ATME COLLEGE OF ENGINEERING

13th KM Stone, Bannur Road, Mysore - 560 028

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(ACADEMIC YEAR 2022-23)

LABORATORY MANUAL

SUBJECT: INTRODUCTION TO WEB PROGRAMMIN

SUB CODE: 22PLC15A

SEMESTER: I

As per Choice Based Credit System (CBCS) scheme

(Effective from the academic year 2022-2023)

INSTITUTIONAL MISSION AND VISION

Objectives

- To provide quality education and groom top-notch professionals, entrepreneurs and leaders for different fields of engineering, technology and management.
- To open a Training-R & D-Design-Consultancy cell in each department, gradually introduce doctoral and postdoctoral programs, encourage basic & applied research in areas of social relevance, and develop the institute as a center of excellence.
- To develop academic, professional and financial alliances with the industry as well as the academia at national and transnational levels.
- To develop academic, professional and financial alliances with the industry as well as the academia at national and transnational levels.
- To cultivate strong community relationships and involve the students and the staff in local community service.
- To constantly enhance the value of the educational inputs with the participation of students, faculty, parents and industry.

Vision

- Development of academically excellent, culturally vibrant, socially responsible and globally competent human resources.

Mission.

- To keep pace with advancements in knowledge and make the students competitive and capable at the global level.
- To create an environment for the students to acquire the right physical, intellectual, emotional and moral foundations and shine as torch bearers of tomorrow's society.
- To strive to attain ever-higher benchmarks of educational excellence.

Department of Computer Science & Engineering

Vision of the Department

- To develop highly talented individuals in Computer Science and Engineering to deal with real world challenges in industry, education, research and society.

Mission of the Department

- To inculcate professional behavior, strong ethical values, innovative research capabilities and leadership abilities in the young minds & to provide a teaching environment that emphasizes depth, originality and critical thinking.
- Motivate students to put their thoughts and ideas adoptable by industry or to pursue higher studies leading to research.

Program Outcomes (POs)

Engineering Graduates will be able to:

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Educational Objectives (PEO'S):

1. Empower students with a strong basis in the mathematical, scientific and engineering fundamentals to solve computational problems and to prepare them for employment, higher learning and R&D.
2. Gain technical knowledge, skills and awareness of current technologies of computer science engineering and to develop an ability to design and provide novel engineering solutions for software/hardware problems through entrepreneurial skills.
3. Exposure to emerging technologies and work in teams on interdisciplinary projects with effective communication skills and leadership qualities.

4. Ability to function ethically and responsibly in a rapidly changing environment by Applying innovative ideas in the latest technology, to become effective professionals in Computer Science to bear a life-long career in related areas.

Program Specific Outcomes (PSOs)

1. Demonstrate understanding of the principles and working of the hardware and software aspects of Embedded Systems.
2. Use professional Engineering practices, strategies and tactics for the development, implementation and maintenance of software.
3. Provide effective and efficient real time solutions using acquired knowledge in various domains.

Course objectives

- To use the syntax and semantics of HTML and XHTML

- To develop different parts of a web page

- To understand how CSS can enhance the design of a webpage.

- To create and apply CSS styling to a webpage

- To get familiarity with the JavaScript language and understand Document Object

  Model handling of Java Script

Course outcome (Course Skill Set)

CO1- Explain the historical context and justification for HTML over XHTML.

CO2 - Develop HTML5 documents and adding various semantic mark-up tags.

CO3 - Analyse various attributes, values and types of CSS.

CO4 - Implement core constructs and event handling mechanisms of JavaScript.

CHAPTER 1: INTRODUCTION

1.1 Hyper Text Markup Language

- HTML stands for Hyper Text Markup Language.
- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements are represented by tags.
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page
- **Hypertext** refers to the way in which Web pages (HTML documents) are linked together. Thus the link available on a webpage are called Hypertext.
- As its name suggests, HTML is a **Markup Language** which means you use HTML to simply "mark up" a text document with tags that tell a Web browser how to structure it to display.
- Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

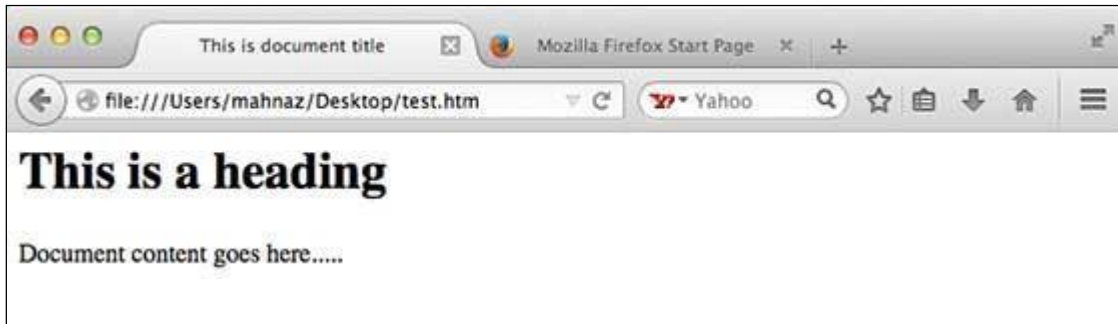## Basic HTML Document

In its simplest form, following is an example of an HTML document:

```
<!DOCTYPE html>
<html>
    <head>
        <title>This is document title</title>
    </head>
<body>
    <h1>This is a heading</h1>
    <p>Document content goes here.... </p>
</body>
</html>
```

- Save it in an HTML file **test.htm** using your favorite text editor. Finally open it using a web browser like Internet Explorer or Google Chrome, or Firefox etc.
- It must show the following output:

Fig 1: Sample Html Output

HTML Tags

- HTML is a markup language and makes use of various tags to format the content. These tags are enclosed within angle braces **<Tag Name>**.

- Except few tags, most of the tags have their corresponding closing tags.

- For example **<html>** has its closing tag **</html>** and **<body>** tag has its closing tag **</body>** tag etc.

- Above example of HTML document uses folloiwng tags:

Tag	Description
<!DOCTYPE...>	This tag defines the document type and HTML version.
<html>	This tag encloses the complete HTML document and mainly comprises of document header which is represented by **<head>...</head>** and document body which is represented by **<body>...</body>** tags.
<head>	This tag represents the document's header which can keep other HTML tags like <title>, <link> etc.
<title>	The **<title>** tag is used inside the <head> tag to mention the document title.
<body>	This tag represents the document's body which keeps other HTML tags like <h1>, <div>, <p> etc.
<h1>	This tag represents the heading.

<p>	This tag represents a paragraph.

World Wide Web Consortium (W3C) recommends to use lowercase tags starting from HTML 4.

HTML Document Structure

A typical HTML document will have following structure:

```
Document declaration tag
<html>
  <head>
    Document header related tags
  </head>

  <body>
    Document body related tags
  </body>
</html>
```

The <!DOCTYPE> Declaration

The <!DOCTYPE> declaration tag is used by the web browser to understand the version of the HTML used in the document. Current version of HTML is 5 and it makes use of the following declaration:

<!DOCTYPE html>

There are many other declaration types which can be used in HTML document depending on what version of HTML is being used.

1. 2 **Cascading Style sheets**

- CSS stands for Cascading Style Sheets

- CSS describes how HTML elements are to be displayed on screen, paper, or in other media.

- CSS saves a lot of work. It can control the layout of multiple web pages all at once

- External stylesheets are stored in CSS files

- CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

CSS Solved a Big Problem

- HTML was NEVER intended to contain tags for formatting a web page!

- HTML was created to **describe the content** of a web page, like:

   <h1>This is a heading</h1>

    <p>This is a paragraph.</p>

- When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large websites, where fonts and color information were added to every single page, became a long and expensive process.

- To solve this problem, the World Wide Web Consortium (W3C) created CSS.

- CSS removed the style formatting from the HTML page!

CSS Saves a Lot of Work!

- The style definitions are normally saved in external .css files.

- With an external stylesheet file, you can change the look of an entire website by changing just one file!

CSS Syntax

- A CSS rule-set consists of a selector and a declaration block:
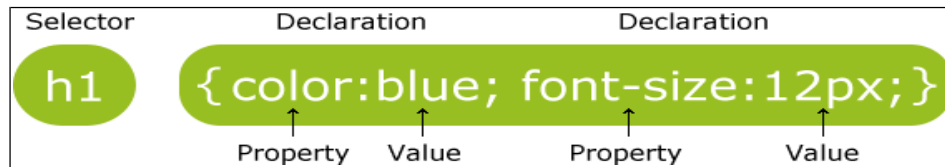
Fig 2: CSS rule-set

- The selector points to the HTML element you want to style.

- The declaration block contains one or more declarations separated by semicolons.

- Each declaration includes a CSS property name and a value, separated by a colon.

- A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

In the following example all <p> elements will be center-aligned, with a red text color:Example

```
<!DOCTYPE html>
  <html>
      <head>
            <style>
                    p {
                          color: red;
                           text-align: center;
                    }
            </style>
      </head>
      <body>
       <p>Hello World!</p>
       <p>This paragraph is styled with CSS.</p>
      </body>
</html>
```

CSS Selectors

- CSS selectors are used to "find" (or select) HTML elements based on their element name, id, class, attribute, and more.

The element Selector

- The element selector selects elements based on the element name.
- You can select all <p> elements on a page like this (in this case, all <p> elements will be center-aligned, with a red text color):
- Example

```
p {

    text-align: center;
    color: red;
}
```

The id Selector

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element should be unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element.
- The style rule below will be applied to the HTML element with id="para1":
- Example

```
#para1

{
    text-align: center;
    color: red;
}
```

- **Note:** An id name cannot start with a number!

The class Selector

- The class selector selects elements with a specific class attribute.
- To select elements with a specific class, write a period (.) character, followed by the name of the class.

In the example below, all HTML elements with class="center" will be red

- and center-aligned:
- Example

```css
.center
{
    text-align: center;
    color: red;
}
```

- You can also specify that only specific HTML elements should be affected by a class.
- In the example below, only <p> elements with class="center" will be center-aligned:
- Example

```css
p.center {
    text-align: center;
    color: red;
}
```

- HTML elements can also refer to more than one class.
- In the example below, the <p> element will be styled according to class="center" and to class="large":
- Example

```html
<p class="center large">This paragraph refers to two classes.</p>
```

JavaScript

- JavaScript is a lightweight, interpreted programming language.

- It is designed for creating network-centric applications. It is complimentary to and integrated with Java.

- JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.

What is JavaScript

- JavaScript is a dynamic computer programming language.

- It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages.

- It is an interpreted programming language with object-oriented capabilities.

Client-side JavaScript

- Client-side JavaScript is the most common form of the language. The script should be included in or referenced by an HTML document for the code to be interpreted by the browser.

- It means that a web page need not be a static HTML, but can include programs that interact with the user, control the browser, and dynamically create HTML content.

The JavaScript client-side mechanism provides many advantages over

- traditional CGI server-side scripts. For example, you might use JavaScript to check if the user has entered a valid e-mail address in a form field.

- The JavaScript code is executed when the user submits the form, and only if all the entries are valid, they would be submitted to the Web Server.

- JavaScript can be used to trap user-initiated events such as button clicks, link navigation, and other actions that the user initiates explicitly or implicitly.

Advantages of JavaScript

- **Less server interaction** − You can validate user input before sending the page off to the server. This saves server traffic, which means less load on your server.
- **Immediate feedback to the visitors** − They don't have to wait for a page reload to see if they have forgotten to enter something.
- **Increased interactivity** − You can create interfaces that react when the user hovers over them with a mouse or activates them via the keyboard.
- **Richer interfaces** − You can use JavaScript to include such items as drag-and-drop components and sliders to give a Rich Interface to your site visitors.

Limitations of JavaScript

We cannot treat JavaScript as a full-fledged programming language. It lacks the following important features −

- Client-side JavaScript does not allow the reading or writing of files. This has been kept for security reason.
- JavaScript cannot be used for networking applications because there is no such support available.
- JavaScript doesn't have any multithreading or multiprocessor capabilities.
- JavaScript is lightweight, interpreted programming language that allows you to build interactivity into otherwise static HTML pages.

To execute JavaScript

Try following example −

```
<html>
<body>

        <script language="javascript" type="text/javascript">
         <!--
           document.write("Hello World!")
          //-->
    </script>

  </body>
```

</html>

output:

- Hello World

HTML5

What is New in HTML5?

The DOCTYPE declaration for HTML5 is very simple:

<!DOCTYPE html>

The character encoding (charset) declaration is also very simple:

<meta charset="UTF-8">

HTML5 Example:

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Title of the document</title>

</head>

<body>

Content of the document......

</body>

</html>

New HTML5 Elements

The most interesting new HTML5 elements are:

New semantic elements like <header>, <footer>, <article>, and <section>.

New attributes of form elements like number, date, time, calendar, and range.

 New graphic elements: <svg> and <canvas>.

New multimedia elements: <audio> and <video>.

Removed Elements in HTML5

The following HTML4 elements have been removed in HTML5:

Removed Element	Use Instead
\<acronym\>	\<abbr\>
\<applet\>	\<object\>
\<basefont\>	CSS
\<big\>	CSS
\<center\>	CSS
\<dir\>	\<ul\>
\<font\>	CSS
\<frame\>	
\<frameset\>	
\<noframes\>	
\<strike\>	CSS, \<s\>, or \<del\>
\<tt\>	CSS

Add New Elements to HTML

You can also add new elements to an HTML page with a browser trick.

This example adds a new element called <myHero> to an HTML page, and defines a style for it:

Example :

```
<!DOCTYPE html>

<html>

<head>

<script>document.createElement("myHero")</script>

<style>

myHero {

    display: block;

    background-color: #dddddd;

    padding: 50px;

    font-size: 30px;

}

</style>

</head>

<body>
```

<h1>A Heading</h1>

<myHero>My Hero Element</myHero>

</body>

</html>

New Semantic/Structural Elements

HTML5 offers new elements for better document structure:

Tag   Description

<article>   Defines an article in a document

<aside>   Defines content aside from the page content

<bdi>   Isolates a part of text that might be formatted in a different direction from other text outside it

<details>   Defines additional details that the user can view or hide

<dialog>   Defines a dialog box or window

<figcaption> Defines a caption for a <figure> element

<figure>   Defines self-contained content

<footer>   Defines a footer for a document or section

<header>   Defines a header for a document or section

<main>   Defines the main content of a document

<mark>   Defines marked/highlighted text

<meter>   Defines a scalar measurement within a known range (a gauge)

<nav>   Defines navigation links

<progress>   Represents the progress of a task

<rp>   Defines what to show in browsers that do not support ruby annotations

<rt>   Defines an explanation/pronunciation of characters (for East Asian typography)

<ruby>   Defines a ruby annotation (for East Asian typography)

<section>   Defines a section in a document

<summary>   Defines a visible heading for a <details> element

<time>   Defines a date/time

<wbr>   Defines a possible line-break

New Form Elements

Tag   Description

<datalist>   Specifies a list of pre-defined options for input controls

<output>   Defines the result of a calculation

XHTML

XHTML stands for EXtensible HyperText Markup Language. It is the next step to evolution of internet. The XHTML was developed by World Wide Web Consortium (W3C). It helps web developers to make the transition from HTML to XML
.

The XHTML documents contains three parts, which are discussed below:

- **DOCTYPE:** It is used to declare a DTD
- **head:** The head section is used to declare the title and other attributes.
- **body:** The body tag contains the content of web pages. It consists many tags.

Creating a XHTML web page, it is necessary to include DTD (Document Type Definition) declaration. There are three types of DTD which are discussed below:

- Transitional DTD
- Strict DTD
- Frameset DTD

Why use XHTML?
- XHTML documents are validated with standard XML tools.
- It is easily to maintain, convert, edit document in the long run.
- It is used to define the quality standard of web pages.
- XHTML is an official standard of the W3C, your website becomes more compatible and accurate with many browsers.

Benefits of XHTML:
- All XHTML tags must have closing tags and are nested correctly. This generates cleaner code.
- XHTML documents are lean which means they use less bandwidth. This reduces cost particularly if your web site has 1000s of pages.
- XHTML documents are well formatted well–formed and can easily be transported to wireless devices, Braille readers and other specialized web environments.
- All new developments will be in XML (of which XHTML is an application).
- XHTML works in association with CSS to create web pages that can easily be updated.

Program 1 :

1. Create an XHTML page using tags to accomplish the following:
(i) A paragraph containing text "All that glitters is not gold". Bold face and italicize this text
(ii) Create equation:

$x = 1/3(y_1$

$^2 + z_1$

^{2}

(iii) Put a background image to a page and demonstrate all attributes of background image
(iv) Create unordered list of 5 fruits and ordered list of 3 flowers.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>Hello XHTML World</title>
</head>
<body>
        <h1>WELCOME TO FIRST XHTML PROGRAMME</h1>

        <p>Gold is resistant to most acids, though it does dissolve in aqua regia (a mixture of nitric acid
and hydrochloric acid),
        forming a soluble tetrachloroaurate anion. <strong><em> "All that glitters is not gold"
</em></strong> Gold is insoluble in nitric acid alone, which dissolves silver and base metals, a
         property long used to refine gold and confirm the presence of gold in metallic substances, giving
rise to the term 'acid test'.
        Gold dissolves in alkaline solutions of cyanide, which are used in mining and electroplating.</p>


        x=1/3(y<sup>2</sup><sub>1</sub>+z<sup>2</sup><sub>1</sub>)


        <h1> FRUITS</h1>
        <ul style="list-style-type:circle">
                <li>Apple</li>
                <li>Mango</li>
                <li>Banana</li>
                <li>Gouva</li>
                <li>Pomogranate</li>
        </ul>
```

```
<h1> FLOWERS</h1>
<ol style="list-style-type:upper-roman">
        <li>Rose</li>
        <li>Lotus</li>
        <li>Sunflower</li>
</ol>

</body>
</html>
```

OUTPUT:

WELCOME TO FIRST XHTML PROGRAMME

Gold is resistant to most acids, though it does dissolve in aqua regia (a mixture of nitric acid and hydrochloric acid), forming a soluble tetrachloroaurate anion. *"All that glitters is not gold"* Gold is insoluble in nitric acid alone, which dissolves silver and base metals, a property long used to refine gold and confirm the presence of gold in metallic substances, giving rise to the term 'acid test'. Gold dissolves in alkaline solutions of cyanide, which are used in mining and electroplating.

$x = 1/3(y^2_1 + z^2_1)$

FRUITS

- Apple
- Mango
- Banana
- Gouva
- Pomogranate

FLOWERS

I. Rose
II. Lotus
III. Sunflower

Program 2 :

Create following table using XHTML tags. Properly align cells, give suitable cell padding and cell spacing, and apply background color, bold and emphasis necessary

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>Hello XHTML World</title>
</head>
<body>
        <table width="50%" border="5" cellpadding="5"  align="center">

        <tr>
                <td rowspan="9" width="30%" style="background-color:lightblue;" align="center"
><b>DEPARTMENT</b></td>
                <td rowspan="3" width="30%" style="background-color:#CBC3E3;" align="center"
><b>Sem 1</b></td>
                <td width="30%">Subject A</td>
        </tr>
        <tr>

                <td>Subject B</td>
        </tr>
        <tr>

                <td>Subject C</td>
        </tr>
        <tr>
                <td rowspan="3" style="background-color:#CBC3E3;" align="center"><b>Sem
2</b></td>
                <td>Subject D</td>
        </tr>
        <tr>

                <td>Subject E</td>
        </tr>
        <tr>

                <td>Subject F</td>
        </tr>

        <tr>
```

```
        <td rowspan="3" style="background-color:#CBC3E3;" align="center"><b>Sem
3</b></td>
        <td>Subject G</td>
    </tr>
    <tr>

        <td>Subject H</td>
    </tr>
    <tr>

        <td>Subject I</td>
    </tr>
    </table>
</body>
</html>
```

OUTPUT:

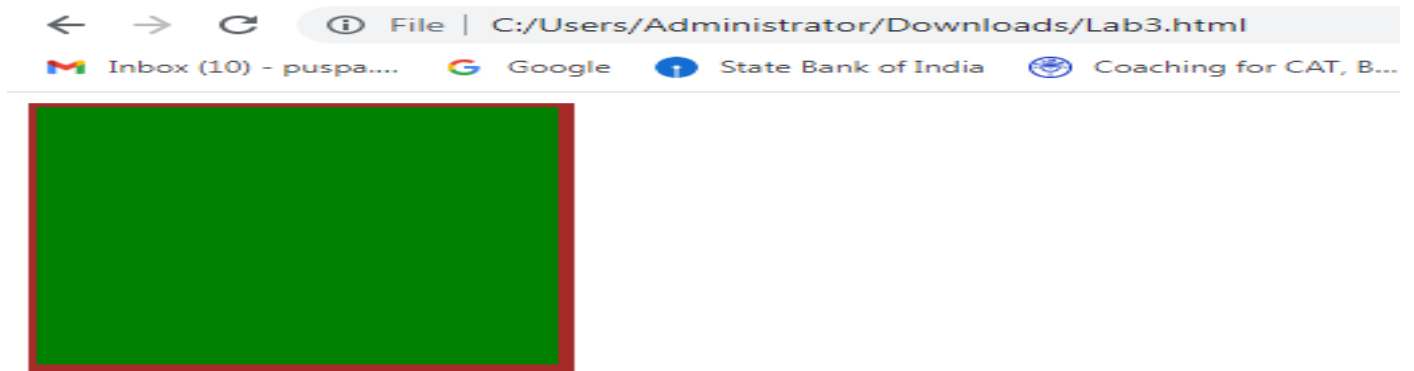| DEPARTMENT	Sem 1	Subject A
		Subject B
		Subject C
	Sem 2	Subject D
		Subject E
		Subject F
	Sem 3	Subject G
		Subject H
		Subject I

Program 3 :

Use HTML5 for performing following tasks:
(i) Draw a square using HTML5 SVG , fill the square with green color and make 6px brown stroke width
(ii) Write the following mathematical expression by using HTML5 MathML.
$d=x_2-y_2$
(iii) Redirecting current page to another page after 5 seconds using HTML5 meta tag

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
        <title>Lab Program 3</title>
        <meta http-equiv="refresh" content="5;
                url='file:///C:/Users/Indian/Desktop/Program/Lab2.html'" />

</head>
<body>
        <svg width="400" height="400">
  <rect width="200" height="200" style="fill:green;stroke-width:6;stroke:brown" />
</svg>



<br>

        <math>
                <mi>d=</mi>
                <mi>x</mi>
                <msup><mn>2</mn></msup>
                <mi>-</mi>
                <mi>y</mi>
                <msup><mn>2</mn></msup>
        </math>
</body>
</html>
```

OUTPUT:

d=x2-y2

Program 4 :

Demonstrate the following HTML5 Semantic tags- <article>, <aside>, <details>, <figcaption>, <figure>, <footer>, <header>, <main>, <mark>, <section> for a webpage that gives information about travel experience.

```
<!DOCTYPE html>
<html>
<body>
<style>
aside{
        width :30%;
        padding-left :15px;
        margin-left :15px;
        float : right;
        font-style: italic;
        background-color:lightgray;
}
</style>

<article>
<header>
        <h1>Travel Experience </h1>
</header>
        <p> My family and I visited the Tajmahal, Mysuru palace etc in this summer. The
waether was nice and places were amazing ! I had
        a great summer vacation with my family.</p>
</article>

        <section>
                <h3>Places visited</h3>
                <p> I have visited many places like mysuru palace , Tajmahal, manglore  and
Rajasthan etc.</p>
        </section>

        <section>
                <h3> Experience </h3>
                <p> I was in love with entire experience of travelling .I couldn't get enough
```

time, I wanted to see as much as I can .Each place had its own speaciality. Each place had its unique historical story .etc .</p>
        </section>

<figure>
        <aside>
        <h4> Tajmahal</h4>
        <p align="justify">Tajmahal is an <mark>ivory-white marble mauseum on south bank of yamuna river in the indian city of Agraha</mark>.it was commisioned in 1632 by mughal emperor shahjahan.
        to house the tomb of his favourite wife, Mumtaz Mahal; it also houses the tomb of Shah Jahan himself. The tomb is the centrepiece of a 17-hectare (42-acre) complex, which includes a mosque and a guest house, and is set in formal gardens bounded on three sides by a crenellated wall. </p>
        </aside>
<img src="tajmahal.jpg" alt="Tajmahal" width="500" height="400">
<figcaption>Fig.1 Tajmahal,Agraha</figcaption>
</figure>

<figure>
        <aside>
        <h4> Mysuru Palace</h4>
        <p align="justify">Mysore Palace, also known as <mark>Amba Vilas Palace, is a historical palace and a royal residence (house)</mark>.
        It is located in Mysore, Karnataka. It used to be the official residence of the Wadiyar dynasty and the seat of the Kingdom of Mysore. The palace is in the centre of Mysore, and faces the Chamundi Hills eastward. Mysore is commonly described as the 'City of Palaces', and there are seven palaces including this one.
        However, the Mysore Palace refers specifically to the one within the new fort.</p>
        </aside>
<img src="mysore-palace.jpg" alt="mysuru-palace" width="500" height="400">
        <figcaption>Fig.2 Mysuru palace, Mysuru</figcaption>

</figure>
<footer>

        <p> .copyright 2023. All right reserved </p>
</footer>
</body>

</html>
OUTPUT:

Travel Experience

My family and I visited the Tajmahal, Mysuru palace etc in this summer. The waether was nice and places were amazing ! I had a great summer vacation with my family.

Places visited

I have visited many places like mysuru palace , Tajmahal, manglore and Rajasthan etc.

Experience

I was in love with entire experience of travelling .I couldn't get enough time, I wanted to see as much as I can .Each place had its own speaciality. Each place had its unique historical story .etc .

Fig.1 Tajmahal,Agraha

Tajmahal

Tajmahal is an ivory-white marble mauseum on south bank of yamuna river in the indian city of Agraha.it was commisioned in 1632 by mughal emperor shahjahan. to house the tomb of his favourite wife, Mumtaz Mahal; it also houses the tomb of Shah Jahan himself. The tomb is the centrepiece of a 17-hectare (42-acre) complex, which includes a mosque and a guest house, and is set in formal gardens bounded on three sides by a crenellated wall.

.copyright 2023. All right reserved

Program 5 :

Create a class called **income**, and make it a background color of #0ff.
Create a class called **expenses**, and make it a background color of #f0f.
Create a class called **profit**, and make it a background color of #f00.
Throughout the document, any text that mentions income, expenses, or profit, attach the appropriate class to that piece of text. Further create following line of text in the same document:
~~The current price is 50 rs~~ and new price is 40 rs.

```
<!DOCTYPE html>
<html>
<head>
        <title> bacground color change</title>
<style type = "text/css">
        .income { font : 50pt }
        .wordtext { color : #0ff; }
        .expenses { font : 50pt  }
        .wordtext1 { color : #f0f; }
        .profit { font : 20pt }
        .wordtext2 { color : #f00; }
</style>
</head>

<body>
     <p class = "income" >
             My Name is Prabha, I have started a business and daily

     <span class = "wordtext">income is 5000/- </span>
     </p>

     <p class ="expenses" >
             and the total personal
     <span class = "wordtext1"> expense 10000/- </span>
             per month
     </p>

     <p class = "profit" >
             and
```

```
<span class = "wordtext2"> the profit 3000/- </span>

        i earn per month . The business is running successfully .
</p>

<p class="income">

<s>The current price my favourite pen is 50</s>. and

 <span class="wordtext">new price is 40</span>.
</p>
```

`</body>`

`</html>`

OUTPUT:

My Name is Prabha, I have started a business and daily income is 5000/-

and the total personal expense 10000/- per month

and the profit 3000/- i earn per month . The business is running successfully .

~~The current price my favourite pen is 50~~. and new price is 40.

Program 6 :

Change the tag **li** to have the following properties:
- A display status of inline
- A medium, double-lined, black border
- No list style type

Add the following properties to the style for **li**:
- Margin of 5px
- Padding of 10px to the top, 20px to the right, 10px to the bottom, and 20px to the left

Also demonstrate list style type with user defined image logos

```
<!DOCTYPE html>
<html>
<head>
<style>

span.a {
  display: inline;
  width: 100px;
  height: 100px;
  padding: 5px;
  border: 2px solid black;
  background-color: lightgray;
}

p.double {
      width: 120px;
      height: 25px;
      border-style: double;
      border-width: thick;
  }

/* No list style type*/
ul.no-bullets {
  list-style-type: none;
  margin: 0;
  padding: 0;
}

/* add the properties to style the li*/
```

```
ul{
  list-style-image: url('star1.gif');
  margin: 5px;
  padding: 10px 20px 10px 20px;
}

</style>
</head>

<body>

<h1>Welcome To Web Programming Lab</h1>

        <h2>display: inline</h2>
        <div>Web Lab is a programming environment, where you can make simple web pages using<p
class="double">HTML and CSS</p>Design your web pages and share your site in seconds.
        Web designing is of three kinds

        <span class="a" >to be specific static</span>

        <span class="a">dynamic or CMS</span> and

        <span class="a" > eCommerce.</span> </div>

        <h4> Top Principles of Web Design("No list style type")</h4>

        <ul class="no-bullets">
        <li>A clear purpose. Every well-designed website caters for the needs of its users.</li>
        <li>Speedy load time. Even if every aspect of your site has a clear purpose, if it takes too long to
load, then it's all but useless to the user.</li>
        <li>Typography</li>
        <li>Communication</li>
        <li>Mobile friendly.</li>
        </ul>
<br>

        <h4> Top Principles of Web Design("user defined list style type with user defined log")</h4>
        <ul>
        <li >A clear purpose. Every well-designed website caters for the needs of its users.</li>
        <li>Speedy load time. Even if every aspect of your site has a clear purpose, if it takes too long to
load, then it's all but useless to the user.</li>
        <li>Typography</li>
        <li>Communication</li>
        <li>Mobile friendly.</li>
        <ul>
```

</body>
</html>

OUTPUT:

Welcome To Web Programming Lab

display: inline

Web Lab is a programming environment, where you can make simple web pages using

HTML and CSS

Design your web pages and share your site in seconds. Web designing is of three kinds to be specific static   dynamic or CMS and eCommerce.

Top Principles of Web Design("No list style type")

A clear purpose. Every well-designed website caters for the needs of its users.

Speedy load time. Even if every aspect of your site has a clear purpose, if it takes too long to load, then it's all but useless to the user.
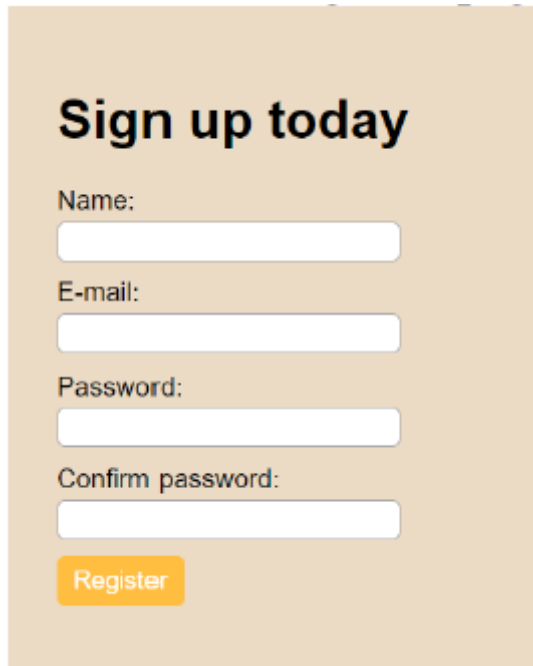
Typography

Communication

Mobile friendly.

Top Principles of Web Design("user defined list style type with user defined log")

A clear purpose. Every well-designed website caters for the needs of its users.

Speedy load time. Even if every aspect of your site has a clear purpose, if it takes too long to load, then it's all but useless to the user.

Typography

Communication

Program 7 :

Create following web page using HTML and CSS with tabular layout


```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">

<style>

        body {
                font-family: Arial, Helvetica, sans-serif;
                background-color: black;
            }


        * {
                box-sizing: border-box;
            }
```

/* Add padding to containers */
```
        .container {

                padding: 16px;
                background-color: white;

                }
```

/* Full-width input fields */

```
        input[type=text], input[type=password] {
                                width: 100%;
                                padding: 15px;
                                margin: 5px 0 22px 0;
                                display: inline-block;
                                border: none;
                                background: #f1f1f1;

                                }

        input[type=text]:focus, input[type=password]:focus {

                                background-color: #ddd;
                                outline: none;

                                 }
```

/* Overwrite default styles of hr */

```
        hr {
                border: 1px solid #f1f1f1;
                margin-bottom: 25px;
            }
```

/* Set a style for the submit button */
```
        .registerbtn {
                background-color: #04AA6D;
                color: white;
                 padding: 16px 20px;
                margin: 8px 0;
                border: none;
                cursor: pointer;
                width: 100%;
```

```
            opacity: 0.9;

            }


      .registerbtn:hover {
            opacity: 1;

            }



/* Set a grey background color and center the text of the "sign in" section */

      .signin {
            background-color: #f1f1f1;
            text-align: center;
            }
</style>
</head>

<body>

  <div class="container">
   <h1>Register</h1>

   <hr>
        <label for="name"><b>Name</b></label>
        <input type="text"  name="name" id="name" required>


   <label for="email"><b>Email</b></label>
   <input type="text"  name="email" id="email" required>

   <label for="psw"><b>Password</b></label>
   <input type="password"  name="psw" id="psw" required>

   <label for="psw-repeat"><b>confirm Password</b></label>
   <input type="password"  name="psw-repeat" id="psw-repeat" required>
   <hr>

   <button type="Register" class="registerbtn">Register</button>
  </div>

  <div class="container signin">
```

```
  </div>
</form>

</body>
</html>
```

OUTPUT:

Register

Name

Email

Password

confirm Password

Register

Program 8 :

Create following calculator interface with HTML and CSS

```
<! DOCTYPE html>
<html>
   <head>
   <meta charset="utf-8">

 <!-- CSS property to create interactive
      calculator interface -->
<style>

   html {
       height: 100vh;
       display: flex;
       align-items: center;
       justify-content: center;
       font-family: 'Cookie', cursive;
       }

     input[type=button] {
           width: 60px;
           height: 60px;
           float: left;
           padding: 0;
           margin: 5px;
           box-sizing: border-box;
           background: #ecedef;
           border: none;
           font-size: 30px;
           line-height: 30px;
           border-radius: 20%;
           font-weight: 700;
           color: #5E5858;
           cursor: pointer;
          }
```

```css
input[type=text] {
        width: 270px;
        height: 60px;
        float: left;
        padding: 0;
        box-sizing: border-box;
        border: none;
        background: none;
        color:Black;
        text-align: right;
        font-weight: 700;
        font-size: 60px;
        line-height: 60px;
        margin: 0 25px;


        }



.calculator {
        background-color: #c0c0c0;
         border: 5px solid black;
         border-radius: 10px;
        }

#display {

        height: 40px;
        text-align: right;
          background-color: white;
          border: 3px solid black;
          font-size: 20px;
          left: 2px;
          top: 2px;
          color: black;
        }


.btnTop {
        color: white;
        background-color:#6f6f6f;
```

```
                font-size: 14px;
                margin: auto;
                width: 50px;
                height: 25px;
            }
    </style>
</head>

<body>

    <form name="Calculator" class = "calculator" >

        <table border="2" align="center" cellpadding="15" cellspacing="12"
bgcolor="pink">
<tr>
<td>
        <input type="text" name="Input" Size="40" id="display">
<br>
</td>
</tr>


<tr>

<td>

<input type="button" name="opening parenthesis" style="font-size:30px" value=" ( "
OnClick="Calculator.Input.value = '('">
<input type="button" name="closing parenthesis" style="font-size:30px" value=" ) "
OnClick="Calculator.Input.value = ')'">
<input     type="button"     name="clear"     style="font-size:30px"     value="    C    "
OnClick="Calculator.Input.value = ''">
<input   type="button"   name="percent   sign"   style="font-size:30px"   value="   %   "
OnClick="Calculator.Input.value = ' % '">


<br>
<input    type="button    name  =   "seven"    style="font-size:30px"    value="   7   "
OnClick="Calculator.Input.value += '7'">
<input    type="button    name  =   "eight"    style="font-size:30px"    value="   8   "
OnCLick="Calculator.Input.value += '8'">
<input    type="button    name  =   "nine"    style="font-size:30px"    value="   9   "
```

```
OnClick="Calculator.Input.value += '9'">
<input   type="button"   name   =   "mul"   style="font-size:30px"   value="   *   "
OnClick="Calculator.Input.value += ' * '">

<br>
<input   type="button"   name   =   "four"   style="font-size:30px"   value="   4   "
OnClick="Calculator.Input.value += '4'">
<input   type="button"   name   =   "five"   style="font-size:30px"   value="   5   "
OnCLick="Calculator.Input.value += '5'">
<input   type="button"   name   =   "six"   style="font-size:30px"   value="   6   "
OnClick="Calculator.Input.value += '6'">
<input   type="button"   name   =   "minus"   style="font-size:30px"   value="   -   "
OnClick="Calculator.Input.value += ' - '">

<br>
<input   type="button"   name   =   "one"   style="font-size:30px"   value="   1   "
OnClick="Calculator.Input.value += '1'">
<input   type="button"   name   =   "two"   style   =   "font-size:30px"   value="   2   "
OnCLick="Calculator.Input.value += '2'">
<input   type="button"   name   =   "three"   style="font-size:30px"   value="   3   "
OnClick="Calculator.Input.value += '3'">
<input type="button" name="add" class ="btnTop" style="font-size:30px" value=" + "
OnClick="Calculator.Input.value += ' + '">

<br>
<input   type="button"   name   =   "zero"   style="font-size:30px"   value="   0   "
OnClick="Calculator.Input.value += '0'">
<input   type="button"   name="period"   style="font-size:30px"   value="   .   "
OnClick="Calculator.Input.value = '.'">
<input   type="button"   name="div"   style="font-size:30px"   value="   /   "
OnClick="Calculator.Input.value += ' / '">
<input   type="button"   name="DoIt"   style="font-size:30px"   value="   =   "
OnClick="Calculator.Input.value = eval(Calculator.Input.value)">
<br>
</td>

</tr>
</table>
</form>
</body>
```
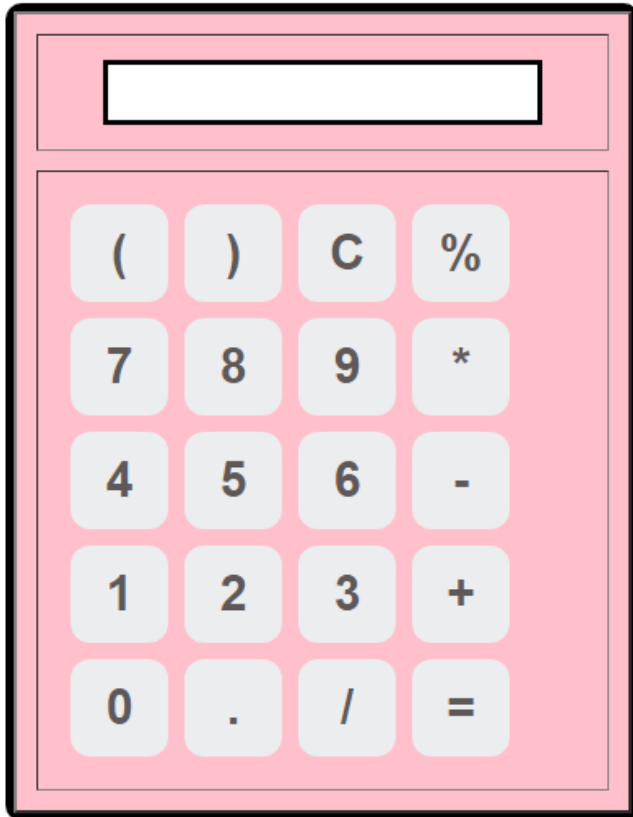
</html>

OUTPUT:

Program 9 :

Write a Java Script program that on clicking a button, displays scrolling text which moves from left to right with a small delay

```
<!DOCTYPE html>
<html>
<style>
 #main{
    width: 100%;
    overflow: hidden;
    }

   .para{
    color: black;
    font-weight: bold;
    white-space: nowrap;
    clear: both;
    float: right;
    }
</style>
<body>
   <div id="main">
      <p class="para" id="para1">
        INTRODUCTION TO WEB PROGRAMMING
      </p>

   </div>

<script>


const para1 = document.getElementById("para1");

animate(para1);

function animate(element) {
   let elementWidth = element.offsetWidth;
   let parentWidth = element.parentElement.offsetWidth;
   let flag = 0;

   setInterval(() => {
      element.style.marginRight = --flag + "px";

      if (elementWidth == -flag) {
```
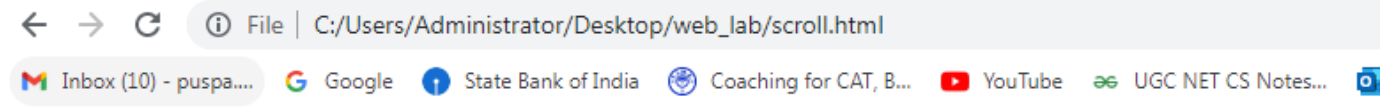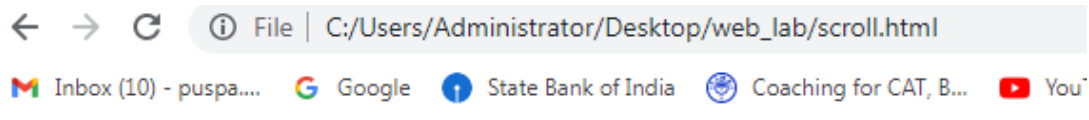
```
        flag = parentWidth;
      }
   }, 20);
}


</script>
</body>

</html>
```

OUTPUT:

Program 10 :

Create a webpage containing 3 overlapping images using HTML, CSS and JS. Further when the mouse is over any image, it should be on the top and fully displayed.

```
<html>

<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
 <style>

      /* Image Container */

.container{

      position: relative;

 width: 300px;

height: 300px;
   }


 .img1{

  position: absolute;

     z-index: 1;

     width: 100%;

     top: 0;

     left: 0;
  }

 .img2{

     position: absolute;

 z-index: 2;
```

```
    width: 100%;

  top: 50px;

  left: 50px;

Float:left;
  }

.img3{

  position: absolute;

    z-index: 3;

    width: 100%;

  top: 100px;

    left: 100px;
  }


  </style>

 </head>

<body>


 <div class="container" >

   <img src="mysore-palace.jpg" style="width:100%;cursor:pointer"
   onclick="onClick(this)"  class="img1">

   <img src="tajmahal.jpg" style="width:100%;cursor:pointer"
   onclick="onClick(this)"class="img3">


   <img src="china-wall.jpg" style="width:100%;cursor:pointer"
   onclick="onClick(this)"  class="img2">

</div>
```

```
<div id="modal01" class="w3-modal" onclick="this.style.display='none'">
  <span class="w3-button w3-hover-red w3-xlarge w3-display-topright">&times;</span>
  <div class="w3-modal-content w3-animate-zoom">
  <img id="img01" style="width:100%">

</div>


<script>
function onClick(element) {
  document.getElementById("img01").src = element.src;
  document.getElementById("modal01").style.display = "block";
}
</script>

</body>

</html>
```
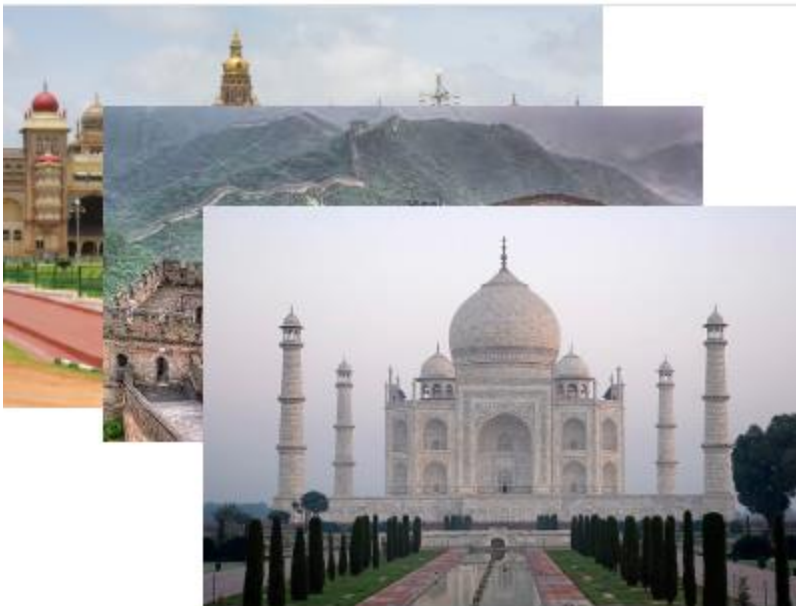
OUTPUT:

Viva Questions

1) What is HTML?

HTML, or HyperText Markup Language, is a Universal language which allows an individual using special code to create web pages to be viewed on the Internet.

2) What is a tag?

In HTML, a tag tells the browser what to do. When we write an HTML page, we enter tags for many reasons -- to change the appearance of text, to show a graphic, or to make a link to another page.

3) What is the simplest HTML page?

```
HTML Code:
<HTML>
<HEAD>
<TITLE>This is my page title! </TITLE>
</HEAD>
<BODY>
        This is my message to the world!
</BODY>
</HTML>
```

4) How do I create frames? What is a frameset?

Frames allow an author to divide a browser window into multiple (rectangular) regions. Multiple documents can be displayed in a single window, each within its own frame. Graphical browsers allow these frames to be scrolled independently of each other, and links can update the document displayed in one frame without affecting the others.
You can't just "add frames" to an existing document. Rather, you must create a frameset document that defines a particular combination of frames, and then display your content documents inside those frames. The frameset document should also include alternative non-framed content in a NOFRAMES element.
The HTML 4 frames model has significant design flaws that cause usability problems for web users. Frames should be used only with great care.

5) How can I include comments in HTML?

Technically, since HTML is an SGML application, HTML uses SGML comment syntax. However, the full syntax is complex, and browsers don't support it in its entirety anyway. Therefore, use the following simplified rule to create HTML comments that both have valid syntax and work in browsers:
An HTML comment begins with "<!--", ends with "-->", and does not contain "--" or ">" anywhere in the comment.

The following are examples of HTML comments:
* <!-- This is a comment. -->
* <!-- This is another comment,
and it continues onto a second line. -->
* <!---->

6) What is a Hypertext link?

A hypertext link is a special tag that links one page to another page or resource. If you click the link, the browser jumps to the link's destination.

7) What is a DOCTYPE? Which one do I use?

According to HTML standards, each HTML document begins with a DOCTYPE declaration that specifies which version of HTML the document uses. Originally, the DOCTYPE declaration was used only by SGML-based tools like HTML validators, which needed to determine which version of HTML a document used (or claimed to use).
Today, many browsers use the document's DOCTYPE declaration to determine whether to use a stricter, more standards-oriented layout mode, or to use a "quirks" layout mode that attempts to emulate older, buggy browsers.

8) How do I align a table to the right (or left)?

You can use <TABLE ALIGN="right"> to float a table to the right. (Use ALIGN="left" to float it to the left.) Any content that follows the closing </TABLE> tag will flow around the table. Use <BR CLEAR="right"> or <BR CLEAR="all"> to mark the end of the text that is to flow around the table, as shown in this example:
The table in this example will float to the right.
<table align="right">...</table>
This text will wrap to fill the available space to the left of (and if the text is long enough, below) the table.
<br clear="right">
This text will appear below the table, even if there is additional room to its left.

9) Explain Cell Padding and Cell Spacing ?

Cell Padding: it refers to the gap or space between the cell content and cell border or cell wall.
Cell Spacing: It refers to the gap between the two cells of same tables.
In HTML cell spacing and padding both are used with Table Border layout.
Example:
<table border cellpadding=2>

<table border cellspacing=2>
<table border cellpadding=2 cellspacing=2>

10) How to create a button which acts like a link?

To create buttons which act as a hyperlink, there are two ways:

<FORM ACTION="[url]" METHOD=get>
<INPUT TYPE=submit VALUE="Text on button">
</FORM>

<INPUT TYPE="submit" VALUE="Go to my link location"
ONCLICK=" http://www.careerride.com/;" />

11) What is difference between HTML and XHTML?

The differences between HTML and XHTML are:

HTML is application of Standard Generalized Markup Language(SGML) whereas XML is application of Extensible Markup Language(XML).

HTML is a static Web Page whereas XHTML is dynamic Web Page.

HTML allows programmer to perform changes in the tags and use attribute minimization whereas XHTML when user need a new markup tag then user can define it in this.

HTML is about displaying information whereas XHTML is about describing the information

12) How many types CSS can be include in HTML?

There are three ways to include the CSS with HTML:

Inline CSS: it is used when only small context is to be styled.
o To use inline styles add the style attribute in the relevant tag.

External Style Sheet: is used when the style is applied to many pages.
o Each page must link to the style sheet using the <link> tag. The <link> tag goes inside the head section:
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>

Internal Style Sheet: is used when a single document has a unique style.
o Internal styles sheet needs to put in the head section of an HTML page, by using the <style> tag, like this:

```
<head>
<style type="text/css">
hr {color:sienna}
p {margin-left:20px}
body {background-image:url("images/back40.gif")}
</style>
</head>
```

13) What are logical and physical tags in HTML?

Logical tags are used to tell the meaning of the enclosed text. The example of the logical tag is   tag. When we enclosed text in strong tag then it tell the browser that enclosed text is more important than other text.

Physical text are used to tell the browser that how to display the text enclosed in the physical tag. Some example of the physical tags are: <b> , <big> , <i>

14) What are new Media Elements in HTML5?

Following are the New Media Elements are present in HTML5:

<audio> tag: for playing audio.

<video> tag: for playing video.

<source> tag: For media resources for media elements.

<embed> tag: For embedded content,

<track> tag: For text tracks used in media players

15) Explain various HTML list tags.

In HTML we can list the element in two ways:

Ordered list: in this list item are marked with numbers.
Syntax:
 first item
second item
Display as: 1. First item
2. Second item.

Unordered Lists: in this item are marked with bullets.
Syntax:
 first item
second item

Display as:
-First item
-Second item.

16) Explain HTML background.

There are two types of background in HTML:

Colored Background: in this the background of the html is colored.
The Syntax is: <body bgcolor = "red">
The value of the bgcolor can be set in three ways by hexadecimal number, an RGB value and Color name.
Example: <body bgcolor = "black">
<body bgcolor = "rgb(0,0,0)">
<body bgcolor = "#000000">

Image Background: in this we set the background of the website by an image. Syntax used for this is : <body background="study.gif">

17) What is CSS?

CSS stands for Cascading Style Sheets. By using CSS with HTML we can change the look of the web page by changing the font size and color of the font. CSS plays an important role in building the website. Well written CSS file can be used to change the presentation of each web page. By including only one CSS file. It gives web site developer and user more control over the web pages.

18) How to insert Javascript in HTML?

We can insert JavaScript in HTML using <Script tag>. JavaScript can be enclosed in <script type = text/javascript> and ending with </script>.
Example:
<html>
  <body>
     <script type="text/javascript">
          ...JavaScript….
      </script>
   </body>
</html>

19) What is the Use of SPAN in HTML and give one example?

SPAN: Used for the following things:

Highlight the any color text

For adding colored text

For adding background image to text.

Example:

```
<p>
<span style="color:#000000;">
In this page we use span.
</span>
</p>
```

20) What are style sheet properties?

CSS Background
CSS Text
CSS Font
CSS Border
CSS Outline
CSS Margin
CSS Padding
CSS List
CSS Table

List various font attributes used in style sheet.

font-style
font-variant
font-weight
font-size/line-height
font-family
caption
icon
menu
message-box
small-caption
status-bar

21) Explain inline, embedded and external style sheets.

Inline
If only a small piece of code has to be styled then inline style sheets can be used.

Embedded
Embedded style sheets are put between the <head> </head> tags.

External
If you want to apply a style to all the pages within your website by changing just one style sheet, then external style sheets can be used.

22) How do I create a link that opens a new window?

      <a target="_blank" href=...> opens a new, unnamed window.
<a target="example" href=...> opens a new window named "example", provided that a window or frame by that name does not already exist.
Note that the TARGET attribute is not part of HTML 4 Strict. In HTML 4 Strict, new windows can be created only with JavaScript. links that open new windows can be annoying to your readers if there is not a good reason for them.

What is the difference between the HTML form methods GET and POST?
The method parameter specifies which method the client is using to send information to the WEB server. The method determines which parameter you will find the CGI request data in:
* POST - post_args
* GET – http args

23)What is the DOM?

      DOM is a platform independent, World Wide Web Consortium (W3C) standard form of representation of structured documents as an object-oriented model. It is an application programming interface so as to access HTML and XML documents.

      Document Object Model (DOM) is used to query, traverse and manipulate documents like XML or HTML documents. DOM is best suited where the document must be accessed repeatedly or out of sequence order. DOM allows accessing the contents of a web page. It also allows dealing with events that allows capturing and responding to user's actions. There are different levels of DOM standards depending on the compatibility of the browsers.

24) What is the HTML DOM?

The HTML DOM API specializes and adds the functionality to relate to HTML documents and elements. It addresses the issues of backwards compatibility with the Level 0 of DOM and provides mechanisms for common and frequent operations on HTML documents

25) What is JavaScript?

JavaScript is a platform-independent,event-driven, interpreted client-side scripting language developed by Netscape Communications Corp. and Sun Microsystems.

JavaScript is a general-purpose programming language designed to let programmers of all skill levels control the behavior of software objects. The language is used most widely today in Web browsers whose software objects tend to represent a variety of HTML elements in a document and the document itself.

But the language is used with other kinds of objects in other environments. For example, Adobe Acrobat Forms uses JavaScript as its underlying scripting language to glue together objects that are unique to the forms generated by Adobe Acrobat.

Therefore, it is important to distinguish JavaScript, the language, from the objects it can communicate with in any particular environment.

When used for Web documents, the scripts go directly inside the HTML documents and are downloaded to the browser with the rest of the HTML tags and content.

26) How is JavaScript different from Java?

Don't be fooled by the term Java in both. Both are quite different technologies.

JavaScript was developed by Brendan Eich of Netscape; Java was developed at Sun Microsystems. While the two languages share some common syntax, they were developed independently of each other and for different audiences. Java is a full-fledged programming language tailored for network computing; it includes hundreds of its own objects, including objects for creating user interfaces that appear in Java applets (in Web browsers) or standalone Java applications. In contrast, JavaScript relies on whatever environment it's operating in for the user interface, such as a Web document's form elements.

JavaScript was initially called LiveScript at Netscape while it was under development. A licensing deal between Netscape and Sun at the last minute let Netscape plug the "Java" name into the name of its scripting language. Programmers use entirely different tools for Java and JavaScript. It is also not uncommon for a programmer of one language to be ignorant of the other. The two languages don't rely on each other and are intended for different purposes. In some ways, the "Java" name on JavaScript has confused the world's understanding of the

differences between the two. On the other hand, JavaScript is much easier to learn than Java and can offer a gentle introduction for newcomers who want to graduate to Java and the kinds of applications you can develop with it.

27) What is the official JavaScript website?

This is a trick question used by interviewers to evaluate the candidate's knowledge of JavaScript. Most people will simply say javascript.com is the official website.

The truth is- there is no official website for Javascript you can refer to. It was developed by Brendan Eich for Netscape. It was based on the ECMAScript language standard; ECMA-262 being the official JavaScript standard.

28) What are JavaScript types?

Number, String, Boolean, Function, Object, Null, Undefined.
How do you convert numbers between different bases in JavaScript?
Use the parseInt() function, that takes a string as the first parameter, and the base as a second parameter. So to convert hexadecimal 3F to decimal, use parseInt ("3F", 16);

29) How do you submit a form using Javascript?

Use document.forms[0].submit();

30) How do you assign object properties?

obj["age"] = 22 or obj.age = 22.

31) What's a way to append a value to an array?

arr[arr.length] = value;

32) What does isNaN function do?

Return true if the argument is not a number.

33 What's relationship between JavaScript and ECMAScript?

ECMAScript is yet another name for JavaScript (other names include LiveScript). The current JavaScript that you see supported in browsers is ECMAScript revision 3.

34) How to read and write a file using javascript?
I/O operations like reading or writing a file is not possible with client-side javascript.

35) How do you convert numbers between different bases in JavaScript?

Use the parseInt() function, that takes a string as the first parameter, and the base as a second parameter. So to convert hexadecimal FF to decimal, use parseInt ("FF", 16);

36) What boolean operators does JavaScript support?

&&, and !

37) How to get the contents of an input box using Javascript?

Use the "value" property.
var myValue = window.document.getElementById("textboxID").value;

38) How to determine the state of a checkbox using Javascript?

var checkedP = window.document.getElementById("CheckBoxID").checked;

39) How to set the focus in an element using Javascript?

<script> function setFocus() { if(focusElement != null) {
document.forms[0].elements["myelementname"].focus(); } } </script>

40) How to access an external javascript file that is stored externally and not embedded?

This can be achieved by using the following tag between head tags or between body tags. <script src="raj.js"></script>How to access an external javascript file that is stored externally and not embedded? where abc.js is the external javscript file to be accessed.

41) What is the difference between an alert box and a confirmation box?

An alert box displays only one button which is the OK button whereas the Confirm box displays two buttons namely OK and cancel.

42) What is a prompt box?

A prompt box allows the user to enter input by providing a text box.

43) Can javascript code be broken in different lines?

Breaking is possible within a string statement by using a backslash \ at the end but not within any other javascript statement.
that is ,
document.write("Hello \ world");
is possible but not document.write \
("hello world");

44) What looping structures are there in JavaScript?

for, while, do-while loops, but no foreach.

45) How do you create a new object in JavaScript?

var obj = new Object(); or var obj = {};

46) What is this keyword?

It refers to the current object.

47) What is the difference between SessionState and ViewState?

ViewState is specific to a page in a session. Session state refers to user specific data that can be accessed across all pages in the web application.

48) What looping structures are there in JavaScript?

for, while, do-while loops, but no foreach.

49) To put a "close window" link on a page ?

 Close

50) How to hide javascript code from old browsers that dont run it?

Use the below specified style of comments <script language=javascript> <!-- javascript code goes here // --> or Use the <NOSCRIPT>some html code </NOSCRIPT> tags and code the display html statements between these and this will appear on the page if the browser does not support javascript

51) How to comment javascript code?

Use // for line comments and
/*
*/ for block comments
Name the numeric constants representing max,min values
Number.MAX_VALUE
Number.MIN_VALUE

52) What does javascript null mean?

The null value is a unique value representing no value or no object.
It implies no object,or null string,no valid boolean value,no number and no array object.

53) How do you create a new object in JavaScript?

var obj = new Object(); or var obj = {};

How do you assign object properties?
obj["age"] = 23 or obj.age = 23.

54) What's a way to append a value to an array?

arr[arr.length] = value;

55) To set all checkboxes to true using JavaScript?
//select all input tags
function SelectAll() {
var checkboxes = document.getElementsByTagName("input");
for(i=0;i<checkboxes.length;i++) {
if(checkboxes.item(i).attributes["type"].value == "checkbox") {
checkboxes.item(i).checked = true;
}}}

56) What does undefined value mean in javascript?

Undefined value means the variable used in the code doesn't exist or is not assigned any value or the property doesn't exist.

57) What is the difference between undefined value and null value?

(i) Undefined value cannot be explicitly stated that is there is no keyword called undefined whereas null value has keyword called null
(ii) typeof undefined variable or property returns undefined whereas typeof null value returns object

58) What are undefined and undeclared variables?

Undeclared variables are those that are not declared in the program (do not exist at all),trying to read their values gives runtime error.But if undeclared variables are assigned then implicit declaration is done .Undefined variables are those that are not assigned any value but are declared in the program.Trying to read such variables gives special value called undefined value.

59) How to disable an HTML object ?

document.getElementById("myObject").disabled = true;

60) How to create a popup warning box?

alert('Warning: Please enter an integer between 0 and 1000.');

61) How to create a confirmation box?

confirm("Do you really want to launch the missile?");

62) How to create an input box?

prompt("What is your temperature?");

63) How to force a page to go to another page using JavaScript ?

<script language="JavaScript" type="text/javascript" ><!--
location.href="http://rajeshstutorials.blogspt.com"; //--></script>

64) What's Math Constants and Functions using JavaScript?

The Math object contains useful constants such as Math.PI, Math.E
Math.abs(value); //absolute value
Math.max(value1, value2); //find the largest
Math.random() //generate a decimal number between 0 and 1
Math.floor(Math.random()*101) //generate a decimal number between 0 and 100

65) How to get value from a textbox?

alert(document.getElementById('txtbox1').value);

66)   How to get value from dropdown (select) control?

alert(document.getElementById('dropdown1').value);

67) What is event bubbling?

Event bubbling describes the behavior of events in child and parent nodes in the
Document Object Model (DOM); that is, all child node events are automatically passed to its
parent nodes. The benefit of this method is speed, because the code only needs to traverse the
DOM tree once. This is useful when you want to place more than one event listener on a DOM
element since you can put just one listener on all of the elements, thus code simplicity and
reduction. One application of this is the creation of one event listener on a page's body element
to respond to any click event that occurs within the page's body.

66) What is a markup language?

A markup language is a set of words and symbols for describing the identity of pieces of a document (for example 'this is a paragraph', 'this is a heading', 'this is a list', 'this is the caption of this figure', etc). Programs can use this with a style sheet to create output for screen, print, audio, video, Braille, etc.
Some markup languages (e.g. those used in word processors) only describe appearances ('this is italics', 'this is bold'), but this method can only be used for display, and is not normally re-usable for anything else.

67) What is HTML5?

HTML5 is the next major revision of the HTML standard superseding HTML 4.01, XHTML 1.0, and XHTML 1.1

68) What is Web Forms 2.0?

Web Forms 2.0 is an extension to the forms features found in HTML4. Form elements and attributes in HTML5 provide a greater degree of semantic mark-up than HTML4 and remove a great deal of the need for tedious scripting and styling that was required in HTML4.

69) What do you mean by session storage in HTML5?

HTML5 introduces the sessionStorage attribute which would be used by the sites to add data to the session storage, and it will be accessible to any page from the same site opened in that window i.e. session and as soon as you close the window, session would be lost.

70) When a session storage data gets deleted?

The Session Storage Data would be deleted by the browsers immediately after the session gets terminated.

71) What is purpose of getCurrentPosition() method of geolocation object of HTML5?

This method retrieves the current geographic location of the user.

72) What is purpose of watchPosition() method of geolocation object of HTML5?

This method retrieves periodic updates about the current geographic location of the device.

73) What is purpose of clearPosition() method of geolocation object of HTML5?

This method cancels an ongoing watchPosition call.

Viva Questions:

1. What is HTML?
2. What is Tag?
3. How can I include comments in HTML?
4. How do I align a table to the right (or left)?
5. What is JavaScript?
6. How is JavaScript different from Java?