

2.1 ADVANCES IN IT

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RATIONALE

A scripting language or script language is a programming language for a runtime system that automates the execution of tasks that would otherwise be performed individually by a human operator. The purpose of the course is to prepare students for building scripts that control a sequence of program steps such as those used in developing testing and deploying software. Modern scripting languages like Java Script are used as an example of scripting language in this course.

COURSE OUTCOMES

At the end of the course student will be able to

CO1: Describe the need of HTML and its applications in Web Development

CO2: Design and Develop Websites using HTML

CO3: Develop interactive Internet applications

CO4: Create interactive applications in Java script.

CO5: Design Internet Applications using Java Script

DETAILED CONTENTS

UNIT I

HTML Fundamentals

Introduction to HTML- Characteristics of HTML language, Structure of a HTML page. Describing Tags. How to create a HTML document? Viewing HTML document, commonly used web browsers. HTML4 – List of Tags in HTML4, HTML tags: Container elements, empty elements. Using tags, Heading, Paragraph, Changing appearance of text (bold, italics, underline, subscript, superscript), center tag, title tag. Changing font size, text color and background, Changing the background color and background of HTML page, Top margin, left margin, ,<hr> and its attributes.

UNIT II

Working with HTML

Using list and images: Unordered lists: type attribute. Ordered lists: start attribute, type attribute, value attribute. Nested lists. Inserting images, aligning an image, centering image, adding border to a image, alternate text, setting height and width, adding space around the image. Working with links: Anchor elements, creating hyperlink to a document. Internal linking and external linking.

UNIT III

Designing with HTML

Creating tables: Creating a table, attributes of table tag (BORDER, BORDERCOLOR, BGCOLOR, ALIGN, CELLSPACING, CELLPADDING, WIDTH) Attributes of table row <tr> and table data <td> tag (BORDERCOLOR, BGCOLOR, ALIGN, VALIGN, HEIGHT). Row span and Col span.

Working with Frames. Use and creating frames. Introduction to Forms

Steps for developing a Website.

UNIT IV

JAVA Script Overview and Core Language Features

Introduction to Scripting Languages, JavaScript Implementation-ECMAScript-DOM-BOM-Values-Variables-Literals-Constants-Operators and Expressions-Regular Expressions Conditional Branching Statements- Conditional Looping Statements-Functions-Creating Simple Java Script page-Adding JavaScript page into HTML

UNIT V

Document Access

The Document Object Model: Mapping your HTML -Text Nodes-Attribute Nodes Accessing the Nodes you Want: Finding an Element by ID-Finding Elements by Tag Name-Finding Elements by Class Name; Navigating the DOM Tree-Interacting with Attributes - Changing Styles: Changing Styles with Class and Id-Font-Table Layout-Text Properties- Padding, Borders and Margins

PRACTICAL EXERCISES

PART A: HTML

1. Creating an HTML document
2. Working with Mark up Tags
3. Working with Heading-Paragraphs

4. Working with Text
5. Working with Lists
6. Working with Tables and Frames
7. Working with Hyperlinks
8. Working with Images and Multimedia
9. Working with Forms and controls.

PART B: Java Script

1. Create a HTML form with Name, Password and Confirm Password Write a Java script to validate if Password and Confirm Password field values are same.
2. Write a Java script to animate a simple Image using set Timeout.
3. Write a Java script to illustrate auto refreshing in your own Web page.
4. Develop a simple calculator using Java script.
5. Write a Java script to illustrate the use of cookies in your own Web page.
6. Write a Java script to prompt two integer numbers from the user and display the sum of them.
7. Write a Java script to greet the user with “Good Morning” or “Good Afternoon” or “Good Evening” depending on the current time.
8. Generate a Digital Clock using Java script.
9. Write a Java script to change the background color of the image in definite time intervals.

RECOMMENDED BOOKS

1. Nicholas C.Zakas, “Professional JavaScript for Web Developers”, Wrox-Wiley Dreamtech, 2005.
2. Thomas A.Powell, “HTML&XHTML –The Complete Reference”, Tata McGraw Hill, 2006
3. JavaScript: The Definitive Guide-By David Flannagan;2003
4. John R Vacca, “JavaScript Development”, Morgan Kaufmann 2004.
5. Paul Lomax, Matt Childs, Ran Petrusha, “VBScript in a nutshell”, O’Reilly, 2005.
6. John Pollac, “JavaScript”, McGraw Hill, 2005.
7. Adrian Kingley, “VBScript Programmers Reference”, Wrox, 2004.

SUGGESTED WEBSITES

1. <https://nptel.ac.in/courses/117/106/117106113/>
2. <https://nptel.ac.in/courses/106/105/106105084/>

INSTRUCTIONAL STRATEGY

This is a skill based subject and topics taught in the class should be practiced in the Lab regularly for development of required skills in the students. This subject contains five units of equal weight age.