 Add text and graphics to the website.</li> <li>3.9 Format the website in accordance with the specifications of the brief.</li> <li>3.10 Save the designed website in required format.</li> <li>3.11 Add Dynamic Hyperlinks to allow successful navigation between the pages of the website.</li> <li>3.12 Create site map of the website.</li> <li>3.13 Test the website according to appropriate testing procedures</li> </ul>
4. Required attitude	<ul style="list-style-type: none"> <li>4.1 Commitment to occupational health and safety</li> <li>4.2 Promptness in carrying out activities</li> <li>4.3 Sincere and honest to duties</li> <li>4.4 Environmental concerns</li> <li>4.5 Eagerness to learn</li> <li>4.6 Tidiness and timeliness</li> <li>4.7 Respect for rights of peers and seniors in workplace</li> <li>4.8 Communication with peers, sub-ordinates and seniors in workplace</li> </ul>
5. Resource implication	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> <li>5.1 Materials relevant to the proposed activity.</li> <li>5.2 Measuring instrument.</li> <li>5.3 Relevant drawing, manuals, codes, standard and reference material.</li> </ul>
6. Methods of assessment	<ul style="list-style-type: none"> <li>6.1 Demonstration with oral questioning</li> <li>6.2 Direct observation</li> <li>6.3 Written test</li> <li>6.4 Portfolio</li> <li>6.5 Log book</li> </ul>
7. Context of assessment	<ul style="list-style-type: none"> <li>7.1 Competencies may be assessed in the work place or a simulated work place</li> </ul>
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB3023A1: Develop a Client Side Dynamic Webpage using jQuery (Basic Level)</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to enter dynamic features for the Client Side Dynamic Web page using jQuery and check the completed website for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan the dynamic features to be added to a website to meet client requirements.	1.4 <b>Plan</b> the purpose and intended audience of the website are identified. 1.5 The design requirements and constraints are identified. 1.6 A conceptual design is developed. 1.7 Necessary <b>software</b> installed and checks <b>other requirement</b> .
2. Add jQuery to the website in accordance with the design specifications.	2.1 jQuery plugin is added and attributes are assigned to meet client requirements in terms of the layout and formatting of the pages and enhancements. 2.2 Interactivity is added, edited and formatted to the website in accordance with client requirements. 2.3 Dynamic <b>content</b> is added in each and every page, if required, in accordance with client requirements. 2.4 The website is saved to a file by use of the program tools available for the task.
3. Test the website.	3.1 The theme is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 3.2 The theme is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 3.3 The theme is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.2 Personal Computer

2. Software Requirements	<ul style="list-style-type: none"> <li>2.1 Operating System</li> <li>2.2 Application Server</li> <li>2.3 Anti-virus Software</li> <li>2.4 FTP Client Software</li> </ul>
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	<p>Legislation relevant to this unit standard includes but is not limited to the:</p> <ul style="list-style-type: none"> <li>5.1 Copyright Act 2005,</li> <li>5.2 National Cyber Policy,</li> <li>5.3 Intellectual Property Rights law,</li> <li>5.4 And their subsequent amendments.</li> </ul>
6. Testing (Browsers)	<ul style="list-style-type: none"> <li>6.1 Google Chrome</li> <li>6.6 Internet Explorer (Last three version)</li> <li>6.7 Mozilla Firefox</li> <li>6.8 Opera</li> <li>6.9 Safari</li> </ul>
7. A plan	<p>7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</p> <ul style="list-style-type: none"> <li>11. Key milestone outcomes;</li> <li>12. How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</li> <li>13. How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</li> </ul>
8. Accessibility considerations	<ul style="list-style-type: none"> <li>8.1 Cultural awareness</li> <li>8.2 Ethnicity</li> <li>8.3 Physical impairments</li> <li>8.4 Remote locations</li> </ul>
9. Contents	<p>Can include information and interactive features such as:</p> <ul style="list-style-type: none"> <li>9.1 Graphic medias</li> <li>9.2 Table</li> <li>9.3 List</li> <li>9.3 Form &amp; button</li> <li>9.4 Text formatting</li> <li>9.5 Website content typography</li> <li>9.6 Site map</li> <li>9.7 Hyperlink titles.</li> </ul>

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
2 Critical aspects of competency	1.1 Must confirm the ability to create and edit web contents using jQuery and check the completed website for accuracy using common browsers.
2 Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 2.3 Website design standards and conventions recommended from W3C ( <a href="http://www.w3c.org">www.w3c.org</a> ) 2.4 Knowledge on well-structured and well-formed jQuery structures according to W3C jQuery coding guidelines and conventions 2.5 Syntax and variations of using jQuery element tags and attributes. 2.6 Adding text and graphics to the website. 2.7 Formatting the website in accordance with client requirements. 2.8 Importance and use of different formats of website code files. 2.9 Required components and dependencies of running a website successfully. 2.11 Importance and structures of developing site map of the website. 2.12 Developing test cases and procedures to test the website according to the testing procedures
3 Underpinning skill	3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures. 3.2 Analytical skills required <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 3.3 Skills to develop a conceptual model. 3.4 Skills to develop the logical model or diagram of website using any suitable tool. 3.5 Can develop well-structured and well-formed jQuery structures according to W3C jQuery coding guidelines and conventions 3.6 Write jQuery element tags and attributes using notepad. 3.7 Use a common tool to develop jQuery codes.

	<p>3.8 Add text and graphics to the website.</p> <p>3.9 Format the website in accordance with the specifications of the brief.</p> <p>3.10 Save the designed website in required format.</p> <p>3.11 Add Dynamic Hyperlinks to allow successful navigation between the pages of the website.</p> <p>3.12 Create site map of the website.</p> <p>3.13 Test the website according to appropriate testing procedures</p>
4 Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5 Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6 Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7 Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB2024A1: Host the Website.</b>
<b>Nominal Hours</b>	<b>20 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to host website and update the website periodically.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan the business, technical and security requirements of the hosting server.	2.1 Business, technical and security requirements of the server are identified.
3 Choose and configure the server.	3.1 Hosting space size, bandwidth and back-up options are selected in accordance with client requirements. 3.2 Appropriate Web Application Server is chosen. 3.3 Security options like SSL are chosen in accordance with client requirements. 3.4 Name Server assigned properly with the domain name. 3.5 Virtual website or folder is created and mapped with the domain. 3.6 The entire site is deployed into the virtual folder.
4 Host and test the site.	4.1 The theme is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 4.2 The theme is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.3 The theme is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity

4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 Follow Server provider's agreement. 5.5 And their subsequent amendments.
6. Browsers	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.1.2 Key milestone outcomes; 7.1.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone 7.1.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to host website and update the website periodically.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge of analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify business, technical and security requirements of the hosting server</li> </ul>

	<ul style="list-style-type: none"> <li>• To identify design requirements and constraints</li> </ul> <p>2.3 Required components and dependencies of running a website successfully</p> <p>2.4 Knowledge to configure the hosting server</p> <p>2.5 Knowledge to create virtual folder in hosting server</p> <p>2.6 Knowledge to configure the File Transfer Protocol client</p> <p>2.7 Knowledge to plan and prepare data for transfer</p> <p>2.8 Knowledge to establish connection to hosting server</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures</p> <p>3.2 Analytical skills required</p> <ol style="list-style-type: none"> <li>a. To identify the purpose and intended audience of the website.</li> <li>b. To identify business, technical and security requirements of the hosting server</li> <li>c. To identify the design requirements and constraints</li> </ol> <p>3.3 Skills to configure the hosting server</p> <p>3.4 Skills to create virtual folder in hosting server</p> <p>3.5 Skills to configure the File Transfer Protocol client</p> <p>3.6 Skills to plan and prepare data for transfer</p> <p>3.7 Skill to establish connection to hosting server</p> <p>3.8 Transfer content to hosting server in accordance with the specifications of the requirements.</p> <p>3.9 Can test the website according to testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>

6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place
<p><b>Accreditation Requirements</b>          Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	



National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB4025A1: Monitor and Compile Website Traffic</b>
<b>Nominal Hours</b>	<b>50 hours</b>
<b>Unit Descriptor</b>	This unit covers the knowledge, skills and attitudes required to demonstrate understanding of policies and procedures related to reporting and understanding website traffic and take responsibility for outputs in managing website monitoring.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	<p>1.1 Safe work practices are observed according to workplace procedures.</p> <p>1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.</p> <p>1.3 Turn on your <b>PC</b> properly.</p>
2. Select web traffic monitoring tools	<p>2.1 <b>Plan</b> site analysis software is identified and analyzed with reference to organizational requirements and website architecture.</p> <p>2.2 The most suitable site analysis software is installed according to vendor requirements</p> <p>2.3 The internet service provider service is selected that will achieve the tasks required.</p> <p>2.4 The required report options are identified with reference to organizational requirements and website architecture</p> <p>2.5 A traffic-monitoring plan is developed</p> <p>2.6 Necessary <b>software</b> installed and checks <b>other requirement</b>.</p>
3. Monitor and report web traffic	<p>3.1 Traffic monitoring tool is configured maintaining <b>standards</b> and be aware of <b>legislation</b>.</p> <p>3.2 Required traffic reports are specified according to information requirements</p> <p>3.3 Reports are analyzed to identify improvements to server/site performance</p> <p>3.4 Forecasting methodologies are applied to predict traffic peaks</p> <p>3.5 <b>Testing</b> your site properly.</p>
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	<p>2.1 Operating System</p> <p>2.2 Application Server</p> <p>2.3 Anti-virus Software</p> <p>2.4 FTP Client Software</p>

3. Other Requirements	3.1 Fair Speed Internet Connectivity 3.2 Google Account
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 Follow analytics agreement, 5.5 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.2 Key milestone outcomes; 7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Must confirm the ability to demonstrate understanding of policies and procedures related to reporting and understanding website traffic.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge of analytical methodologies, techniques and procedures

	<ul style="list-style-type: none"> <li>To identify the purpose and intended audience of the website.</li> <li>To identify business, technical and security requirements of the analytic engine.</li> </ul> <p>2.3 Required components and dependencies of running an analytic engine successfully</p> <p>2.4 Knowledge to configure the analytic engine.</p> <p>2.5 Knowledge to establish connection to analytic engine.</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures</p> <ul style="list-style-type: none"> <li>Analytical skills required</li> <li>To identify the purpose and intended audience of the website.</li> </ul> <p>3.2 To identify business, technical and security requirements of the analytical engine.</p> <p>3.3 To identify the design requirements and constraints</p> <p>3.4 Skills to configure the analytical engine.</p> <p>3.5 Skill to establish connection to analytical engine.</p> <p>3.6 Can test the website according to testing procedures.</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>2.4 Materials relevant to the proposed activity.</p> <p><b>2.5</b> Measuring instrument.</p> <p><b>2.6</b> Relevant drawing, manuals, codes, standard and reference material.</p>
3 Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
4 Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB5026A1: Apply SEO techniques</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to apply Search Engine Optimization (SEO) techniques to a website.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan the SEO model to be added to meet client requirements.	2.1 <b>Plan</b> the purpose and intended uses of the website are identified. 2.2 The common search engines are analyzed and search patterns are identified. 2.3 SEO best practices are identified. 2.4 Target domain and verticals are identified. 2.5 SEO model is developed to meet client requirements.
3. Apply SEO techniques to the website.	3.1 SEO techniques are listed to maintaining <b>standards</b> meet client requirement. 3.2 SEO <b>techniques</b> are applied. 3.3 Analytical engine user created and be aware of <b>legislation</b> .
4. Test the site	4.1 Using analytic engine and SEO tools. 4.2 <b>Testing</b> analytic data using common browsers.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law 5.4 And their subsequent amendments.

6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. Technique	(May include but not limited to) 4.1 Standards typography. 4.2 robot.txt accessibility 4.3 Sitemap. 4.4 breadcrumb
8. A plan	8.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 8.2 Key milestone outcomes; 8.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 8.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
9. Accessibility considerations	9.1 Cultural awareness 9.2 Ethnicity 9.3 Physical impairments 9.4 Remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to apply Search Engine Optimization (SEO) techniques to a website.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify common search engines and analyze search pattern</li> <li>• To identify SEO best practices</li> <li>• To identify target domain and verticals</li> </ul> 2.3 Knowledge on developing the SEO model 2.4 Knowledge on applying SEO model to website 2.5 Website design standards and conventions recommended from W3C ( <a href="http://www.w3c.org">www.w3c.org</a> )

	2.6	Knowledge on well-structured and well-formed SEO structures according to W3C SEO guidelines and conventions
3. Underpinning skill	3.1	Use tools and devices to combat OSH hazards and incidents according to workplace procedures.
	3.2	Analytical skills required <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify common search engines and analyze search pattern</li> <li>• To identify SEO best practices</li> <li>• To identify target domain and verticals</li> </ul>
	3.3	Skills to develop the SEO model
	3.4	Skills to apply SEO model to website
	3.5	Can develop well-structured and well-formed SEO structures according to W3C SEO guidelines and conventions
4. Required attitude	4.1	Commitment to occupational health and safety
	4.2	Promptness in carrying out activities
	4.3	Sincere and honest to duties
	4.4	Environmental concerns
	4.5	Eagerness to learn
	4.6	Tidiness and timeliness
	4.7	Respect for rights of peers and seniors in workplace
	4.8	Communication with peers, sub-ordinates and seniors in workplace
5. Resource implication		The following resources must be provided: <ul style="list-style-type: none"> <li>5.1 Materials relevant to the proposed activity.</li> <li>5.2 Measuring instrument.</li> <li>5.3 Relevant drawing, manuals, codes, standard and reference material.</li> </ul>
6. Methods of assessment	6.1	Demonstration with oral questioning
	6.2	Direct observation
	6.3	Written test
	6.4	Portfolio
	6.5	Log book
7. Context of assessment	7.1	Competencies may be assessed in the work place or a simulated work place

### **Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB5027A1: Develop online shopping system</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to integrate an e-commerce features with an existing website, implement payment model and interact with third-party websites.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan e-commerce features and payment model to be added to meet the specifications of a set brief.	2.1 Plan the purpose and intended uses of the shopping system are identified. 2.2 Payment methods are identified. • Feasibility of payment methods is tested. 2.3 The e-commerce business model is developed to meet client requirement.
3. Integrate the e-commerce site and payment methods.	3.1 E-Commerce site is identified, evaluated and selected 3.2 E-commerce site is integrated. 3.3 Payment methods are implemented.
4. Test the shopping system	4.1 Shopping cart is tested accordingly. 4.2 The shopping system is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 4.3 The shopping system is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.4 The shopping system is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Compute
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software

	<p>2.4 FTP Client Software</p> <p>2.5 Online shop management systems.</p>
3. Other Requirements	3.1 Fair speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	<p>Legislation relevant to this unit standard includes but is not limited to the:</p> <p>5.1 Copyright Act 2005,</p> <p>5.2 National Cyber Policy,</p> <p>5.3 Intellectual Property Rights law,</p> <p>5.4 Online shop management system agreement,</p> <p>5.5 Payment methods rules and regulation.</p> <p>5.6 And their subsequent amendments.</p>
6. Testing (Browsers)	<p>6.1 Google Chrome</p> <p>6.2 Internet Explorer (Last three version)</p> <p>6.3 Mozilla Firefox</p> <p>6.4 Opera</p> <p>6.5 Safari</p>
7. A plan	<p>7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</p> <p>7.2 Key milestone outcomes;</p> <p>7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</p> <p>7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</p>
8. Accessibility considerations	<p>8.1 Cultural awareness</p> <p>8.2 Ethnicity</p> <p>8.3 Physical impairments</p> <p>8.4 Remote locations</p>
9. Contents	<p>Can include information and interactive features such as :</p> <p>9.1 Product information</p> <p>9.2 Company information</p> <p>9.3 Copyright and disclaimer notices</p> <p>9.4 Site map</p> <p>9.5 Frequently asked questions</p> <p>9.6 W new</p> <p>9.7 Customer specific information, customer only information</p>



	<p>9.8 Instructions</p> <p>9.9 Feedback mechanisms</p> <p>9.10 Reference pages</p> <p>9.11 Ratings/rankings/testimonials/quotes from reviews</p>
<p><b>Evidence Guide</b></p> <p>The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	Must confirm the ability to integrate e-commerce features with an existing website, implement payment model and interact with third-party websites.
2. Underpinning knowledge	<p>2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>2.2 Knowledge on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify Shopping system features</li> <li>• To identify target domain and verticals</li> </ul> <p>2.3 Knowledge on developing the Shopping model</p> <p>2.4 Knowledge on applying Online Shopping model to website</p> <p>2.5 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.6 Knowledge on well-structured and well-formed e-commerce structures.</p>
3 Underpinning skill	<p>3.1 Skills on analytical methodologies, techniques and procedures</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify Shopping system features</li> <li>• To identify target domain and verticals</li> </ul> <p>3.2 Skills on developing the Shopping model</p> <p>3.3 Skills on applying Online Shopping model to website</p> <p>3.4 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>3.5 Skills on well-structured and well-formed e-commerce structures.</p>
4 Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>

5	Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6	Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7	Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB5028A1: Maintain Website Security</b>
<b>Nominal Hours</b>	<b>60 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge, skills and attitudes required to identify common security threats as well as to secure a website.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan the security features to be added to a website to client requirements.	2.1 The purpose and intended uses of the website are identified. 2.2 Common and specific security threats are identified. 2.3 The security features to be added to a website are identified. 2.4 The security model is developed to meet client requirements.
3 Design the security features of the website to meet client requirements.	3.1 The security features of the website are designed to meet the specifications of the security model.
4 Configure the hosting server to meet client requirements.	4.1 The hosting server is configured to meet the specifications of the security model.
5 Check security logs, monitor performance and report security status to meet the client requirements.	5.1 Security logs are checked and performance is monitored. 5.2 Security status is reported.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.1 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.

5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.2 Key milestone outcomes; how resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.3 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations
<b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1. Must confirm the ability to identify common security threats as well as to secure a website.
2. Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures 2.3 To identify the purpose and intended audience of the website. 2.4 To identify common security threats and analyze threats pattern 2.5 To identify website security model best practices 2.6 Knowledge on developing website security model 2.7 Knowledge on applying website security model to website

	<p>2.8 Website design standards and conventions recommended from W3C (<a href="http://www.w3c.org">www.w3c.org</a>)</p> <p>2.9 Developing test cases and procedures to test the website according to the testing procedures</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <p>3.3 To identify the purpose and intended audience of the website.</p> <p>3.4 To identify common security threats and analyse threats pattern</p> <p>3.5 To identify website security model best practices</p> <p>3.6 Skills to develop website security model</p> <p>3.7 Skills to apply website security model to website.</p> <p>3.8 Skills on developing website security model</p> <p>3.9 Format the website in accordance with the client requirements.</p> <p>3.10 Create site map of the website.</p> <p>3.11 Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

**National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency**

<b>Unit Code and Title</b>	<b>ITWEB5029A1: Configure plug-ins for CMS (Content Management System)</b>
<b>Nominal Hours</b>	<b>80 hours</b>
Unit Descriptor	This unit covers knowledge, skills and attitudes required to configure plug-ins for CMS and check the completed work for accuracy using common browsers.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan to configure a CMS plug-in.	2.1 <b>Plan</b> the purpose and intended audience of the website are identified. 2.2 The design requirements and constraints are identified. 2.3 A conceptual design is developed. 2.4 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Configure plug-ins in accordance with the design specifications.	3.1 Install necessary plug-ins. 3.2 Configure installed plug-ins as required. 3.3 <b>Content</b> are added to the site by using plug-ins, and also formatted in accordance with client requirements and be aware of <b>legislation</b> .
4. Test the plug-in.	4.1 The plug-in is tested to ensure compatibility, functionality, correct any errors and log in according to the <b>testing</b> procedures in the <b>plan</b> . 4.2 The plug-in is opened in a variety of common <b>browsers</b> and check for <b>accessibility</b> , readability, legibility and presentation in accordance with client requirements. 4.3 The plug-in is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of client requirements.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.2 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software 2.5 Plug-ins packages
3. Other Requirements	3.1 Fair Speed Internet Connectivity

4. Standards	<p>4.1 For this unit standard candidates will have to follow World Wide Web (<a href="http://www.w3c.org">www.w3c.org</a>) standards as well as any design or business guidelines given by the owner of website.</p> <p>4.2 Each plug-in has its own rule to use in website, ensure these rules are applied while configuring a plug-in for CMS.</p>
5. Legislation	<p>Legislation relevant to this unit standard includes but is not limited to the:</p> <p>5.1 Copyright Act 2005,  5.2 National Cyber Policy,  5.3 Intellectual Property Rights law,  5.4 Be aware of GNU plug-in rules.  5.5 And their subsequent amendments.</p>
6. Testing (Browsers)	<p>6.1 Google Chrome  6.2 Internet Explorer (Last three version)  6.3 Mozilla Firefox  6.4 Opera  6.5 Safari</p>
7. A plan	<p>7.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</p> <p>7.2 Key milestone outcomes;  7.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;  7.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</p>
8. Accessibility considerations	<p>8.1 Cultural awareness  8.2 Ethnicity  8.3 Physical impairments  8.4 Remote locations</p>
9. Contents	<p>Can include information and interactive features such as:</p> <p>9.1 Graphic medias  9.2 Table  9.3 List  9.4 Form &amp; button  9.5 Text formatting  9.6 Website content typography  9.7 Site map  9.8 Hyperlink titles.</p>

<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	1.1 Must confirm the ability to configure plug-ins for CMS and check the completed work for accuracy using common browsers.
2 Underpinning knowledge	2.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.2 Knowledge on analytical methodologies, techniques and procedures 2.3 To identify the purpose and intended audience of the website. 2.4 To identify the design requirements and constraints. 2.5 Required components and dependencies of running a website successfully. 2.6 Knowledge to configure plug-in for CMS (Content Management System) 2.7 Knowledge to Use plug-ins for content management system application in accordance with the specifications of the brief. 2.8 Developing test cases and procedures to test the website according to the testing procedures
3 Underpinning skill	3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures. 3.2 Analytical skills required <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> 3.3 Skills to configure plug-in for CMS (Content Management System) 3.4 Skills to Use plug-ins for content management system application in accordance with the specifications of the brief. 3.5 Can test the website according to the testing procedures
4 Required attitude	4.1 Commitment to occupational health and safety 4.2 Promptness in carrying out activities 4.3 Sincere and honest to duties 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect for rights of peers and seniors in workplace 4.8 Communication with peers, sub-ordinates and seniors in workplace



5. Resource implication	The following resources must be provided: 5.1 Materials relevant to the proposed activity. 5.2 Measuring instrument. 5.3 Relevant drawing, manuals, codes, standard and reference material.
6. Methods of assessment	6.1 Demonstration with oral questioning 6.2 Direct observation 6.3 Written test 6.4 Portfolio 6.5 Log book
7. Context of assessment	7.1 Competencies may be assessed in the work place or a simulated work place

**Accreditation Requirements**

Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB4031a1 - Use Ajax and JSON</b>
<b>Nominal Hours</b>	<b>40 hours</b>
<b>Unit Descriptor</b>	This unit covers knowledge; skills and attitudes required to Update a web page without reloading the page, request / receive / send data from a server - after the page has loaded and storing and exchanging data using ajax and json.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.3 Turn on your <b>PC</b> properly.
2. Plan to implement ajax and json.	<b>2.1</b> <b>Plan</b> the purpose and intended audience of the website are identified. <b>2.2</b> The design requirements and constraints are identified. <b>2.3</b> A conceptual design is developed. <b>2.4</b> Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Implement ajax and JSON according to specifications.	3.1 Embed necessary ajax and JSON code. 3.2 Configure embedded ajax and JSON as required. 3.3 <b>Content</b> are added to the site by using plug-ins, and also formatted in accordance with client requirements and be aware of <b>legislation</b> . 3.4 Test Ajax and JSON functionality.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b> (May include but not limited to)
1. PC	1.3 Personal Computer
2. Software Requirements	2.1 Operating System 2.2 Application Server 2.3 Anti-virus Software 2.4 FTP Client Software 2.5 Ajax and JSON codes.
3. Other Requirements	3.1 Fair Speed Internet Connectivity
4. Standards	4 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.
5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy,

	<p>5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.</p>
6. Testing (Browsers)	<p>6.6 Google Chrome 6.7 Internet Explorer (Last three version) 6.8 Mozilla Firefox 6.9 Opera 6.10 Safari</p>
7. A plan	<p>7.1.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include:</p> <p>7.1.2 Key milestone outcomes;</p> <p>7.1.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone;</p> <p>7.1.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.</p>
8. Accessibility considerations	<p>8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations</p>
9. Contents	<p>Can include information and interactive features such as:</p> <p>9.1 Graphic medias 9.2 Table 9.3 List 9.4 Form &amp; button 9.5 Text formatting 9.6 Website content typography 9.7 Site map 9.8 Hyperlink titles.</p>
<p><b>Evidence Guide</b> The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.</p>	
1. Critical aspects of competency	<p>Must ability to embed and configure Ajax and JSON code for reloading the page, request / receive / send data from a server - after the page has loaded and storing and exchanging data using ajax and JSON.</p>
2. Underpinning knowledge	<p>2.1.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.1.2 Knowledge on analytical methodologies, techniques and procedures 2.1.3 To identify the purpose and intended audience of the website.</p>

	<p>2.1.4 To identify the design requirements and constraints.</p> <p>2.1.5 Required components and dependencies of running a website successfully.</p> <p>2.1.6 Knowledge to configure ajax and JSON code.</p> <p>2.1.7 Knowledge to ajax and JSON code in accordance with the client requirements.</p> <p><b>2.1.8</b> Developing test cases and procedures to test the website according to the testing procedures.</p>
3. Underpinning skill	<p>3.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.2 Analytical skills required</p> <ul style="list-style-type: none"> <li>• To identify the purpose and intended audience of the website.</li> <li>• To identify the design requirements and constraints.</li> </ul> <p>3.3 Skills to configure ajax and JSON code.</p> <p>3.4 Skills to ajax and JSON code in accordance with the client requirements.</p> <p>3.5 Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b></p> <p>Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	

National Technical and Vocational Qualification Framework for Bangladesh  
Unit of Competency

<b>Unit Code and Title</b>	<b>ITWEB5032A1 - Design and administer a Database (RDBMS)</b>
<b>Nominal Hours</b>	<b>80</b>
<b>Unit Descriptor</b>	This unit covers knowledge; skills and attitudes required to design, create, connect and manipulate database and established relation among table in database.
<b>Elements of Competency</b>	<b>Performance Criteria</b> <i>Italicized</i> terms are elaborated in the range of variables
1. Follow OSH practices	1.1 Safe work practices are observed as according to workplace procedures. 1.2 OSH hazards and incidents are reported to appropriate personnel according to workplace procedures. 1.1 Turn on your <b>PC</b> properly.
2. Plan to design database according to client requirements.	2.1 <b>Plan</b> the purpose and intended audience of the website are identified. 2.2 The design requirements and constraints are identified. 2.3 A conceptual design is developed. 2.4 Necessary <b>software</b> installed and checks <b>other requirement</b> .
3. Implement database according to client requirements.	According to client requirements 3.1 DB is created 3.2 Table is created 3.3 Data is inserted 3.4 Last ID is retrieved 3.5 Multiple data is inserted 3.6 Data is selected 3.7 Data is deleted 3.8 Data is updated 3.9 Data is limited
4. Test database	4.1 Test database using most use common browsers.
<b>Range of Variables</b>	
<b>Variable</b>	<b>Range</b>
1. PC	1.4 Personal Computer
2. Software Requirements	2.6 Operating System 2.7 Application Server 2.8 Anti-virus Software 2.9 FTP Client Software 2.10 Ajax and JSON codes.
3. Other Requirements	3.2 Fair Speed Internet Connectivity
4. Standards	4.1 For this unit standard candidates will have to follow World Wide Web ( <a href="http://www.w3c.org">www.w3c.org</a> ) standards as well as any design or business guidelines given by the owner of website.

5. Legislation	Legislation relevant to this unit standard includes but is not limited to the: 5.1 Copyright Act 2005, 5.2 National Cyber Policy, 5.3 Intellectual Property Rights law, 5.4 And their subsequent amendments.
6. Testing (Browsers)	6.1 Google Chrome 6.2 Internet Explorer (Last three version) 6.3 Mozilla Firefox 6.4 Opera 6.5 Safari
7. A plan	7.1.1 Outlines how the client requirements will be realized. The plan must include the specifications and/or features required by the client to provide the solution. The plan may be modified during the task and changes justified. Evidence of planning may be oral, written, and/or graphic. Depending on the assessment context, the plan may include: 7.1.2 Key milestone outcomes; 7.1.3 How resources such as time, expertise and materials (and finance, if appropriate) will be used to achieve the outcomes of each milestone; 7.1.4 How consultation with stakeholders will be carried out to ensure that all constraints and requirements are met.
8. Accessibility considerations	8.1 Cultural awareness 8.2 Ethnicity 8.3 Physical impairments 8.4 Remote locations
9. Contents	Can include information and interactive features such as: 9.1 Table 9.2 MD5 encryption 9.3 Exporting multiple format.
<b>Evidence Guide</b>	
The evidence must be authentic, valid, sufficient, reliable, consistent and recent and meet the requirements of the current version of the Unit of Competency.	
1. Critical aspects of competency	Must able to design, create, connect and manipulate database and established relation among table in database.
2. Underpinning knowledge	2.1.1 How to use tools and devices to combat OSH hazards and incidents according to workplace procedures. 2.1.2 Knowledge on analytical methodologies, techniques and procedures 2.1.3 To identify the purpose and intended audience of the website. 2.1.4 To identify the design requirements and constraints.

	<p>2.1.5 Required components and dependencies of running a database successfully.</p> <p>2.1.6 Knowledge to configure database.</p> <p>2.1.7 Knowledge to database attributes in accordance with the client requirements.</p> <p><b>2.1.8</b> Developing test cases and procedures to test the website according to the testing procedures.</p>
3. Underpinning skill	<p>3.1.1 Use tools and devices to combat OSH hazards and incidents according to workplace procedures.</p> <p>3.1.2 Analytical skills required</p> <p>3.1.3 To identify the purpose and intended audience of the website.</p> <p>3.1.4 To identify the design requirements and constraints.</p> <p>3.1.5 Skills to configure database.</p> <p>3.1.6 Skills to database attributes in accordance with the client requirements.</p> <p><b>3.1.7</b> Can test the website according to the testing procedures</p>
4. Required attitude	<p>4.1 Commitment to occupational health and safety</p> <p>4.2 Promptness in carrying out activities</p> <p>4.3 Sincere and honest to duties</p> <p>4.4 Environmental concerns</p> <p>4.5 Eagerness to learn</p> <p>4.6 Tidiness and timeliness</p> <p>4.7 Respect for rights of peers and seniors in workplace</p> <p>4.8 Communication with peers, sub-ordinates and seniors in workplace</p>
5. Resource implication	<p>The following resources must be provided:</p> <p>5.1 Materials relevant to the proposed activity.</p> <p>5.2 Measuring instrument.</p> <p>5.3 Relevant drawing, manuals, codes, standard and reference material.</p>
6. Methods of assessment	<p>6.1 Demonstration with oral questioning</p> <p>6.2 Direct observation</p> <p>6.3 Written test</p> <p>6.4 Portfolio</p> <p>6.5 Log book</p>
7. Context of assessment	<p>7.1 Competencies may be assessed in the work place or a simulated work place</p>
<p><b>Accreditation Requirements</b>  Training Providers must be accredited by Bangladesh Technical Education Board (BTEB), the national quality assurance body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of any national qualification. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by BTEB.</p>	