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# Facilitator Guide



Sector  
IT-ITeS

Sub-Sector  
IT Services

Occupation  
Application Development

Reference ID: SSC/Q0503, Version 3.0  
NSQF level 4

## Web Developer



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**Shri Narendra Modi**  
Prime Minister of India

“ Skilling is building a better India.  
If we have to move India towards  
development then Skill Development  
should be our mission. ”



## Acknowledgements

IT-ITeS Sector Skills Council NASSCOM would like to express its gratitude to all the individuals and institutions who contributed in different ways towards the preparation of this “Facilitator Guide”. Without their contribution it would not have been completed. Special thanks are extended to those who collaborated in the preparation of its different modules. Sincere appreciation is also extended to all who provided peer review for these modules. The preparation of this Guide would not have been possible without the IT - ITeS support. Industry feedback has been extremely encouraging from inception to conclusion and it is with their input that we have tried to bridge the skill gaps existing today in the Industry.

This Guide is dedicated to the aspiring youth who desire to achieve special skills which will be a lifelong asset for their future endeavours.

## About this Book

This Participant Handbook is developed to impart training for the skill and knowledge required to work as a Web Developer. It is designed based on the Qualification Pack SSC/Q0503 under the National Skill Qualification Framework and comprises of the following NOS/topics:

1. SSC/N0501: Contribute to the design of software products and applications
2. SSC/N0503: Develop media content and graphic designs for software products and applications
3. SSC/N90104: Implement & Improve the Gender Sensitivity, PWD (Person/People With Disability) Sensitivity and Greening
4. DGT/VSQ/N0102 Employability Skills

This book is designed considering the technical demand and educational background of the participants. Thus, special effort has been made to explain the concepts required for the job mostly through graphics and illustrations.

## Symbols Used



Key Learning Outcomes



Practical



Exercise



Activity



Facilitation Notes



Unit Objectives



Demonstrate



Do



Explain



Say



Ask



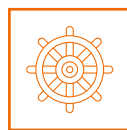
Team Activity



Summary



Resources



Elaborate



Tips

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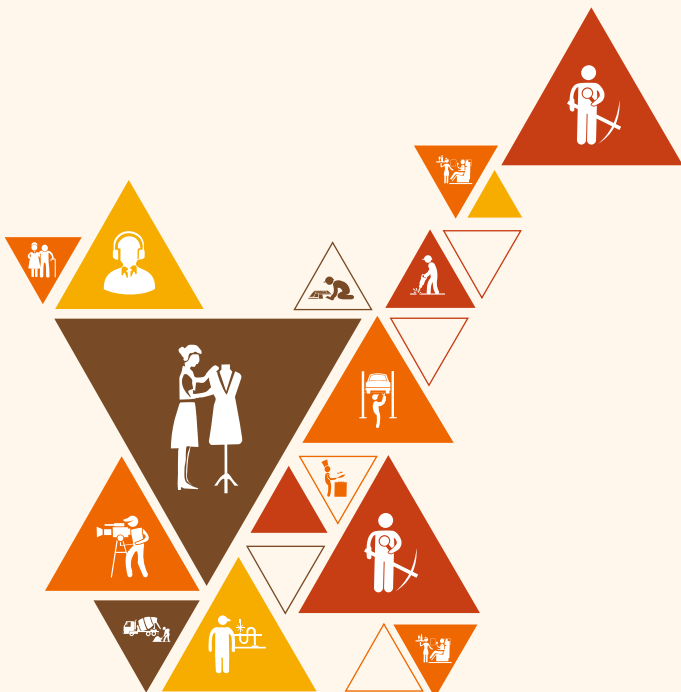


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# 1. IT-ITeS/Application Development Industry – An Introduction

Unit 1.1 - IT-ITeS/Application Development Industry

Unit 1.2 - Career Path of a Web Developer



**Bridge Module**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Comprehend various delivery models used in the IT-Application development industry
2. Examine the current growth and development standards of web development application

## UNIT 1.1: IT- ITeS / Application Development Industry

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Discuss the relevance of the IT-ITeS sector
2. List the various sub-sectors of the Application development industry

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Say

- Start the class by saying, "This training program is developed to impart specific knowledge and skills relevant to the job required to be performed as a "Web Developer", in the "IT-ITeS Sector/Industry."
- Talk about the Qualification Pack (QP), and National Occupational Standards (NOS).
- List the compulsory NOSs to the QP "Web Developer ".
- Say, "Before we start the program let's play a small game".

### Group Activity

<b>Objective</b>	The purpose of this activity is to gain participants' attention
<b>Materials required</b>	N/A

**Steps/procedure**

- This is an ice breaker activity.
- Ask the participants to gather in a circle
- Inform them that they all will play together to create a story.
- One of the participants will start the game by narrating the first three lines of an imaginary story.
- The next adjacent participant will say 'suddenly.'
- Then, the participant next to him continues the story by stating the new three lines.
- Whoever does not respond will be considered out of the game.
- After this, the Facilitation will sum up the whole story quickly.

**Conclusion / what has been achieved**

This activity will assist participants to pay attention in the class and also help them to connect.

**Explain**

- Explain the meaning of information technology and its important features.
- Explain different segments of IT industry with the help of Fig. 1.1.1 in the Participant Handbook.
- Explain the relevance of IT/ITeS industry.
- Explain the IT application development industry and its types.
- Explain the sub-sectors of the application development industry with the help of Fig. 1.1.2 in the Participant Handbook.
- Explain the emerging trends in application development industry with the help of Fig 1.1.3 in the Participant Handbook.

**Do/Demonstrate**

- Demonstrate 'Software Products Development sector' with the help of the AV link - <https://youtu.be/dnH-y7eQ4aQ>

## Elaborate

- Elaborate the various delivery models used in the IT application development industry:
  - Waterfall model (Fig 1.1.5)
  - Iterative model (Fig 1.1.6)
  - Agile Model (Fig 1.1.6)
  - DevOps (Fig 1.1.7)
- Elaborate web development standards. (Table 1.1.1)

## Ask

- What do you understand about the IT/ITeS sector?
- How waterfall model is different from the Iterative model in the IT sector?
- Name any two sub-sectors of the application development industry.

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Summarize

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Notes for Facilitation

- Examine participants about their expectations from this program.
- Inquire participants if they have any doubts. Then, encourage them to ask questions.
- Answer their queries.

## UNIT 1.2 Career Path for a Web Developer

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Identify the career path for a Web Developer

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Ask

- Start the class by asking a few questions on IT sector and its sub-sector and give participants the chance to guess before revealing the correct answer.

### Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

### Say

- "The work of a web developer is to build websites. Many web developers are in charge of the website's performance and capacity in addition to making sure it is aesthetically pleasing and simple to navigate."
- "This unit will help you understand the key responsibilities and career path of web developer."

## Explain



- Explain roles and responsibilities of a web developer.
- Explain required skills in a web developer with the help of figure (Fig 1.2.1) given in Participant Handbook.
- Explain various job roles and career opportunities available for a web developer in IT/ITeS sector. (Fig 1.2.2 and Fig 1.2.3).

## Summarize



- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise



- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 1.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answer to Question I:
    1. Reference given in 1.1.3
    2. Reference given in 1.1.6
  - Answer to Question II:
    1. Waterfall model
    2. Web application development
  - Answer to Question III:
    1. Waterfall
    2. Web Developer



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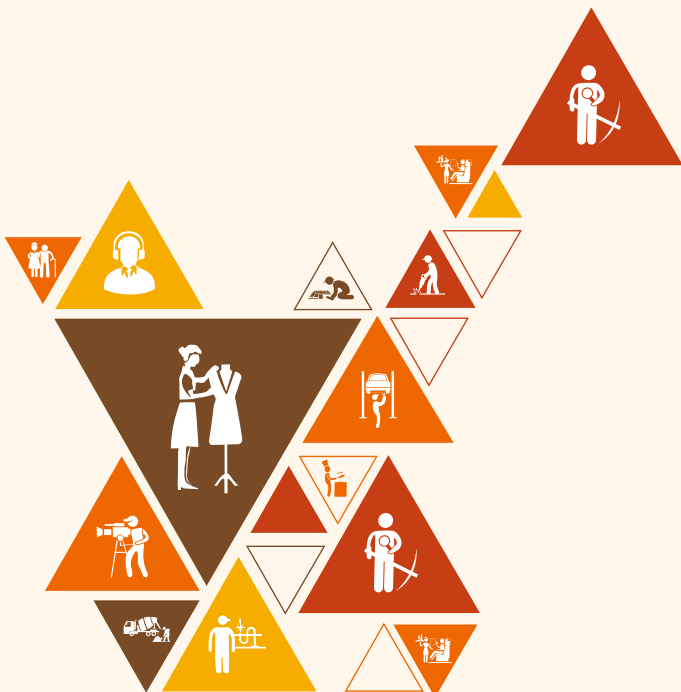
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## 2. Programming for the Web

Unit 2.1 - Web Designing and Development



**SSC/N0501**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Evaluate the functioning of Business Requirement Specification, User Requirements Specification, Software Requirements Specification and Low-Level Design in the web development domain
2. Examine how assumptions, constraints, interfaces determine the process of web designing

## UNIT 2.1 Web Designing and Development

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Evaluate the use of the Business Requirements Specification (BRS)/User Requirements Specification (URS)
2. Identify the Software Requirements Specification (SRS)

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

### Ask

- Start the class by asking a few questions on ITeS sector/Sub-sectors and give participants the chance to guess before revealing the correct answer.
- Ask them about roles and responsibilities of a web developer.

### Notes for Facilitation

- Welcome and greet the students.
- Begin the session with a brief recapitulation of the previous session.

## Say

- “Start the class by saying, “This unit will help you to understand websites and its different types. Further, we will discuss the coding and specifications for web designing.”

## Explain

- Explain website and its types with the help of Table 2.1.1 given in the Participant Handbook.
- Explain the difference between static & dynamic website with the help of Fig 2.1.1 given in the Participant Handbook.
- Explain coding and programming language.
- Explain different types of web development programming languages website with the help of Fig 2.1.4 given in the Participant Handbook.
- Explain basic elements of web designing with the help of Fig 2.1.11 given in the Participant Handbook.

## Elaborate

- Elaborate on the following topics:
  - Business requirement specifications (BRS) and its features (Fig 2.1.12)
  - Elements of Business requirement document (BRD)
  - Benefits of BRD (Fig 2.1.13)
  - Steps to create BRD

## Ask

- What are websites?
- Can you tell me difference between static and dynamic website?
- How front-end development is different from back-end development?
- List few basic elements required in web designing.
- What is Business requirement specifications (BRS)?

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Explain

- Explain steps to create a URS.
- Explain software requirement specification (SRS) and its key features with the help of Fig 2.1.18 given in the Participant Handbook.
- Explain various elements of SRS documents with the help of Fig 2.1.29 given in the Participant Handbook.
- Explain the importance of SRS documents.
- Explain the guidelines for writing software use cases in an SRS with the help of Fig 2.1.20 given in the Participant Handbook.

## Elaborate

- Elaborate on the following tools used for customer query management -.
  - Six stages for creating SRS document in software engineering
  - Various Constraints in web design
  - Key assumptions for creating websites
  - Interfaces of web designing process

## Ask

- What is the six stages for producing an SRS document in software engineering?
- What is the difference between functional constraints and non-functional constraints?
- Can anyone tell me about low-level and high-level design for programming?

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Explain

- Explain low-level design and its key features with the help of Fig 2.1.25 given in the Participant Handbook.
- Explain object-oriented design in LLD with the help of Fig 2.1.27 given in the Participant Handbook.
- Explain database design in LLD with the help of Fig 2.1.28 given in the Participant Handbook.
- Explain API design in LLD.
- Explain the process of creating low level design with the help of Fig 2.1.29 given in the Participant Handbook.
- Explain high-level design and its key features with the help of Fig 2.1.30 given in the Participant Handbook.

## Do/Demonstrate

- Demonstrate web designing and development with the help of the AV link below - [youtu.be/RTLySOPkhoc](https://youtu.be/RTLySOPkhoc)

## Ask

- What is the purpose of sequence diagram?

## Notes for Facilitation

- Write down the response on the board.

## Elaborate



- Elaborate on the following topics-
  - Components of HLD (Fig 2.1.31)
  - Purpose and scope of HLD
  - Characteristics of HLD (Fig 2.1.32)
  - Requirements of HD
  - Construction steps of HLD

## Summarize



- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 2.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I:
    1. Reference given in 2.1.1
    2. Reference given in 2.1.1
    3. Reference given in 2.1.2
    4. Reference given in 2.1.3
  - Answers to Questions II:
    1. To speed up
    2. Programing Languages
    3. Coding
    4. IP address
  - Answer to Question III:
    1. It helps in expressing the functional logic of every module in a system in detail
    2. Sensory Constraints

## QR Code

Scan the QR Code to watch the related video



<https://youtu.be/RTLySOPkhoc>

Unit 2.1 Web Designing and Development



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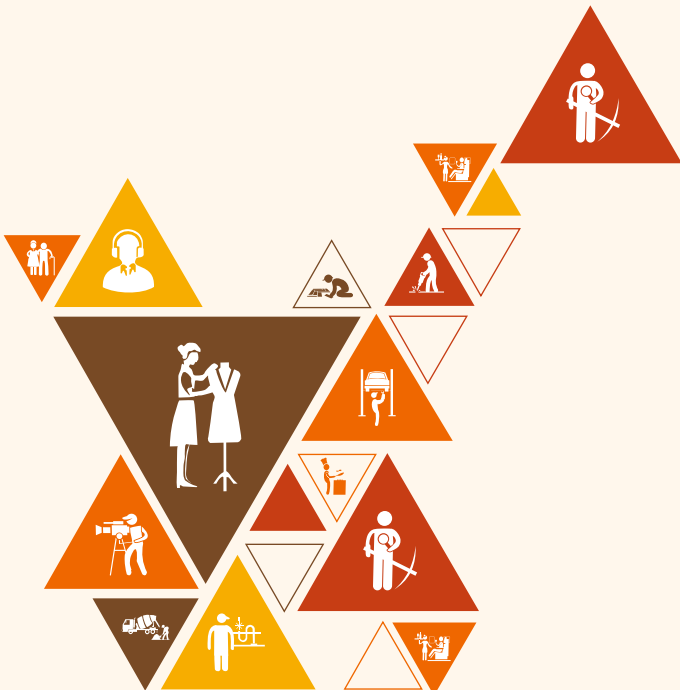
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# 3. Contribute to the Design of Software Products and Applications

Unit 3.1 - Design Defects and Its Solution



**SSC/N0501**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Collate basic programming structures related to High Level design/Low Level Design and monitor the same
2. Examine how to create software code that is efficient, readable, and maintainable

## UNIT 3.1 Design Defects and Its Solution

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Collate inputs from design experts to identify, resolve and record design defects
2. Discuss conclusions from defects for improving future designs
3. Discuss how to use various ranges of coding tools

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Say

- " In the last unit, we gained an understanding of Business Requirements Specification (BRS)/User Requirements Specification (URS) and Software Requirements Specification (SRS) in web development."
- "In today's session, we will discuss about design defects and its solution."
- "When a software product does not live up to the standards or expectations set forth for it, it is said to have a flaw."

### Ask

- What do you understand by term 'defect'?
- Did you discover any issues/defects while designing web pages?

### Notes for Facilitation

- Write down the response of the students on the board.

## Explain



- Explain design defects.
- Explain the primary cause of design defects.
- Explain the categories of design defects.
- Explain the stages of defect in software development life cycle with the help of Fig 3.1.4 given in the Participant Handbook.
- Explain different types of testing for software defects.

## Do/Demonstrate



- Demonstrate design defects and their resolution with the help of the AV link - [youtu.be/kfcgk2lsdQ8](https://youtu.be/kfcgk2lsdQ8)

## Elaborate



- Elaborate on the following topics:
  - Unit testing
  - Importance of unit testing (Fig 3.1.6)
  - Advantages and disadvantages of unit testing (Fig 3.1.7)
  - Unit Testing Techniques (Fig 3.1.2)
  - Unit testing tools

## Ask



- What are the various stages of software testing?
- What is the difference between black box testing and white box testing?
- List any three tools of unit testing.

## Notes for Facilitation



- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Explain



- Explain integration testing and its importance with the help of Fig 3.1.10 given in the Participant Handbook.
- Explain different types of integration testing with the help of Fig 3.1.11 given in the Participant Handbook.
- Explain the procedure for conducting integration testing.
- Explain best integration testing tools.
- Explain system testing and its process with the help of Fig 3.1.12 given in the Participant Handbook.
- Explain different kinds of system testing with the help of Fig 3.1.13 given in the Participant Handbook.

## Elaborate



- Elaborate on the following topics:
  - Acceptance testing
  - Need For User Acceptance Testing (UAT)
  - Checklist for user acceptance testing
  - Process to conduct User Acceptance Testing (UAT)

## Ask



- What do you understand by smart integration test accelerator (SITA)?
- Can anyone list few checklists of user acceptance testing?

## Notes for Facilitation



- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Explain



- Explain procedure of defect resolution with the help of Fig 3.1.15 given in the Participant Handbook.
- Explain scope of improvement for future design.
- Explain different types of coding Tool and their uses.
- Explain recording and documentation of design defects.

## Elaborate



- Elaborate the following topics:
  - Checklist of defect report
  - Format of defect text (Fig 3.1.16)

## Summarize



- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 3.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 3.1.1
    2. Reference given in 3.1.4
    3. Reference given in 3.1.6
    4. Reference given in 3.1.3
    5. Reference given in 3.1.7
    6. Reference given in 3.1.5
    7. Reference given in 3.1.3
  - Answers to Questions II.
    1. System testing
    2. Defect resolution
    3. Code and verify whether the unit functions as designed
  - Answer to Question III:
    1. GitHub
    2. Nunit

## QR Code

Scan the QR Code to watch the related video



<https://youtu.be/kfcgk2lsdQ8>  
Unit 3.1 Design Defects and Its Solution



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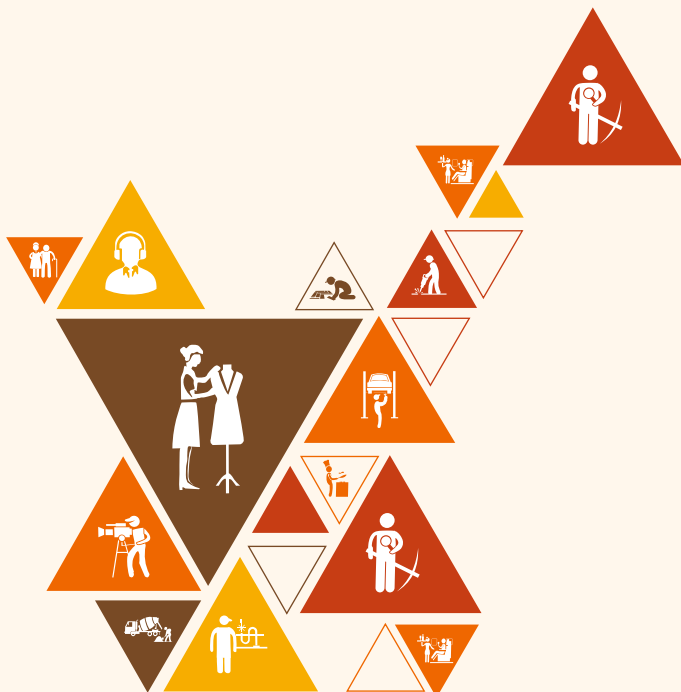


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## 4. Technical Skills for Software Design

Unit 4.1 - Technical specifications for coding

Unit 4.2 - Designing of software products



**SSC/N0501**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Utilize the codes constructed to meet technical specifications
2. Practice hands-on experience on various software for designing

## UNIT 4.1 Technical Specifications for Coding

### Unit Objectives

At the end of this unit, the participant will be able to:

1. List the functional and non-functional requirements in software application for web development

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Notes for Facilitation

- Welcome and greet the students.
- Begin the session with a brief recapitulation of the previous session.

### Say

- “In the previous session, we have gained knowledge related to programming structures, tools required for coding and documentation of designs.”
- “In today’s session, we will discuss functional and non-functional requirements in software application for web development.”

### Do/Demonstrate

- Demonstrate functional and non-functional requirements in software application with the help of YouTube link –  
<https://www.youtube.com/watch?v=3fgfUHKITs>

## Explain

- Explain the meaning of functional and non-functional specifications for web development.
- Explain features and benefits of functional requirement (Fig 4.1.1).
- Explain features and benefits of non-functional requirement (Fig 4.1.2).
- Explain categories of non-functional requirements (Fig 4.1.3).

## Ask

- Can you tell me difference between functional and non-functional requirements in web development??

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Elaborate

- Elaborate on the following topics -.
  - Specification document
  - User stories
  - User cases
  -

## Summarize

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Unit 4.1
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 4.1.1
    2. Reference given in 4.1.1
    3. Reference given in 4.1.1
    4. Reference given in 4.1.1 (Fig 4.4)
    5. a) Reference given in 4.1.1  
b) Reference given in 4.1.1  
c) Reference given in 4.1.1  
d) Reference given in 4.1.1
  - Answers to Questions II.
    1. User cases
    2. Non-functional requirements
    3. User stories
  - Answer to Question III:
    1. Specification document
    2. Audit Tracking

## UNIT 4.2 Designing of Software Products

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Discuss the current practice in the design of software products

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Say

- “We have discussed the functional and non-functional requirements in software application for web development in previous unit. Let’s understand current practices in software product design in today’s session.”

### Explain

- Explain the current practices in software product design with the help of figure given in the participant handbook (fig 4.2.1)

### Elaborate

- Elaborate the following platform for web designing:
  - WordPress
  - PHP
  - Joomla
  - Magneto
  - Active Server Pages (ASP)
  - Java Server Pages (JSP) technology

**Ask**

- Which platform of web designing is widely used for blogging?
- What is the difference between ASP and JSP?

**Notes for Facilitation**

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

**Summarize**

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Unit 4.2
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 4.2.1
    2. Reference given in 4.2.2
    3. Reference given in 4.2.2
    4. Reference given in 4.2.2
    5. Reference given in 4.2.2
  - Answers to Questions II.
    1. Website
    2. Magneto
    3. PHP
  - Answer to Question III:
    1. 2003
    2. Magneto



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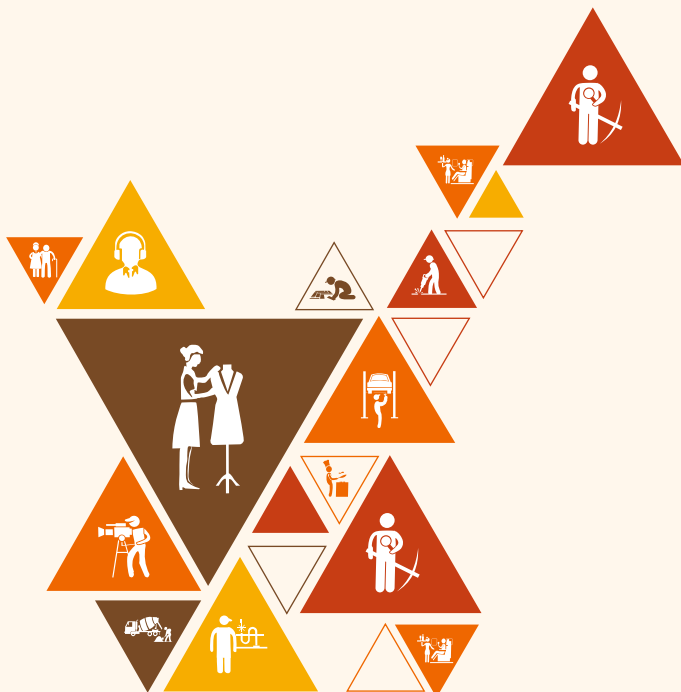
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## 5. Analysis and Design of Web Based Applications

Unit 5.1 - Process of conversions and testing new  
products and applications



SSC/N0503

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Evaluate the process for converting designs into media and graphic content
2. Examine how to test new products and applications

## UNIT 5.1 Process of Conversions and Testing New Products and Applications

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Discuss the implications that new products and applications may have on business processes.
2. Identify the sources of information to design software products and specifications.
3. List range of equipment used to design software products and applications.

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Do

- Welcome and greet the students.
- Begin the session with a brief recapitulation of the previous session.

### Say

- " In the previous unit, we discussed current practice in the design of software products."
- " Today, we are going to cover elements of graphic design."
- "Also, we will learn about sources of information and equipment used to design software products and application."

### Ask

- What do you understand by graphic?
- Can you tell me about graphic design?

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Do/Demonstrate

- Demonstrate the process of conversions and testing new products and applications with the help of the AV link - [youtu.be/RXOq0d-5g9g](https://youtu.be/RXOq0d-5g9g)

## Explain

- Explain the elements of graphic design with help of Fig. 5.1.1 given in the Participant Handbook.
- Explain sources of information and their platform for web designing.
- Explain software for conversion of web designing.
- Explain the process for conversion with help of Fig. 5.1.11 given in the Participant Handbook.
- Explain various equipment for web designing.

## Elaborate

- Elaborate on the following topics:
  - Testing of new products and applications (Fig 5.1.12)
  - Implications of New Products and Applications on Business Processes (Table 5.1.2)

## Ask

- What do you understand by GIMP (GNU Image Manipulation Program)?
- How smartphone is used as an equipment of web designing?
- What is testing of new products and applications?

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Summarize

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 5.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 5.1.1
    2. Reference given in 5.1.1 (Fig 5.1.1)
    3. Reference given in 5.1.6
    4. Reference given in 5.1.4
    5. Reference given in 5.1.4
    6. Reference given in 5.1.4
    7. Reference given in 5.1.3
  - Answers to Questions II.
    1. DSLR (Digital Single Lens Reflex)
    2. Adobe Photoshop
    3. Media and techniques
  - Answer to Questions III:
    1. Pinterest
    2. GIMP (GNU Image Manipulation Program)

## QR Code

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<https://youtu.be/RXOq0d-5g9g>

Unit 5.1 Process of conversions and testing new products and applications



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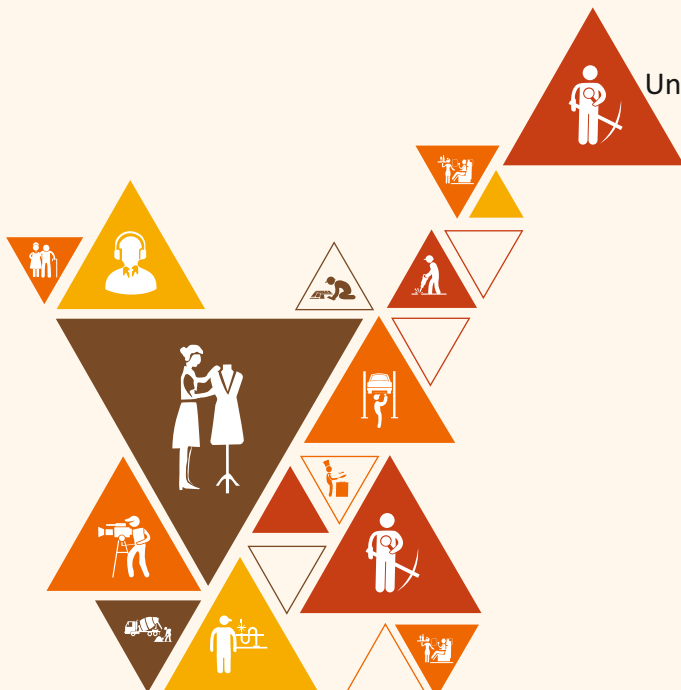


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## 6. Develop Media Content and Graphic Designs for Software Products and Applications

Unit 6.1 - Selection of Components and Tools for  
Web/Media Content Development

Unit 6.2 - Verification and Validation of Media and  
Graphics



**SSC/N0503**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Illustrate the various forms of coding tools required for software applications and web designs
2. Convert requirements into web content and graphic designs, leveraging reusable components

## UNIT 6.1 Selection of Components and Tools for Web/Media Content Development

### Unit Objectives

At the end of this unit, the participant will be able to:

1. Select reusable components, media and graphical packages and tools to develop media content

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Do

- Welcome and greet the students.
- Discuss the important topics from the previous two modules.

### Say

- Say that, "So, let's start today's session. In this module, we are going to discuss reusable components, media and graphical packages and tools for developing web/media content."
- "Do you know what is reusable components?"
- "Let's find it in detail."

## Explain



- Explain reusable components, media and graphical packages.
- Explain the characteristics of reusable components with help of Fig.6.1.1 given in the Participant Handbook.
- Explain benefits and drawbacks of reusable components, media and graphical packages with help of Fig.6.1.2 and 6.1.3 given in the Participant Handbook.
- Explain the guidelines to create reusable components with help of Fig.6.1.4 given in the Participant Handbook.
- Explain various tools used for reusing media content.

## Elaborate



- Elaborate the following topics:
  - Designing skills required for creating templates and reusable designs (Fig 6.1.5)
  - Technical tasks performed using fireworks and Dreamweaver (Fig 6.1.6)

## Ask



- List five tools used for reusing media content.
- What are the characteristics of reusable components?

## Notes for Facilitation



- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Summarize

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## UNIT 6.2 Verification and Validation of Media and Graphics

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Identify any defects and corrective actions taken to improve media and graphics

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Explain

- Explain the verification of media and graphics.
- Explain the validation of media and graphics.
- Explain phases for design validation with help of Fig.6.2.1 given in the Participant Handbook.
- Explain details required for design validation with help of Fig.6.2.2 given in the Participant Handbook.
- Explain steps for validation process with help of Fig.6.2.3 given in the Participant Handbook.

### Do/Demonstrate

- Demonstrate verification and validation of media and graphics with the help of the AV link - [youtu.be/IrdTWzRz5v0](https://youtu.be/IrdTWzRz5v0)

**Ask**

- What are the phases of design validation?
- Can anyone tell me steps of validation process?

**Notes for Facilitation**

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

**Summarize**

- Summarize the session with the roleplay activity.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise



- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 6.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 6.1.2 and 6.1.3
    2. Reference given in 6.1.4
    3. Reference given in 6.2.1 and 6.2.2
  - Answers to Questions II.
    1. Reusable components
    2. Chunking and assembling
    3. Design validation
  - Answer to Question III:
    1. Storybook
    2. Design analysis

## QR Code

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<https://youtu.be/IrdTWzRz5v0>

Unit 6.2 Verification and Validation of Media and Graphics



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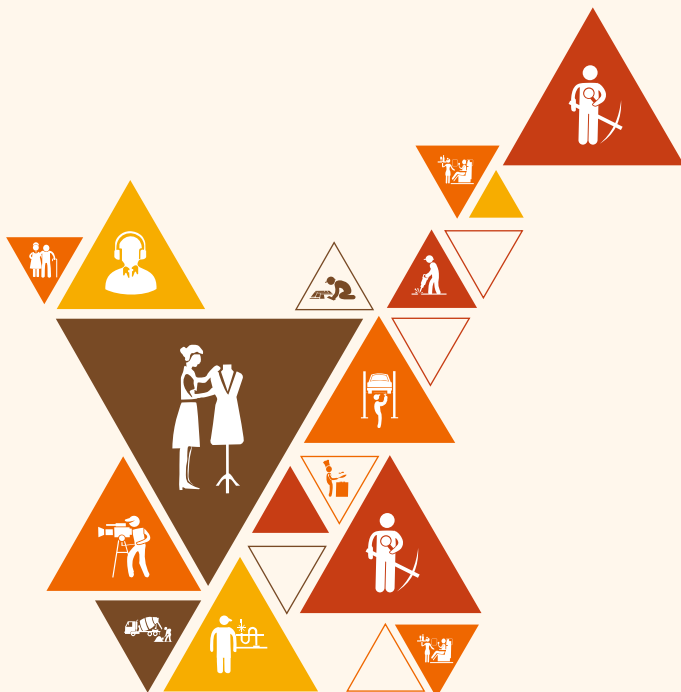


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## 7. Interpret Design Specification

Unit 7.1 - Implementation of Web Design

Unit 7.2 - Technical Validation of a Web's HTML  
Implementation



**SSC/N0503**

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Check the technical implementation of the web design with validation tools.
2. Discuss the technical validation of a web's HTML implementation

## UNIT 7.1 Implementation of Web Design

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Identify the current practice in developing media content and graphic designs.

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Notes for Facilitation

- Begin the session with a brief recapitulation of the previous session.

### Say

- “We have covered the concept of graphic design, the different elements, and the tools used in the earlier modules. Here, we look into the web design standards.”
- “The best practices for web design consider mainly three categories of standards, namely, brand standards, coding standards and accessibility standards.”
- “Let’s understand these standards in details.”

## Explain



- Explain web design standards with the help of Table 7.1.1 given in the Participant Handbook.
- Explain positioning of web design elements with the help of Fig 7.1.1 given in the Participant Handbook.
- Explain web implementation with the help of Fig 7.1.2 given in the Participant Handbook.
- Explain procedure of web implementation.
- Explain key of web implementation practices with the help of Fig 7.1.3 given in the Participant Handbook.

## Do/Demonstrate



- Demonstrate implementation of web design with the help of the AV link - [youtu.be/HF2fnQt-4xE](https://youtu.be/HF2fnQt-4xE)

## Elaborate



- Elaborate the topics below:
  - Testing and its types (Fig 7.1.4)
  - Validation
  - Rework to incorporate feedback

## Ask



- What do you understand by Intelligent call routing?
- List different types of call distribution.
- What is the role of IVR in Automatic Call Distributor (ACD)?

## Notes for Facilitation

- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Summarize

- Summarize the session.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## QR Code

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<https://youtu.be/HF2fnQt-4xE>

Unit 7.1 Implementation of Web Design

## UNIT 7.2: Technical Validation of a Web's HTML Implementation

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Discuss the technical validation of a web's HTML implementation

### Resources to be Used

- Participant Handbook
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Say

- “In our previous unit, we have learned about web design standards. Today, we will discuss technical validation of a web's HTML implementation.”
- “Validating a website is the process of ensuring that the web pages on a website conform to the norms or standards defined by different organizations. The importance of validation lies in the fact that all web pages have to be interpreted in an expected way by various devices, search engines, users and visitors to the web page.”
- “Let's understand more about validation of a web's HTML implementation”

## Explain



- Explain validation of websites and its importance.
- Explain validation scope and objects of websites with the help of Fig 7.2.1 in Participant Handbook.
- Explain different validation tools with the help of Fig 7.2.2 in Participant Handbook.
- Explain categories of validation tools with the help of Fig 7.2.3 in Participant Handbook.

## Elaborate



- Elaborate the topics below:
  - HTML validation methods by W3C's markup validation service
  - CSS HTML validator
  - Checklist Items for website implementation (Fig 7.2.5)

## Ask



- What is the importance of website validation?
- List any three validation tools.
- Can anyone list two checkpoints for website implementation?

## Notes for Facilitation



- Allow one or two students to answer the questions.
- Write down the correct answer on the board.

## Summarize



- Summarize the session by asking questions on the topics covered in the class.
- Prepare a list of participant's doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 7.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. Reference given in 7.1.1
    2. Reference given in 7.1.2
    3. Reference given in 7.1.1
    4. Reference given in 7.1.3
    5. Reference given in 7.2.1
    6. Reference given in 7.2.1
    7. Reference given in 7.2.1
    8. a) Reference given in 7.2.3  
b) Reference given in 7.2.3  
c) Reference given in 7.2.3
    9. Reference given in 7.2.4
    10. Reference given in 7.2.5
  - Answers to Questions II.
    1. Website
    2. Brand standards
    3. Errors
  - Answer to Question III:
    1. Interface testing
    2. All of the above

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<https://youtu.be/HF2fnQt-4xE>

Unit 7.1 Implementation of Web Design



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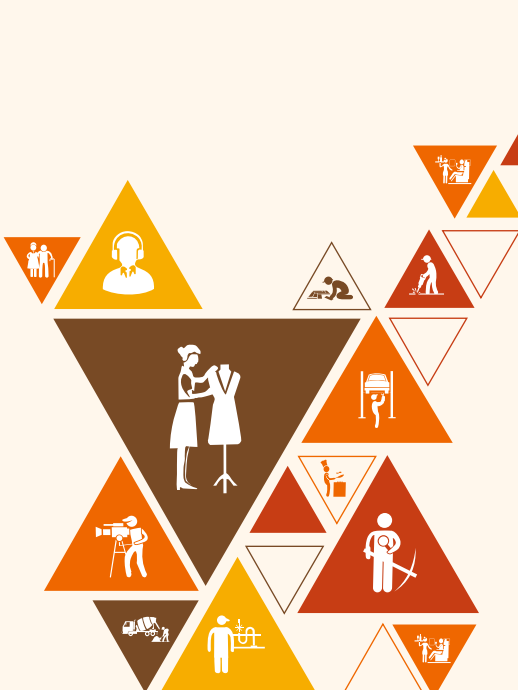
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## 8. Implement & Improve the Gender Sensitivity, PWD (Person/People with Disability) Sensitivity and Greening

Unit 8.1 - Sustainable Practices

Unit 8.2 - Respect Diversity and Strengthen

Practices to Promote Equality



SSC/N9014

## Key Learning Outcomes

**At the end of this module, the participant will be able to:**

1. Illustrate sustainable practices in the workplace for energy efficiency and waste management
2. Apply different approaches to maintain gender equality and increase inclusiveness for PwD

## Unit 8.1: Sustainable Practices

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Describe different approaches for efficient energy resource utilization and waste management
2. Describe the importance of following diversity policies

### Resources to be Used

- Participant Handbooks
- Paper, Pens, Notepad, Chart paper
- Computer, Projector
- Whiteboard, Marker, and Duster

### Notes for Facilitation

- Begin the session with a brief recapitulation of the previous session.

### Say

- “In the previous module, we gain an understanding on workplace data management.”
- “We will now discuss the sustainable practices in workplace that optimize usage of material and energy. Moreover, waste management is a significant aspect of every organization. We will also discuss proper waste management and recycling processes here.”

### Ask

- Why do you think promoting greenery is important?
- How should an organization manage its waste products?

## Notes for Facilitation

- Write down the participants' answers on whiteboard.
- Take appropriate cues from the answers and start teaching the lesson.

## Say

- “Plants in workplaces purify the air; they reduce the concentration of CO<sub>2</sub> (Carbon dioxide gas) and other volatile organic compounds, keeping the air fresh and healthy.”
- “External vegetation moderates heat in and around office block in the summertime, pulling down heat stress and decreasing the necessity for air-conditioning”.
- “Green roofs and facades proliferate insulation or the absorption capacity of heat, plummeting heating and cooling expenses”.
- “Green environments encourage people to undertake activities such as a lunchtime walk, keeping staff alert and healthy. Long periods of sitting adversely affect health.”
- “Renewable Energy is an eternal energy source that does not get depleted on exploitation and fetch nil or minimal waste product”.
- “Let us now participate in an activity to understand the concept better.”

## Activity

<b>Objective</b>	The purpose of this activity is to prepare a sample checklist and monitor energy usage.
<b>Materials required</b>	Pen, Paper
<b>Steps/procedure</b>	<ul style="list-style-type: none"> <li>• This activity is in the form of “Prepare a sample checklist and monitor energy usage”.</li> <li>• This activity targets to make the trainees understand the optimization of energy in the workplace.</li> <li>• The trainer will divide the class into three groups.</li> <li>• The trainer will distinguish one particular room for the case study.</li> <li>• Each group will be assigned with the following tasks.</li> <li>• Count the number of lights, fans and ACs in the case study room.</li> <li>• Note down the duration of their usage.</li> <li>• Assess the proper usage and wastage.</li> <li>• Prepare a checklist to evaluate how to optimize the energy usage.</li> <li>• Submit a document furnishing observations.</li> <li>• The trainer will check the documents and declare the best group.</li> </ul>
<b>Conclusion / what has been achieved</b>	This activity helps the participants to understand the optimization of energy in the workplace.

## Explain



- Explain how to optimize the usage of electricity/energy, materials and water.
- Explain the significance of greening.
- Explain the initiative towards efficient use of natural resources and energy, reduction and prevention of pollution with help of Table 12.1.1 given in the Participant Handbook.
- Explain various energy options including renewable and non-renewable.

## Do/Demonstrate



- Demonstrate 'Sustainable Practices' with the help of the AV link - [youtu.be/-0zQV8F03Og](https://youtu.be/-0zQV8F03Og)

## Elaborate



- Elaborate the following topics:
  - Electricity first aid emergency procedures
  - Steps to free a person from electrocution
  - Segregate Recyclable, Non-Recyclable and Hazardous Waste
  - Process of reporting potential hazard
  - Hazard Identification
  - Hazard and Operability (HAZOP) Study
  - 3Rs of waste optimization

## Activity

<b>Objective</b>	The purpose of this activity is to prepare a sample hazard measurement checklist.
<b>Materials required</b>	Pen, Paper
<b>Steps/procedure</b>	<ul style="list-style-type: none"> <li>• This activity is in the form of “Waste management”.</li> <li>• The trainer will ask every trainee to prepare a sample hazard measurement checklist.</li> <li>• The trainees should assess the waste management system of the building.</li> <li>• They should prepare a document on the existing waste management system and propose systems to enhance it.</li> <li>• They must be able to segregate between different types of waste and their treatment.</li> <li>• On the merit of the document submitted by the trainees, the trainer will announce the best reports.</li> <li>• The trainees who furnished best reports will be appreciated by the class.</li> </ul>
<b>Conclusion / what has been achieved</b>	This activity helps the participants to recognize potential hazards at workplace.

## Summarize

- Summarize the session using roleplay on the techniques of telecalling.
- Prepare a list of participants’ doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Unit 8.2: Respect Diversity and Strengthen Practices to Promote Equality

### Unit Objectives

**At the end of this unit, the participant will be able to:**

1. Identify stereotypes and prejudices associated with people with disabilities and the negative consequences of prejudice and stereotypes
2. Discuss the importance of promoting, sharing, and implementing gender equality and PwD sensitivity guidelines at the organizational level

### Notes for Facilitation

- Begin the session with a brief recapitulation of the previous session.

### Say

- “In the previous unit, we discussed the sustainable practices in workplace that optimize usage of material and energy. Moreover, waste management is a significant aspect of every organization.”
- “We also discussed proper waste management and recycling processes.”
- “Today we will talk about gender sensitivity at workplace and PwD related policies to strengthen and promote equality.”

### Ask

- Why do you think promoting gender equality at workplace is important?

### Notes for Facilitation

- Write down the participants' answers on whiteboard.
- Take appropriate cues from the answers and start teaching the lesson.

## Say

- “The Constitution of India applies uniformly to equality of opportunity for all citizens (including every legal citizen of India, whether they are the disabled) in matters relating to employment or healthy or disabled.”
- “The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 prescribes a system for investigating and redressing complaints against sexual harassment of women at the workplace.”
- “The definition of a ‘disabled person’ is broadened under the 2016 Act: it covers persons with disability, persons with benchmark disability, and persons with disability having high support needs
- The Indian Government respects the equality and therefore no discrimination should be made on the ground of disability.”
- “The definition of a ‘disabled person’ is broadened under the 2016 Act: it covers persons with disability, persons with benchmark disability, and persons with disability having high support needs.”
- “Let us now participate in an activity to understand the concept better.”

## Activity

<b>Objective</b>	The purpose of this activity is to learn the laws and regulations related to PWD issued by the government.
<b>Materials required</b>	N/A
<b>Steps/procedure</b>	<ul style="list-style-type: none"> <li>• This activity is in the form of “elocution session.”</li> <li>• The Trainer will divide the class into 4 groups.</li> <li>• Each group will be assigned with one law related to PWD compliance issued by the government of India (as discussed in the unit).</li> <li>• The groups will come in front of the class one by one and explain the key features and advantages of the law assigned to them.</li> <li>• The Trainer will supervise the session.</li> <li>• The best group will be appreciated by the class.</li> </ul>
<b>Conclusion / what has been achieved</b>	This activity helps the participants to understand the laws and regulations related to PWD compliance issued by the government of India

## Explain



- Explain the concept of Gender, Gender Equality and Gender discrimination.
- Explain the policies and procedures about gender inclusivity, equality and sustainability while working with colleagues.
- Explain the organization's Redressal Mechanisms.

## Elaborate



- Elaborate the following topic - Comply to PWD Inclusive Policies.

## Activity



<b>Objective</b>	The purpose of this activity is to learn the importance of gender equality at workplace.
<b>Materials required</b>	Pen, Paper
<b>Steps/procedure</b>	<ul style="list-style-type: none"> <li>• This activity is in the form of 'written test'</li> <li>• Each Trainee will be provided with blank sheets and pen</li> <li>• The Trainer will read out the following question to the Trainees</li> <li>• What is gender equality and workplace and how that can be implemented and strengthened?</li> <li>• The Trainees will get 15 minutes to answer the above question</li> <li>• They should write the answer in the stipulated time</li> <li>• The Trainer will check the answers</li> </ul> <p>Trainees with best answers will be appreciated by the class.</p>
<b>Conclusion / what has been achieved</b>	This activity helps the participants to implement gender equality at workplace.

## Summarize



- Summarize the session using roleplay on the techniques of telecalling.
- Prepare a list of participants' doubts if they have any. Encourage them to ask questions.
- Answer their queries.

## Exercise

- Instruct the trainees to open their Participant Handbook and complete the exercise given in Module 8.
- Ensure that the participants have opened the correct page for the activity.
- Give them 20 minutes to complete the exercise.
- Exercise Hints:
  - Answers to Questions I.
    1. The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act - 2013
    2. The Person with Disabilities Act - 1995
    3. The Mental Health Act - 1987
    4. The Rehabilitation Council of India - 1992
    5. The National Trust Act - 1999
  - Answers to Questions II.
    1. (b)
    2. (c)
    3. (a)
  - Answer to Question III:
    1. Identifying hazards, assessing the risks, controlling and mitigating risks
    2. Wind energy, solar energy, geothermal energy, bio energy, hydropower energy
    3. In order to ensure speedy justice, special courts are instituted in each district to deal with cases pertaining to the violation of the rights of disabled persons. Penalties for the violation of rights of disabled persons can extend to a monetary fine of US\$7,750 (Rs 500,000) and imprisonment for up to five years.
    4. Switch off the main power, don't touch the person who is electrocuted, try to remove the person from the electrical source with the help of non-conducting objects like stick, cardboard, bamboo, etc, lay the person in this position.
    - 5.

## QR Code

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<https://youtu.be/eBNYq5n-4VA>

Unit 8.1 Sustainable Practices

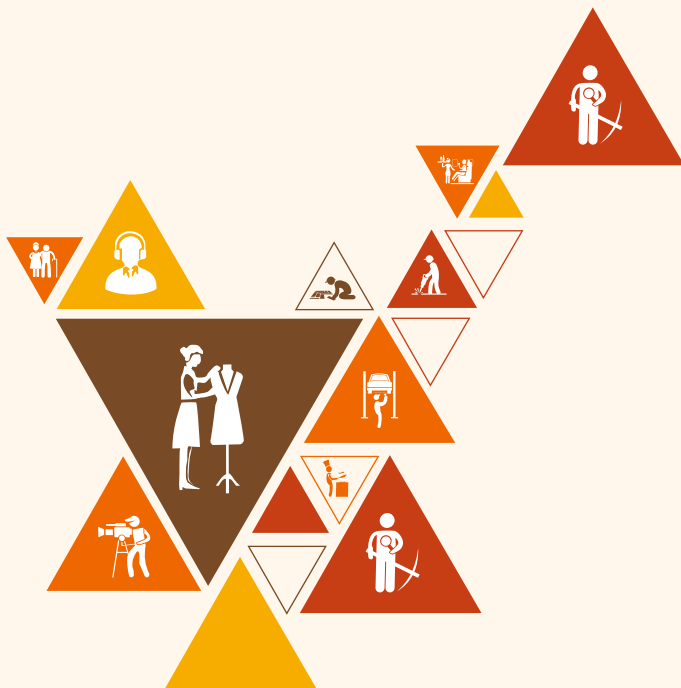


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## 9. Employability and Entrepreneurship Skills



<https://eskillindia.org/NewEmployability>



Employability skills can be defined as those soft skills which employers look for in a potential employee. These skills equip the employees to carry out their role to the best of their ability and client satisfaction. For example, the ability to explain what you mean in a clear and concise way through written and spoken means helps to build a better relationship with the client or the customer. Similarly, handling stress that comes with deadlines for finishing work and ensuring that you meet the deadlines can be done through effective self-management training. It can also be done by working well with other people from different disciplines, backgrounds, and expertise to accomplish a task or goal. In today's digital age, employers expect that the employees should be able to make use of elementary functions of information and communication technology to retrieve, access, store, and produce, present and exchange information in collaborative networks via the Internet. Students need to develop entrepreneurial skills, so that they can develop necessary knowledge and skills to start their own business, thus becoming job creators rather than job seekers. Potential employees need to develop green skills, which are the technical skills, knowledge, values and attitudes needed in the workforce to develop and support sustainable social, economic and environmental outcomes in business, industry and the community. Thus, students are expected to acquire a range of skills so that you can meet the skill demands of the organisation that you would work for or to set up and run your own business.

This chapter is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

The scope covers the following:

- Introduction to Employability Skills
- Constitutional values – Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs.

Scan the QR codes or click on the link to watch the related videos



[youtu.be/SVPIPwNekWc](https://youtu.be/SVPIPwNekWc)

Work ethics to follow in an organization



[youtu.be/g3dN1wkiOL4](https://youtu.be/g3dN1wkiOL4)

Significance of Healthy Team Bonding in Ideal Work Culture



[youtu.be/MMTsl2xT2\\_8](https://youtu.be/MMTsl2xT2_8)

Evacuation procedures for workers and visitors



[youtu.be/jtmfiltg8Jw](https://youtu.be/jtmfiltg8Jw)

Health, Safety, and Accident Reporting Procedures and the Importance



[youtu.be/pNKOC9mNIOs](https://youtu.be/pNKOC9mNIOs)

Follow the accurate process flow to analyze data



**Skill India**  
कौशल भारत - कुशल भारत



सत्यमेव जयते  
GOVERNMENT OF INDIA  
MINISTRY OF SKILL DEVELOPMENT  
& ENTREPRENEURSHIP



N · S · D · C  
National  
Skill Development  
Corporation

Transforming the skill landscape

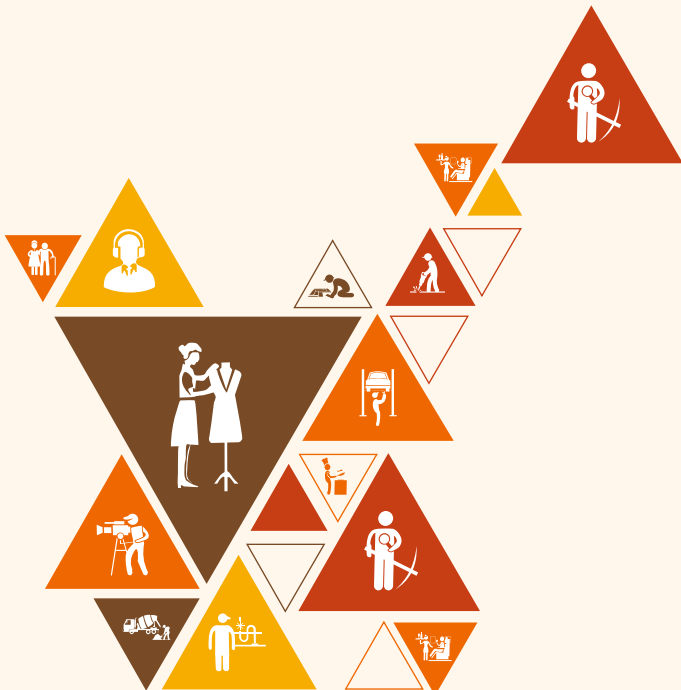


**IT - ITeS SSC**  
**NASSCOM**






## 10. Annexures

Annexure I : Training Delivery Plan






Annexure II: Assessment Criteria




## ANNEXURE - QR Codes

Sl. No.	Chapter No.	Unit No.	Topic name	Page No.	QR Codes	URL
1	2. Programming for the Web	Unit 2.1 Web Designing and Development	Unit 2.1 Web Designing and Development	15		<a href="https://youtu.be/RTLySOPkhoc">youtu.be/RTLySOPkhoc</a>
2	3. Contribute to the Design of Software Products and Applications	Unit 3.1 Design Defects and Its Solution	Unit 3.1 Design Defects and Its Solution	22		<a href="https://youtu.be/kfcgk2l5dQ8">youtu.be/kfcgk2l5dQ8</a>
3	5. Analysis and Design of Web Based Applications	Unit 5.1 Process of conversions and testing new products and applications	Unit 5.1 Process of conversions and testing new products and applications	36		<a href="https://youtu.be/RXOq0d-5g9g">youtu.be/RXOq0d-5g9g</a>
4	6. Develop Media Content and Graphic Designs for Software Products and Application	Unit 6.2 Verification and Validation of Media and Graphics	Unit 6.2 Verification and Validation of Media and Graphics	44		<a href="https://youtu.be/IrdTWzRz5v0">youtu.be/IrdTWzRz5v0</a>
5	7. Interpret Design Specification	Unit 7.1 Implementation of Web Design	Unit 7.1 Implementation of Web Design	49		<a href="https://youtu.be/HF2fnQt-4xE">youtu.be/HF2fnQt-4xE</a>

## ANNEXURE - QR Codes

Sl. No.	Chapter No.	Unit No.	Topic name	Page No.	QR Codes	URL
6	8. Inclusive and Environmentally Sustainable Workplaces	Unit 8.1 Sustainable Practices	Sustainable Practices	64		<a href="https://youtu.be/eBNYq5n-4VA">youtu.be/eBNYq5n-4VA</a>
7	9. Employability Skills (DGT/VSQ/NO 102)	Employability and Entrepreneurship Skills	Work ethics to follow in an organization	67		<a href="https://youtu.be/XjUM90uNBSc">youtu.be/XjUM90uNBSc</a>
8	9. Employability Skills (DGT/VSQ/NO 102)	Employability and Entrepreneurship Skills	Significance of Healthy Team Bonding in Ideal Work Culture	67		<a href="https://youtu.be/WG5ag12xPbY">youtu.be/WG5ag12xPbY</a>
9	9. Employability Skills (DGT/VSQ/NO 102)	Employability and Entrepreneurship Skills	Evacuation procedures for workers and visitors	67		<a href="https://youtu.be/MMTsl2xT2_8">youtu.be/MMTsl2xT2_8</a>
10	9. Employability Skills (DGT/VSQ/NO 102)	Employability and Entrepreneurship Skills	Health, Safety, and Accident Reporting Procedures and the Importance	67		<a href="https://youtu.be/jtmfilitg8Jw">youtu.be/jtmfilitg8Jw</a>

## ANNEXURE - QR Codes

Sl. No.	Chapter No.	Unit No.	Topic name	Page No.	QR Codes	URL
11.	9. Employability Skills (DGT/VSQ/N0102)	Employability and Entrepreneurship Skills	Follow the accurate process flow to analyze data	67		<a href="https://youtu.be/a8NETGQQhyI">youtu.be/a8NETGQQhyI</a>

## Annexure I

### Training Development Plan

Training Delivery Plan			
<b>Program Name</b>	Web Developer		
<b>Qualification Pack, Name and Reference ID</b>	Web Developer SSC/Q0503, v3.0		
<b>Version No.</b>	3.0	<b>Version Update Date</b>	27/01/2022
<b>Minimum Educational Qualification and Experience</b>	Class 11th OR 10th+1-Yr NTC/NAC/CITS OR NSQF Level 3 STT		
<b>Pre-requisites to Training (If any)</b>	Relevant animation and graphics courses/Certifications/training		
<b>Minimum Job Entry Age</b>	16 years		
<b>Training Outcome</b>	<p><b>After completing this programme, trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Evaluate the functioning of Business Requirement Specification, User Requirements Specification, Software Requirements Specification and Low-Level Design in the web development domain.</li> <li>2. Examine how assumptions, constraints, interfaces determine the process of web designing.</li> <li>3. Collate basic programming structures related to High Level design/Low Level Design and monitor the same.</li> <li>4. Examine how to create software code that is efficient, readable, and maintainable.</li> <li>5. Evaluate the process for converting designs into media and graphic content.</li> <li>6. Examine how to test new products and applications.</li> <li>7. Illustrate the various forms of coding tools required for software applications and web designs.</li> <li>8. Convert requirements into web content and graphic designs, leveraging reusable components.</li> <li>9. Discuss the technical validation of a web's HTML implementation.</li> <li>10. Demonstrate effective communication and collaboration with colleagues.</li> </ol>		

	<ol style="list-style-type: none"><li>11. Apply measures to maintain standards of health and safety at the workplace.</li><li>12. Use different approaches to effectively manage and share data and information.</li><li>13. Develop strong relationships at the workplace through effective communication and conflict management.</li><li>14. Identify best practices to maintain an inclusive, environmentally sustainable workplace.</li></ol>
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Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
1.	Programming for the Web (SSC/N0501)	Web Designing and Development	1. Evaluate the use of the Business Requirements Specification (BRS)/User Requirements Specification (URS)	SSC/N0501	Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 6 P: 2
		Web Designing and Development (Contd....)	1. Evaluate the use of the Business Requirements Specification (BRS)/User Requirements Specification (URS)		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 8
		Web Designing and Development (Contd....)	1. Evaluate the use of the Business Requirements Specification (BRS)/User Requirements Specification (URS) 2. Identify the Software Requirements Specification (SRS)		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 3 P: 5
		Web Designing and Development (Contd....)	2. Identify the Software Requirements Specification (SRS)		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 6

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Web Designing and Development (Contd....)	1. Identify the Software Requirements Specification (SRS)		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 5
		Web Designing and Development (Contd....)	1. Identify the Software Requirements Specification (SRS)		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 1
2.	Contribute to the Design of Software Products and Applications (SSC/N0501)	Design Defects and Its Solution	1. Collate inputs from design experts to identify, resolve and record design defects	SSC/N0501	Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 5 P: 2
		Design Defects and Its Solution (Contd....)	1. Collate inputs from design experts to identify, resolve and record design defects 2. Discuss conclusions from defects for improving future designs				T: 1 P: 4
		Design Defects and Its Solution (Contd....)	2. Discuss conclusions from defects for improving future designs				T: 4 P: 2

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Design Defects and Its Solution (Contd....)	2. Discuss conclusions from defects for improving future designs 3. Discuss how to use various ranges of coding tools		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 3 P: 3
		Design Defects and Its Solution (Contd....)	3. Discuss how to use various ranges of coding tools		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 2
		Design Defects and Its Solution (Contd....)	3. Discuss how to use various ranges of coding tools				T: 0 P: 2
3.	Technical skills for software design (SSC/N0501)	Technical specifications for coding	1. List the functional and non-functional requirements in software application for web development	SSC/N0501	Interactive Lecture in the Class, demonstrate	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P: 5
		Technical specifications for coding (Contd....)	1. List the functional and non-functional requirements in software application for web development		Interactive Lecture in the Class, Demonstrate	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P: 5
		Designing of software products	2. Discuss the current practice in the design of software products		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 3

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Designing of software products (Contd....)	2. Discuss the current practice in the design of software products		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P: 2
4.	Analysis and Design of Web Based Applications (SSC/N0503)	Process of conversions and testing new products and applications	1. Discuss the implications that new products and applications may have on business processes.	SSC/N0503	Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 7 P: 1
		Software Products and Applications (Contd....)	1. Discuss the implications that new products and applications may have on business processes.		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 8
		Software Products and Applications (Contd....)					T: 0 P: 3
		Process of conversions and testing new products and applications (Contd....)	2. Identify the sources of information to design software products and specifications.		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 7 P: 1
		Process of conversions and testing new products and applications (Contd....)	2. Identify the sources of information to design software products and specifications.				Interactive Lecture in the Class

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Process of conversions and testing new products and applications (Contd....)					T: 0 P: 3
		Process of conversions and testing new products and applications (Contd....)	2. Identify the sources of information to design software products and specifications. 3. List range of equipment used to design software products and applications.				T: 7 P: 1
		Process of conversions and testing new products and applications (Contd....)	3. List range of equipment used to design software products and applications.		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 8
		Process of conversions and testing new products and applications (Contd....)	3. List range of equipment used to design software products and applications.				T: 0 P: 6

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
5.	Develop Media Content and Graphic Designs for Software Products and Application (SSC/N0503)	Selection of Components and Tools for Web/Media Content Development	1. Select reusable components, media and graphical packages and tools to develop media content	SSC/N0503	Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 8 P: 0
		Selection of Components and Tools for Web/Media Content Development (Contd....)			Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 8
		Selection of Components and Tools for Web/Media Content Development (Contd....)			Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 7
		Verification and Validation of Media and Graphics	2. Identify any defects and corrective actions taken to improve media and graphics		Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 7 P: 1
		Verification and Validation of Media and Graphics (Contd...)			Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 8
		Verification and Validation of Media and Graphics (Contd...)			Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 6
		Verification and Validation of Media and Graphics (Contd...)			Interactive Lecture in the Class	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0 P: 6

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
6.	Interpret Design Specification (SSC/N0503)	Implementation of Web Design	1. Identify the current practice in developing media content and graphic designs.	SSC/N0503	Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 8 P: 0
		Implementation of Web Design (Contd...)	1. Identify the current practice in developing media content and graphic designs.				T: 2 P: 6
		Implementation of Web Design (Contd...)	1. Identify the current practice in developing media content and graphic designs.				T: 0 P: 7
		Technical Validation of a Web's HTML Implementation	1. Discuss the technical validation of a web's HTML implementation.		Interactive Lecture in the Class, Demonstrate		T: 8 P: 0
		Technical Validation of a Web's HTML Implementation (Contd...)	2. Discuss the technical validation of a web's HTML implementation.				T: 2 P: 6
		Technical Validation of a Web's HTML Implementation (Contd...)	2. Discuss the technical validation of a web's HTML implementation.				T: 0 P: 6
		Technical Validation of a Web's HTML Implementation (Contd...)	2. Discuss the technical validation of a web's HTML implementation.				T: 0 P: 6

Sl. No	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
7.	Inclusive and environmentally sustainable workplaces (SSC/N 9014)	Sustainable Practices	1. Describe different approaches for efficient energy resource utilization and waste management.	SSC/N 9014	Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 5
		Sustainable Practices (Contd...)	2. Describe the importance of following the diversity policies		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 3 P: 5
		Sustainable Practices (Contd...)	3. Identify stereotypes and prejudices associated with people with disabilities and the negative consequences of prejudice and stereotypes.		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 3 P: 5
		Respect Diversity and Strengthen Practices to Promote Equality	4. Discuss the importance of promoting, sharing and implementing gender equality and PwD sensitivity guidelines at organization level.		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P: 5

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
8.	Employability & Entrepreneurship Skills	Introduction to Employability Skills	<ol style="list-style-type: none"> <li>1. Discuss the Employability Skills required for jobs in various industries</li> <li>2. List different learning and employability related GOI and private portals and their usage</li> </ol>	N/A	Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0.5 P:1
		Constitutional Values: Citizenship	<ol style="list-style-type: none"> <li>1. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen</li> <li>2. Show how to practice different environmentally sustainable practices</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 0.5 P:1
		Becoming a Professional in the 21st Century	<ol style="list-style-type: none"> <li>1. Discuss importance of relevant 21st century skills.</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P:1.5

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
			<ol style="list-style-type: none"> <li>1. Exhibit 21st century skills like Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.</li> <li>2. Describe the benefits of continuous learning</li> </ol>				
		Basic English Skills	<ol style="list-style-type: none"> <li>1. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone</li> <li>2. Read and interpret text written in basic English</li> <li>3. Write a short note/paragraph / letter/e -mail using basic English</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 4 P: 4
		Basic English Skills (Contd.)					T: 0 P: 2
		Career Development and Goal-Setting	<ol style="list-style-type: none"> <li>1. Create a career development plan with well-defined short- and long-term goals</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P: 1

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Communication Skills	<ol style="list-style-type: none"> <li>1. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.</li> <li>2. Explain the importance of active listening for effective communication</li> <li>3. Discuss the significance of working collaboratively with others in a team</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T:2 P:3
		Diversity and Inclusion	<ol style="list-style-type: none"> <li>1. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD</li> <li>2. Discuss the significance of escalating sexual harassment issues as per POSH</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 1 P:1.5
		Financial and Legal Literacy	<ol style="list-style-type: none"> <li>1. Outline the importance of selecting the right financial institution, product, and service</li> <li>2. Demonstrate how to carry out offline and online financial transactions, safely and securely</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 2 P:3

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Essential Digital Skills	<ol style="list-style-type: none"> <li>1. Describe the role of digital technology in today's life</li> <li>2. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T:4 P:2
		Essential Digital Skills (Contd.)	<ol style="list-style-type: none"> <li>3. Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely</li> <li>4. Create sample word documents, excel sheets and presentations using basic features utilize virtual collaboration tools to work effectively</li> </ol>				T:0 P:4

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Entrepreneurship	<ol style="list-style-type: none"> <li>1. Explain the types of entrepreneurship and enterprises</li> <li>2. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan</li> <li>3. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement</li> <li>4. Create a sample business plan, for the selected business opportunity</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T:3 P:4
		Customer Service	<ol style="list-style-type: none"> <li>1. Describe the significance of analysing different types and needs of customers</li> <li>2. Explain the significance of identifying customer needs and responding to them in a professional manner.</li> <li>3. Discuss the significance of maintaining hygiene and dressing appropriately</li> </ol>				T:2 P:3

Sl. No.	Module Name	Session Name	Session Objectives	NOS Ref.	Methodology	Training Tools/Aids	Duration in Hours
		Getting Ready for Apprenticeships and Jobs	<ol style="list-style-type: none"> <li>1. Create a professional Curriculum Vitae (CV)</li> <li>2. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively</li> <li>3. Discuss the significance of maintaining hygiene and confidence during an interview</li> <li>4. Perform a mock interview</li> <li>5. List the steps for searching and registering for apprenticeship opportunities</li> </ol>		Interactive Lecture in the Class, Activity	Participant handbook, Projector, Whiteboard, Marker, and Duster	T: 3 P:5
<b>Total (In Hours)</b>						<b>Theory</b>	120
						<b>Practical</b>	210
						<b>On the Job Training</b>	60
						<b>*Grand Total (in Hours)</b>	390 hours

## Annexure II

### Assessment Criteria

#### CRITERIA FOR ASSESSMENT OF TRAINEES

Assessment Criteria for Technical Support	
Job Role	Web Developer
Qualification Pack	SSC/Q0503, v3.0
Sector Skill Council	IT-ITeS Sector Skills Council NASSCOM

Sr. No.	Guidelines for Assessment
1.	Criteria for assessment for each Qualifications File will be approved by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2.	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3.	Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/ option NOS/ Set of NOS.
4.	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
5.	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criterion.
6.	To pass the Qualifications File, every trainee should score a minimum of 70 % of aggregate marks.
7.	In case of unsuccessful completion, the trainee may seek reassessment on the Qualification File.

Total Marks: 700	Compulsory NOS				
Assessable Outcomes	Assessment criteria for outcomes	Total Marks (400)	Theory Marks	Practical Marks	Viva Marks
Assessable Outcomes	Assessment criteria for the outcome	Total Marks	Out of	Theory	Skills Practical
<b>SSC/N0501 Contribute to the design of software products and applications</b>	Pc1. understand Business Requirements Specification (BRS)/User Requirements Specification (URS), and Software Requirements Specification (SRS) with appropriate people	<b>100</b>	10	10	-
	Pc2. check the understanding of High-Level Design (HLD) concept with appropriate people		5	5	-
	Pc3. design basic programming structures to implement functionality in line with requirements defined in BRS/URS, SRS and HLD		40	-	40
	Pc4. review the designs with industry experts		10	10	-
	Pc5. analyse inputs from superiors to identify, resolve and record design defects and inform future designs		15	15	-
	Pc6. document the details of designs using standard templates and tools		10	-	10
	Pc7. comply with organizational policies, procedures and guidelines when contributing to the design of software products and applications		10	-	10
			<b>Total</b>	<b>100</b>	<b>40</b>

Total Marks: 700	Compulsory NOS				
Assessable Outco	Assessment criteria for outcomes	Total Marks (400)	Theory Marks	Practical Marks	Viva Marks
Assessable Outcomes	Assessment Criteria for the Outcomes	Total Mark	Out of	Theory	Skills Practical
<b>SSC/N0503: Develop media content and graphic designs for software products and applications</b>	Pc1. verify Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low-Level Design (LLD)	<b>100</b>	10	10	-
	Pc2. access reusable components, media and graphical packages and tools from the organization's knowledge base		10	-	10
	Pc3. convert requirements into media content and graphic designs, leveraging reusable components where available		20	-	20
	Pc4. review media content and graphic designs with superiors and analyse their feedback		10	5	5
	Pc5. record any defects and corrective actions taken to inform future work		10	-	10
	Pc6. rework media content and graphic designs, incorporating feedback		25	5	5
	Pc7. submit media content and graphic designs for approval to supervisor		10	-	10
	Pc8. update the organization's knowledge base with the experiences of the media content and graphic designs developed		10	-	10
	Pc9. comply with organization's policies, procedures and guidelines when analysing data from multiple disparate sources		10	-	10
			<b>Total</b>	<b>100</b>	<b>20</b>

Total Marks: 700		Compulsory NOS			
Assessable Outcomes	Assessment criteria for outcomes	Total Marks (400)	Theory Marks	Practical Marks	Viva Marks
<b>SSC/N9014: Maintain an inclusive, environmentally sustainable workplace</b>	Pc1. optimize usage of electricity/energy, materials, and water in various tasks/activities /processes and plan the implementation of energy efficient systems in a phased manner	<b>100</b>	20	5	15
	Pc2. segregate recyclable, non-recyclable and hazardous waste generated for disposal or efficient waste management		20	5	15
	Pc3. understand the diversity policy of the organization and use internal & external communication to colleagues to improve		15	5	10
	Pc4. comply with PwD inclusive policies for an adaptable and equitable work environment		10	-	10
	Pc5. improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.		20	-	20
	Pc6. improve through specifically designed recruitment practices, PwD friendly infrastructure, job roles, etc.		15	5	10
		<b>Total</b>	<b>100</b>	<b>20</b>	<b>80</b>

Total Marks: 700	Compulsory NOS				
Assessable Outcomes	Assessment criteria for outcomes	Total Marks (400)	Theory Marks	Practical Marks	Viva Marks
<b>Employability NOS for 60 Hours</b>	Pc1. Introduction to Employability Skills	<b>50</b>	2	1	1
	Pc2. Constitutional values – Citizenship		2	1	1
	Pc3. Becoming a Professional in the 21st Century		6	2	4
	Pc4. Basic English Skills		6	2	3
	Pc5. Career Development & Goal Setting		3	1	2
	Pc6. Communication Skills		4	2	2
	Pc7. Diversity & Inclusion		2	1	2
	Pc8. Financial and Legal Literacy		5	2	3
	Pc9. Essential Digital Skills		8	3	4
	Pc10. Entrepreneurship		4	2	3
	Pc11. Customer Service		3	1	2
	Pc12. Getting Ready for Apprenticeship & Jobs		5	2	3
		<b>Total</b>	<b>50</b>	<b>20</b>	<b>30</b>

## Glossary

- **Sector:** Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
- **Sub-sector:** Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
- **Occupation:** Occupation is a set of job roles, which perform similar/ related set of functions in an industry. **Job role:** Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
- **Occupational Standards (OS):** OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
- **Performance Criteria (PC):** Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
- **National Occupational Standards (NOS):** NOS are occupational standards which apply uniquely in the Indian context.
- **Qualifications Pack (QP):** QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
- **Unit Code:** Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
- **Unit Title:** Unit title gives a clear overall statement about what the incumbent should be able to do.
- **Description:** Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
- **Scope:** Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
- **Knowledge and Understanding (KU):** Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
- **Organizational Context:** Organizational context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
- **Technical Knowledge:** Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
- **Core Skills/ Generic Skills (GS):** Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
- **Electives:** Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.

- Options: Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.



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