

ATRIA INSTITUTE OF TECHNOLOGY

(Affiliated to VTU, Belgaum and Approved by AICTE)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



LABORATORY MANUAL

2022-2023

21CSL481

WEB PROGRAMMING

PREPARED BY

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SYLLABUS

Hours/Week: 01

Exam Hours: 02

I.A. Marks: 20

Total Hours: 12T + 12P

Semester: IV/ CSE A, B CSD

Exam Marks: 60

Module-1	
Introduction to WEB Programming: Internet, WWW, Web Browsers, and Web Servers, URLs, MIME, HTTP, Security, The Web Programmers Toolbox.	
Textbook 1: Chapter 1(1.1 to 1.9)	
Teaching-Learning Process	Chalk and board, Active Learning, practical based learning
Module-2	
HTML and XHTML: Origins of HTML and XHTML, Basic syntax, Standard XHTML document structure, Basic text markup, Images, Hypertext Links, Lists, Tables, Forms, Frames in HTML and XHTML, Syntactic differences between HTML and XHTML.	
Textbook 1: Chapter 2(2.1 to 2.10)	
Teaching-Learning Process	Chalk and board, Active Learning, Demonstration, presentation, problem solving
Module-3	
CSS: Introduction, Levels of style sheets, Style specification formats, Selector forms, Property value forms, Font properties, List properties, Color, Alignment of text, Background images, tags.	
Textbook 1: Chapter 3(3.1 to 3.12)	
Teaching-Learning Process	Chalk and board, Demonstration, problem solving
Module-4	
Java Script – I: Object orientation and JavaScript; General syntactic characteristics; Primitives, Operations, and expressions; Screen output and keyboard input.	
Textbook 1: Chapter 4(4.1 to 4.5)	
Teaching-Learning Process	Chalk and board, Practical based learning, practical's
Module-5	
Java Script – II: Control statements, Object creation and Modification; Arrays; Functions; Constructor; Pattern matching using expressions; Errors, Element access in JavaScript.	
Textbook 1: Chapter 4(4.6 to 4.14)	

Programming Assignments:

- Create an XHTML page using tags to accomplish the following:
 - A paragraph containing text “All that glitters is not gold”. Bold face and italicize this text
 - Create equation: $x = 1/3(y^2 + z^2)$
 - Put a background image to a page and demonstrate all attributes of background image
 - Create unordered list of 5 fruits and ordered list of 3 flowers
- Use HTML5 for performing following tasks:
 - Draw a square using HTML5 SVG, fill the square with green color and make 6px brown stroke width
 - Write the following mathematical expression by using HTML5 MathML. $d = x^2 - y^2$
 - Redirecting current page to another page after 5 seconds using HTML5 meta tag

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

Department	Sem1	SubjectA
		SubjectB
		SubjectC
	Sem2	SubjectE
		SubjectF
		SubjectG
	Sem3	SubjectH
		SubjectI
		SubjectJ

4. Demonstrate the following HTML5 Semantic tags- , , , , , , , for a webpage that gives information about travel experience.

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₹ and new price is 40₹

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

7. Create following web page using HTML and CSS with tabular layout

Sign up today

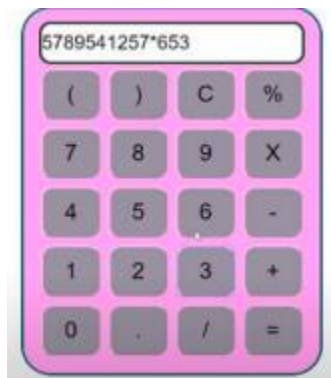
Name:

E-mail:

Password:

Confirm password:

8. Create following calculator interface with HTML and CSS



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

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.

Course Objectives:

- CLO 1. Learn Web tool box and history of web browsers.
- CLO 2. Learn HTML, XHTML tags with utilizations.
- CLO 3. Know CSS with dynamic document utilizations.
- CLO 4. Learn JavaScript with Element access in JavaScript.
- CLO 5. Logically plan and develop web pages.

Course Outcomes (Course Skill Set):

At the end of the course the student will be able to:

- CO 1. Describe the fundamentals of web and concept of HTML.
- CO 2. Use the concepts of HTML, XHTML to construct the web pages.
- CO 3. Interpret CSS for dynamic documents.
- CO 4. Evaluate different concepts of JavaScript & Construct dynamic documents.
- CO 5. Design a small project with JavaScript and XHTML.

Textbooks

- 1. Robert W Sebesta, "Programming the World Wide Web", 6th Edition, Pearson Education, 2008.

Reference Books

- 1. M.Deitel, P.J.Deitel, A.B.Goldberg, "Internet & World Wide Web How to program", 3rd Edition, Pearson Education / PHI, 2004.
- 2. Chris Bates, "Web Programming Building Internet Applications", 3rd Edition, Wiley India, 2006.
- 3. Xue Bai et al, "The Web Warrior Guide to Web Programming", Thomson, 2003.
- 4. Sklar, "The Web Warrior Guide to Web Design Technologies", 1st Edition, Cengage Learning India

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

SOLUTION i) :

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<TITLE> QUOTES </title>
```

```
</head>
```

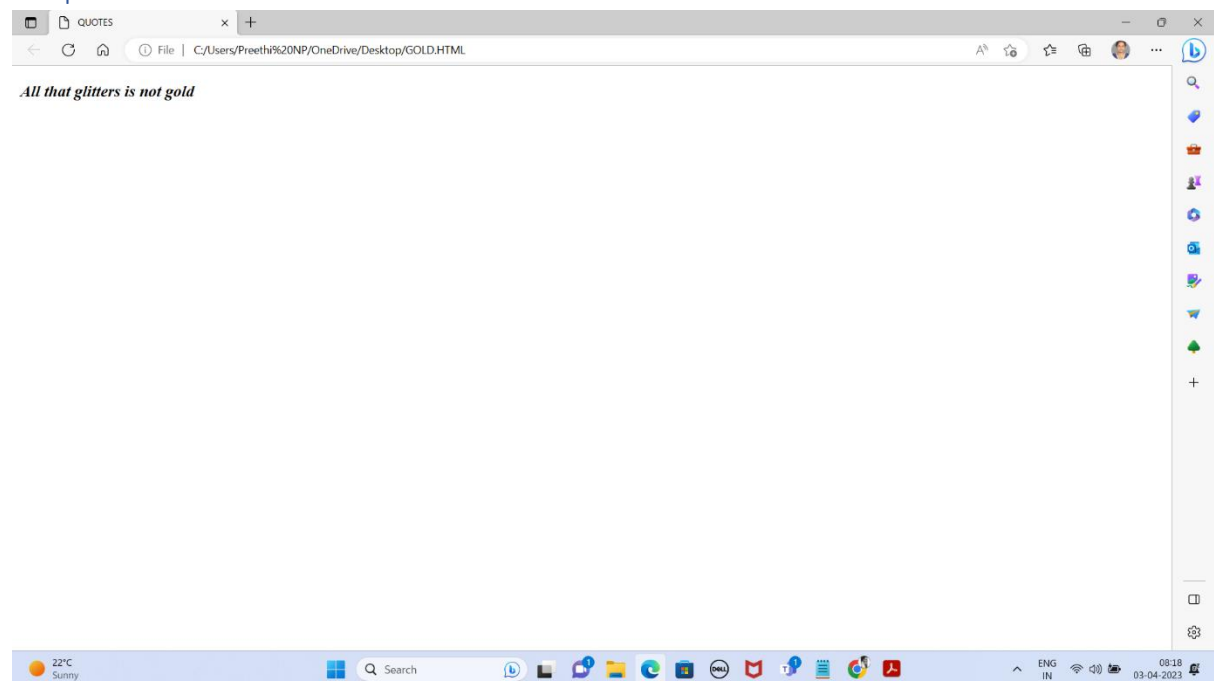
```
<body>
```

```
<p><strong><em>All that glitters is not gold</em></strong></p>
```

```
</body>
```

```
</html>
```

Output:



SOLUTION ii):

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>

<title>Equation Example</title>

</head>

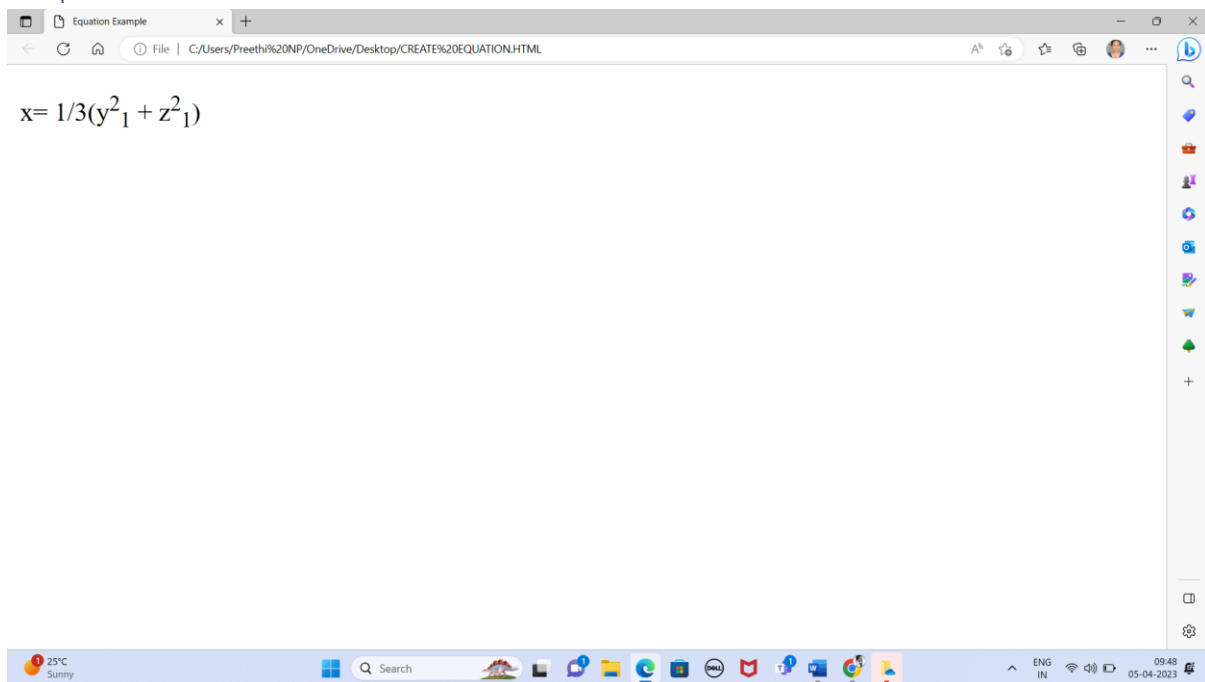
<body>

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

</body>

</html>
```

Output:



SOLUTION iii):

```
<!DOCTYPE html>

<html>

  <head>

    <title>Background Image Example</title>

    <style>

      body {

        background-image:
          url("https://i.pinimg.com/originals/b5/6e/86/b56e86d640b352179a3c8832f9731c76.jpg");

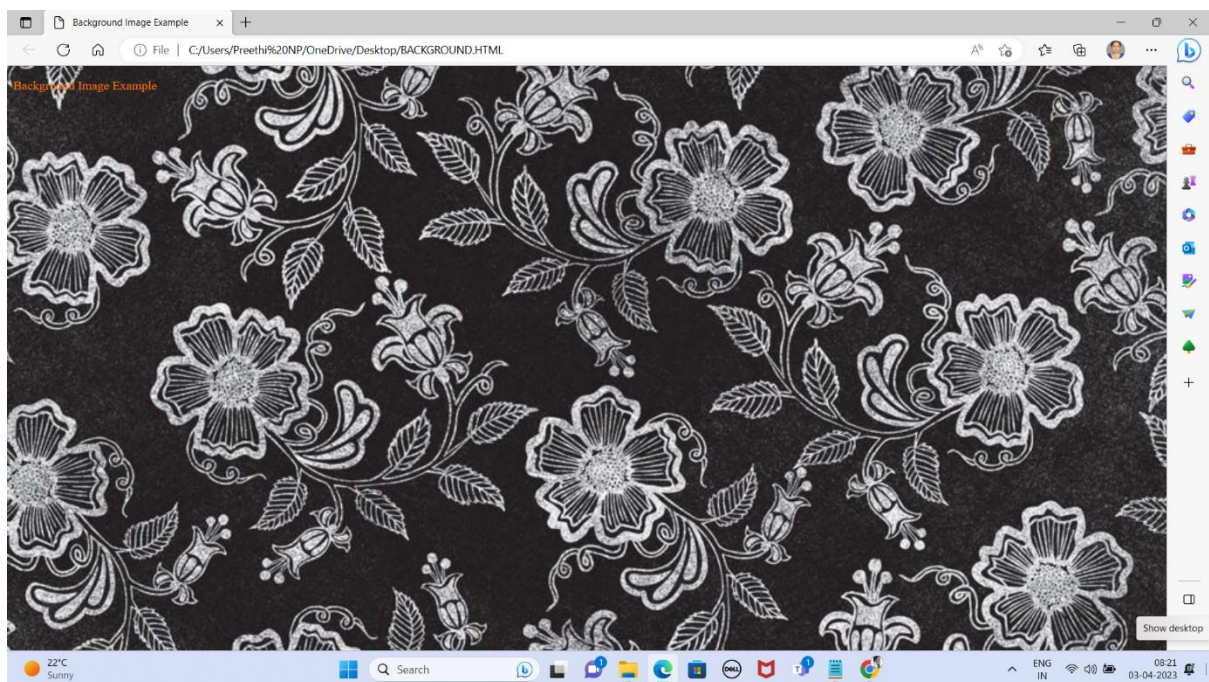
        background-repeat: no-repeat;

        background-size: cover;

        background-position: center center;
```

```
        background-attachment: fixed;
    }
p {
    color: #f97206;
}
</style>
</head>
<body>
<p>Background Image Example</p>
</body>
</html>
```

Output:



SOLUTION iv):

```
<!DOCTYPE html>

<html>

<head>

<title>Lists Example</title>

</head>

<body>
```

```
<h1>Fruits and Flowers</h1>
```

```
<h2>Fruits</h2>
```

```
<ul>
```

```
<li>Apples</li>
```

```
<li>Grapes</li>
```

```
<li>Bananas</li>
```

```
<li>Oranges</li>
```

```
<li>Strawberries</li>
```

```
</ul>
```

```
<h2>Flowers</h2>
```

```
<ol>
```

```
<li>Roses</li>
```

```
<li>Tulips</li>
```

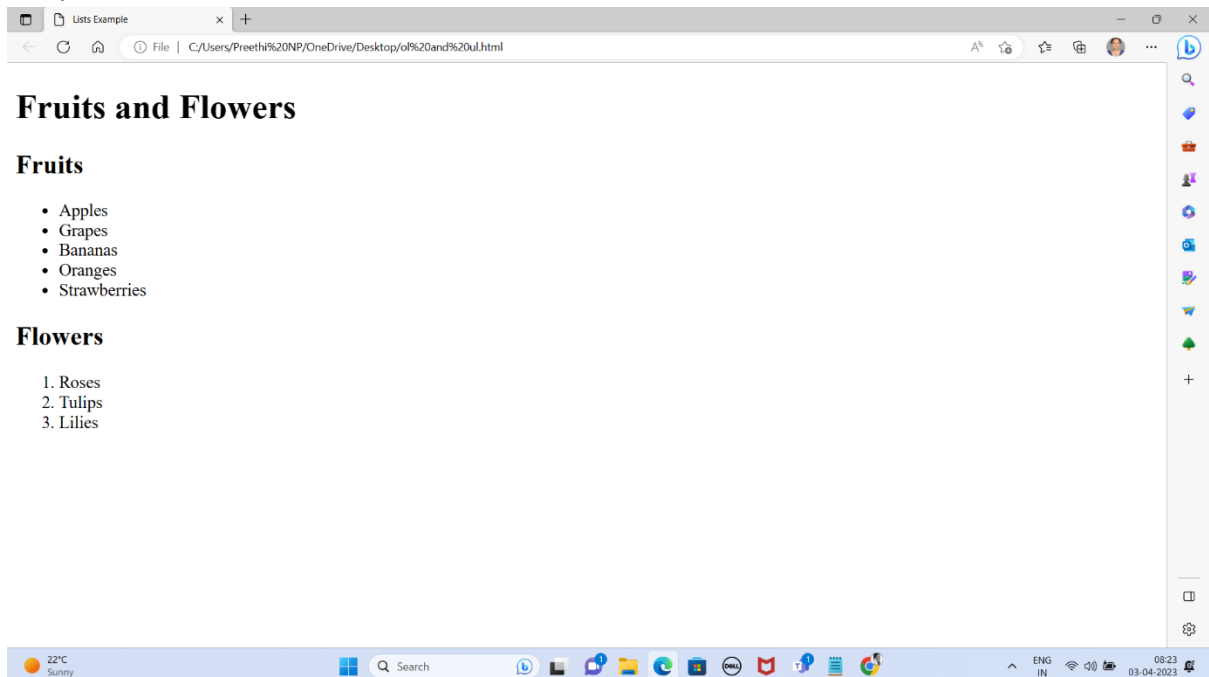
```
<li>Lilies</li>
```

```
</ol>
```

```
</body>
```

```
</html>
```

Output:



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.

Department	Sem1	<i>SubjectA</i>
		<i>SubjectB</i>
		<i>SubjectC</i>
	Sem2	<i>SubjectE</i>
		<i>SubjectF</i>
		<i>SubjectG</i>
	Sem3	<i>SubjectH</i>
		<i>SubjectI</i>
		<i>SubjectJ</i>

SOLUTION:

```
<!DOCTYPE HTML>
```

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> ROWSPAN CONCEPT </TITLE>
```

```
<STYLE>
```

```
TABLE,TR,TH,TD{BORDER: 1PX BLACK SOLID; BORDER-COLLAPSE: COLLAPSE;}
```

```
TABLE{WIDTH:500PX; HEIGHT:400PX;}
```

```
TH,TD{PADDING: 10PX;}
```

```
TH{BACKGROUND-COLOR: #CBC3E3;}
```

```
TD{BACKGROUND-COLOR: #FFFFFF;}
```

```
</STYLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<TABLE>
```

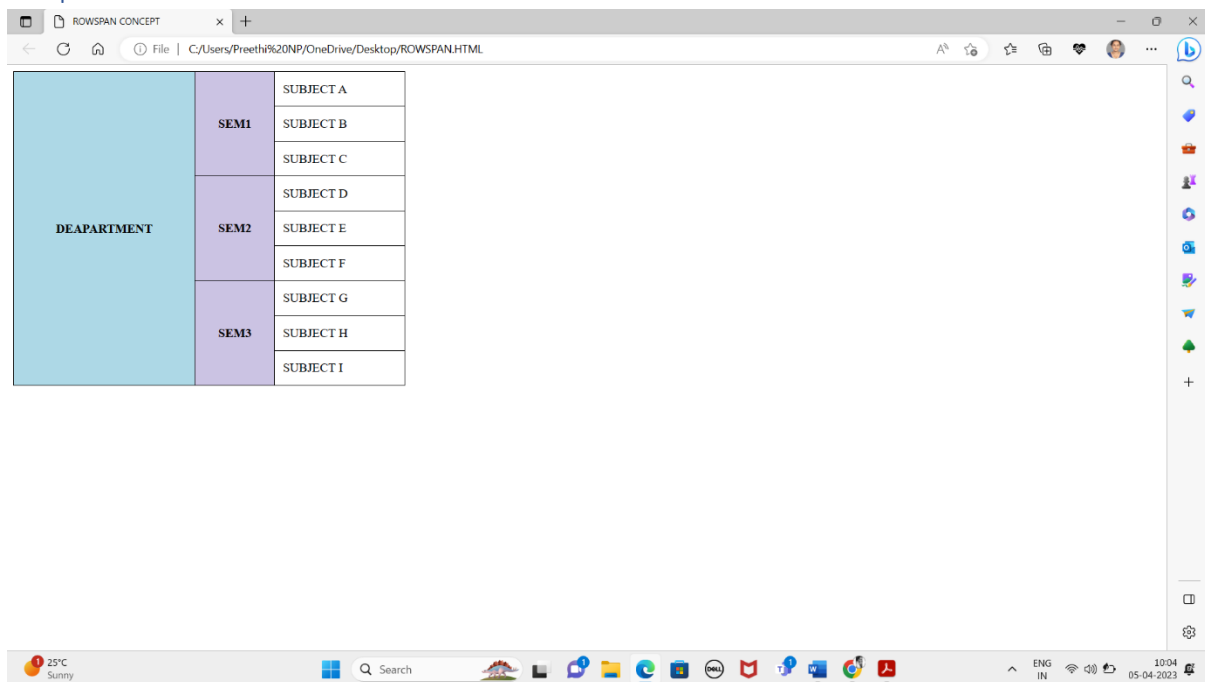
```
<TR>
```

```
<TH STYLE="BACKGROUND-COLOR:#ADD8E6;" ROWSPAN="9" > DEAPARTMENT</TH>
```

```
<TH ROWSPAN="3"> SEM1</TH>
<TD> SUBJECT A</TD>
</TR>
<TR>
<TD> SUBJECT B</TD>
</TR>
<TR>
<TD> SUBJECT C</TD>
</TR>
<TR>
<TH ROWSPAN="3"> SEM2</TH>
<TD> SUBJECT D</TD>
</TR>
<TR>
<TD> SUBJECT E</TD>
</TR>
<TR>
<TD> SUBJECT F</TD>
</TR>
<TR>
<TH ROWSPAN="3"> SEM3</TH>
<TD> SUBJECT G</TD>
</TR>
<TR>
<TD> SUBJECT H</TD>
</TR>
<TR>
<TD> SUBJECT I</TD>
</TR>
</TABLE>
</BODY>
```

</HTML>

Output:



The screenshot shows a web browser window with a single tab titled "ROWSPAN CONCEPT". The address bar shows the file path "C:/Users/Preethi%20NP/OneDrive/Desktop/ROWSPAN.HTML". The browser displays a table with the following structure:

DEAPARTMENT	SEM1	SUBJECT A
		SUBJECT B
		SUBJECT C
	SEM2	SUBJECT D
		SUBJECT E
		SUBJECT F
	SEM3	SUBJECT G
		SUBJECT H
		SUBJECT I

The table is rendered in a browser window. The first column, labeled "DEAPARTMENT", spans all 9 rows. The second column is divided into three groups: "SEM1" (rows 1-3), "SEM2" (rows 4-6), and "SEM3" (rows 7-9). The third column lists subjects from "SUBJECT A" to "SUBJECT I". The browser's taskbar at the bottom shows the system clock as 10:04 on 05-04-2023, with a temperature of 25°C and a sunny weather icon.

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

SOLUTION i):

```
<!DOCTYPE HTML>
```

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> SVG </TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<H3> SQUARE </H3>
```

```
<SVG WIDTH="100" HEIGHT="100">
```

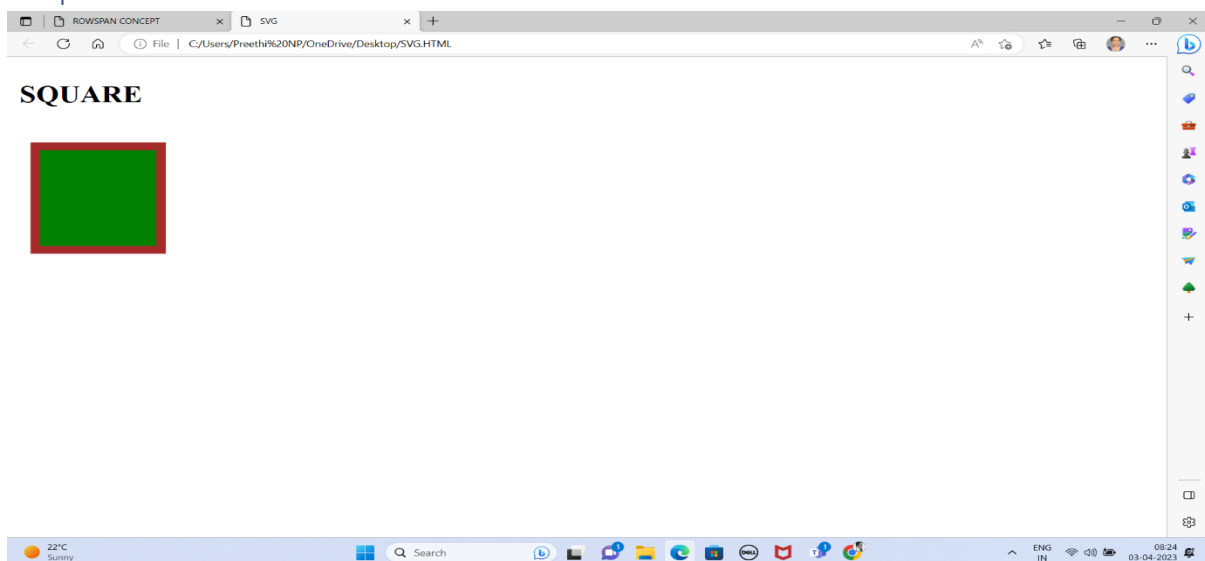
```
<RECT X="10" Y="10" WIDTH="80" HEIGHT="80" FILL="GREEN" STROKE="BROWN" STROKE-  
WIDTH="6"/>
```

```
</SVG>
```

```
</BODY>
```

```
</HTML>
```

Output:



SOLUTION ii):

```
<!DOCTYPE HTML>
```

```
<HTML>
```

```
<HEAD>
```

```
<TITLE> EQUATION </TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<MATH>
```

```
<MI>d</MI>
```

```
<MO>=</MO>
```

```
<MSUP>
```

```
<MI>x</MI>
```

```
<MN>2</MN>
```

```
</MSUP>
```

```
<MO>-</MO>
```

```
<MSUP>
```

```
<MI>y</MI>
```

```
<MN>2</MN>
```

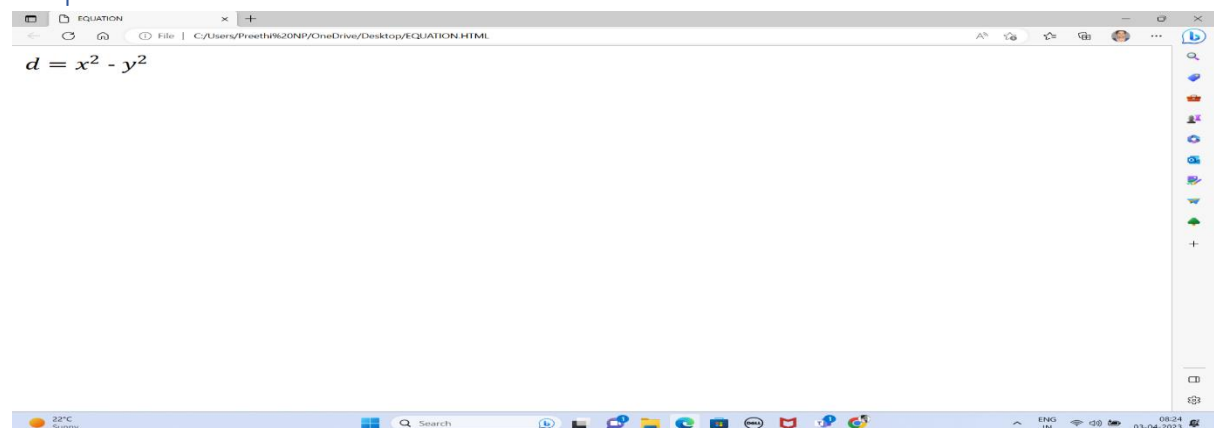
```
</MSUP>
```

```
</MATH>
```

```
</BODY>
```

```
</HTML>
```

Output:



SOLUTION iii):

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Meta Refresh Redirection</title>
```

```
<meta http-equiv="refresh"
```

```
content="5; url = https://WWW.W3CSCHOOLS.COM" />
```

```
</head>
```

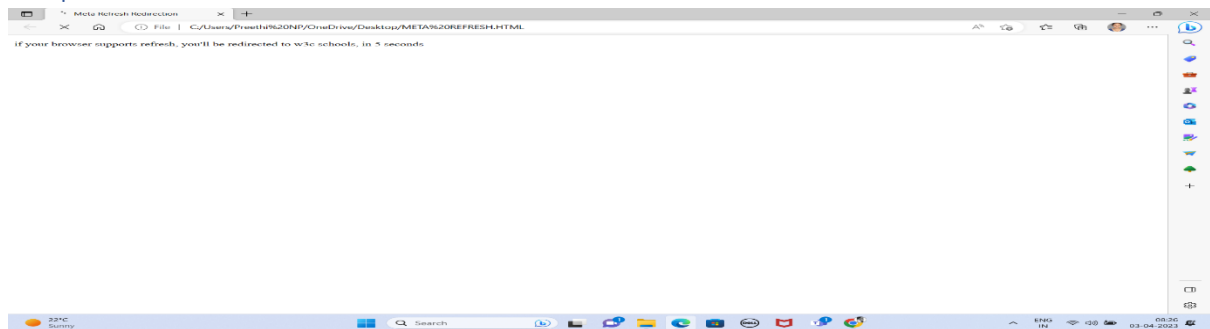
```
<body>
```

```
<P>if your browser supports refresh, you'll be redirected to w3c schools, in 5 seconds</P>
```

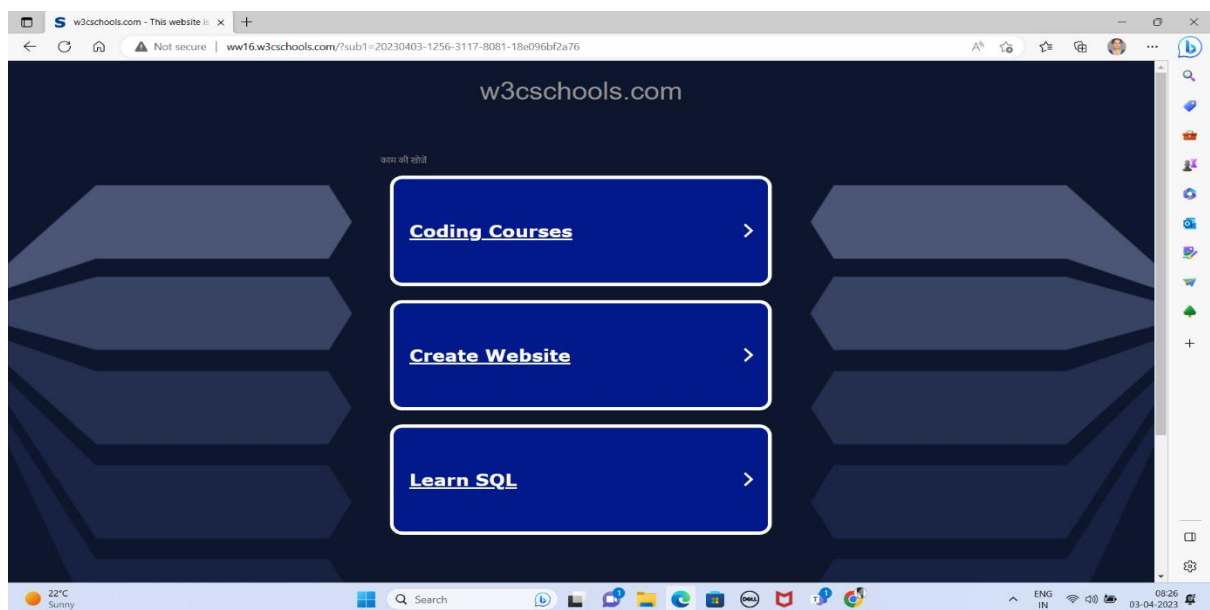
```
</body>
```

```
</HTML>
```

Output:



After refreshing it will get redirected to w3c schools in 5 seconds (you can specify browser's URL)



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.

SOLUTION:

```
<!DOCTYPE html>

<html>

<head>

    <title>Travel Experience</title>

</head>

<body>

    <header>

        <h1>Around the World</h1>

    </header>

    <main>

        <section>

            <article>

                <h2>Paris, France</h2>

                <figure>

                    <figcaption>Eiffel Tower in Paris</figcaption>

                </figure>

                <p>Paris is known for its beautiful architecture and rich history. The Eiffel Tower is a must-visit attraction.</p>

            </article>

            <aside>

                <h3>Travel Tips</h3>

                <ul>

                    <li>Visit the Louvre Museum</li>

                    <li>Eat croissants for breakfast</li>

                    <li>Take a boat ride on the Seine River</li>

                </ul>

            </aside>

        </section>

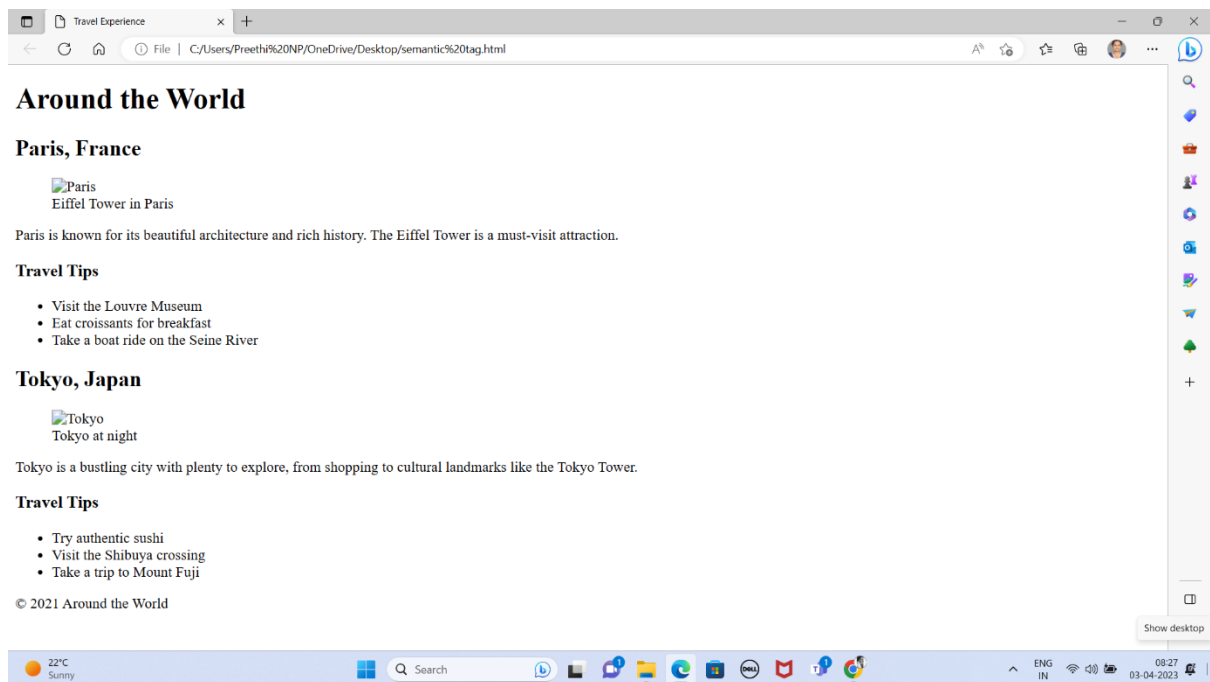
    </main>

</body>

</html>
```

```
</aside>
</section>
<section>
  <article>
    <h2>Tokyo, Japan</h2>
    <figure>
      
      <figcaption> Tokyo at night</figcaption>
    </figure>
    <p>Tokyo is a bustling city with plenty to explore, from shopping to
cultural landmarks like the Tokyo Tower.</p>
  </article>
  <aside>
    <h3>Travel Tips</h3>
    <ul>
      <li>Try authentic sushi</li>
      <li>Visit the Shibuya crossing</li>
      <li>Take a trip to Mount Fuji</li>
    </ul>
  </aside>
</section>
</main>
<footer>
  <p>&copy; 2021 Around the World</p>
</footer>
</body>
</html>
```


Output:



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₹ and new price is 40₹

SOLUTION:

```
<!doctype html>

<html>

<head>

<title> program </title>

<style>

.income{background-color: #ff0;}

.expenses{background-color: #f0f;}

.profit{background-color: #f00;}

</style>

</head>

<body>

<p class="income"> income </p>

<p class="expenses"> expenses</p>

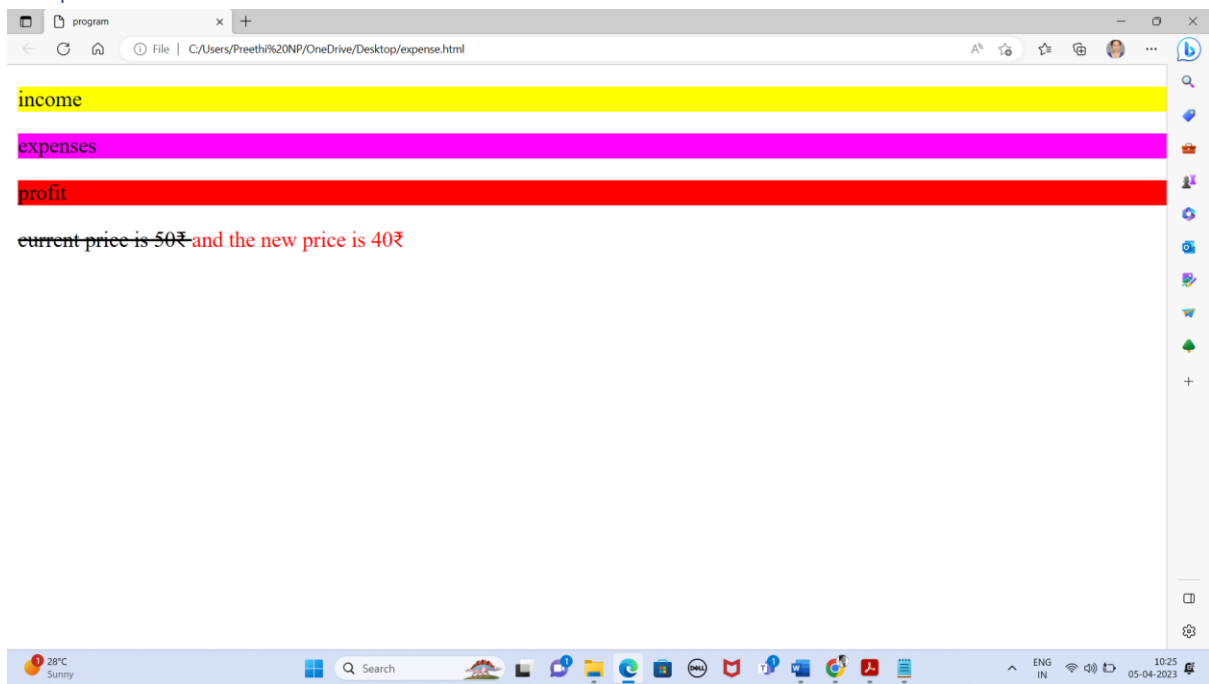
<p class="profit"> profit </p>

<p><strike>current price is 50₹ </strike><span style="color: red">and the new price is
40₹</span></p>

</body>

</html>
```

Output:



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.

SOLUTION:

```
<!DOCTYPE html>

<html>

<head>

  <style>

    li {

      display: inline;

      border: 2px double black;

      border-radius: 5px;

      list-style-type: none;

      margin: 5px;

      padding: 10px 20px 10px 20px;

    }

    .logo {

      background-image: url('your-logo-image-url-here');

      background-size: 20px 20px;

      background-repeat: no-repeat;

      padding-left: 25px;

    }

  </style>

</head>

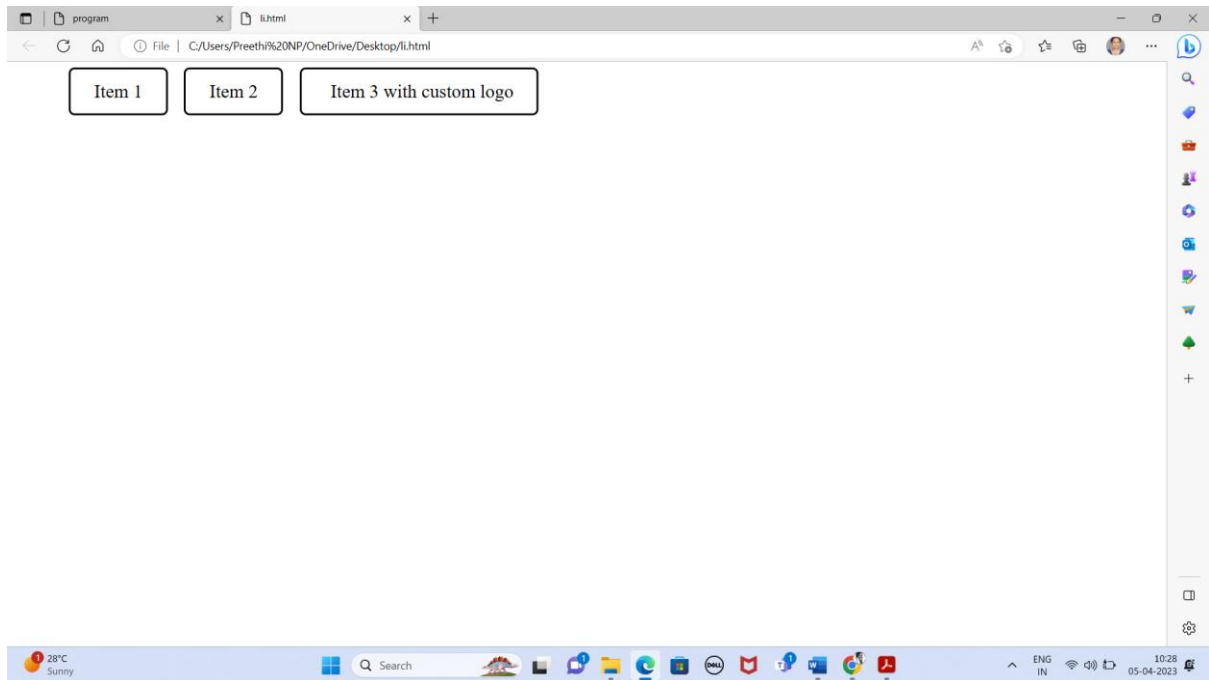
<body>

  <ul>

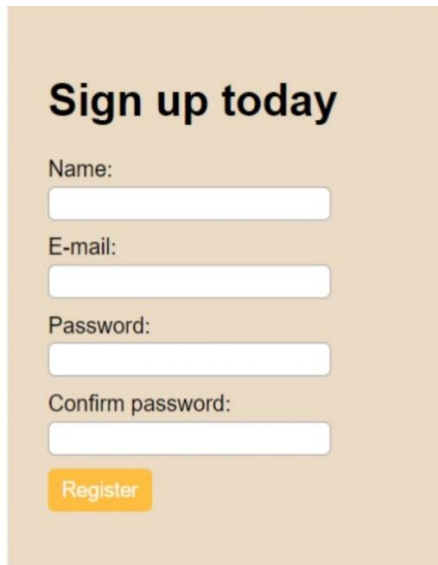
    <li>Item 1</li>
```

```
<li>Item 2</li>  
  
<li class="logo">Item 3 with custom logo</li>  
  
</ul>  
</body>  
</html>
```

Output:



7. Create following web page using HTML and CSS with tabular layout



SOLUTION:

```
<!doctype html>

<html>

<head>

<title> registration form </title>

<style>

form{width: 250px;
padding: 10;
background-color: #ffdbac;
HEIGHT: 330PX;
PADDING: 10PX;}

.hi{background: orange;}

</style>

</head>

<body>

<form>

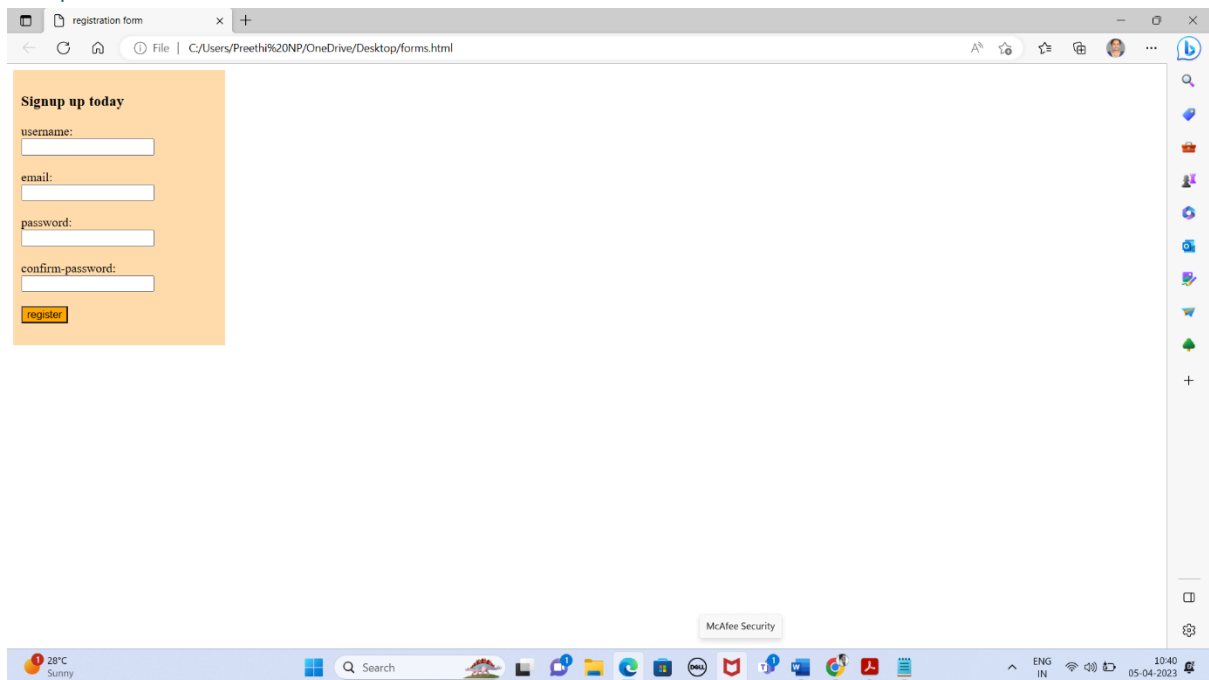
<H3> Signup up today </h3>

<label for="username">username:</label><br>

<input type="text" id="username" name="username"> <br><br>
```

```
<label for="email">email:</label><br>
<input type="email" id="email" name="email"> <br><br>
<label for="password">password:</label><br>
<input type="password" id="password" name="password" minlength="8"> <br><br>
<label for="confirm-password">confirm-password:</label><br>
<input type="confirm-password" id="confirm-password" name="confirm-password" minlength="8">
<br><br>
<input class="hi" type="button" value="register">
</form>
</body>
</html>
```

Output:



8. Create following calculator interface with HTML and CSS



SOLUTION:

HTML CODE:

```
<!doctype html>

<html>

<head>

<title> calculator </title>

<link rel="stylesheet" type="text/css" href="jeevi3.css">

</head>

<body>

<div class="container">

<div class="calculator">

<div class="display">

<input type="text" placeholder="0">

</div>

<form>

<div>

<input type="button" value="(">

<input type="button" value=")">

<input type="button" value="C">
```



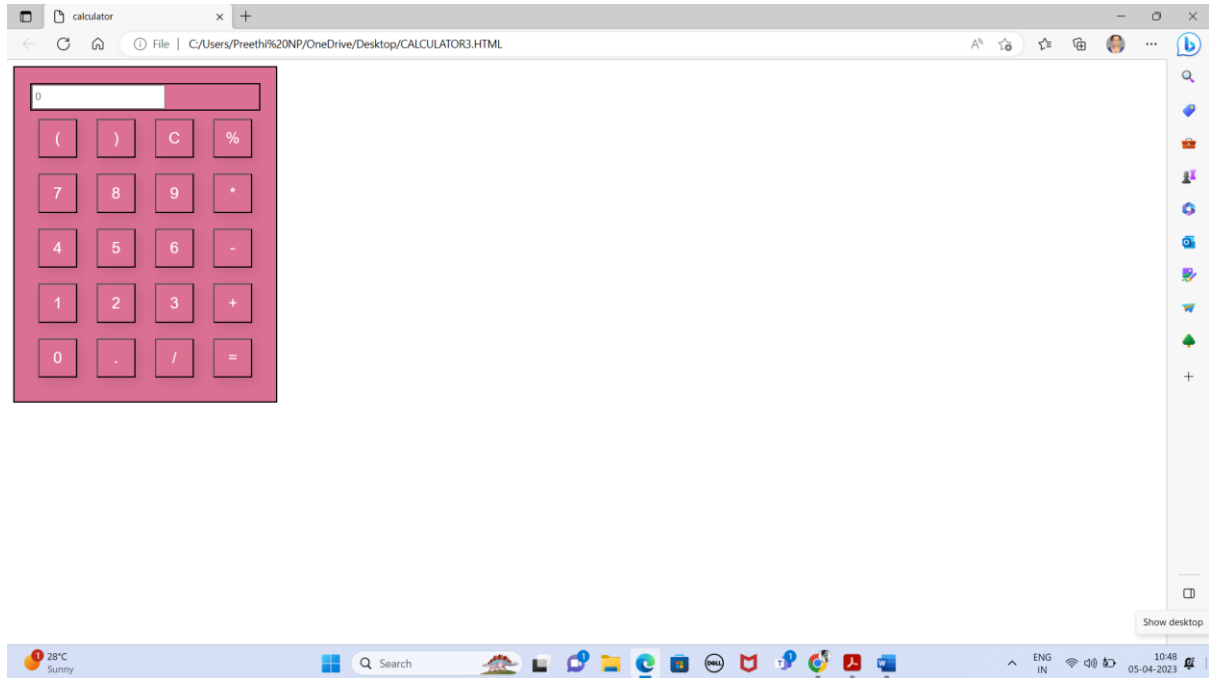
```
<input type="button" value="%">
</div>
<div>
<input type="button" value="7">
<input type="button" value="8">
<input type="button" value="9">
<input type="button" value="*">
</div>
<div>
<input type="button" value="4">
<input type="button" value="5">
<input type="button" value="6">
<input type="button" value="-">
</div>
<div>
<input type="button" value="1">
<input type="button" value="2">
<input type="button" value="3">
<input type="button" value="+">
</div>
<div>
<input type="button" value="0">
<input type="button" value=".">
<input type="button" value="/">
<input type="button" value="=">
</div>
</form>
</div>
</div>
</body>
</html>
```

CSS CODE:

```
*{  
    font-family: sans-serif;  
}  
  
.container{width: 100%;  
    height: 100%;  
    display: flex;  
  
}  
  
.calculator{  
    background: #DB7093;  
    padding: 20px;  
    border: 2px BLACK SOLID;  
}  
  
.calculator form input{  
    width: 50px;  
    height: 50px;  
    box-shadow: 5px 5px 15px rgba(0,0,0,0.1);  
    background: transparent;  
    font-size: 20px;  
    color: #fff;  
    margin: 10px;  
}  
  
.display{  
    height: 30px;  
    display: flex;  
    padding: 1px;  
    border: 2px BLACK SOLID;  
}  
  
.display form input{  
    text-align: right;
```

```
flex: 1;  
font-size: 45px;  
}
```

Output:



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

SOLUTION:

```
<!DOCTYPE html>

<html>

<head>

    <title>Scrolling Text</title>

    <style>

        #scroll-text {

            position: absolute;

            top: 50%;

            left: -300px;

            font-size: 36px;

            font-weight: bold;

            color: red;

            white-space: nowrap; /* Prevents text from wrapping */

        }

    </style>

</head>

<body>

    <button onclick="startScroll()">Start Scrolling</button>

    <div id="scroll-text">This text scrolls from left to right</div>

    <script>

        function startScroll() {

            let scrollText = document.getElementById('scroll-text');

            let position = -300;

            let interval = setInterval(function() {

                position += 5;

                scrollText.style.left = position + 'px';

            }, 10);

        }

    </script>

</body>

</html>
```

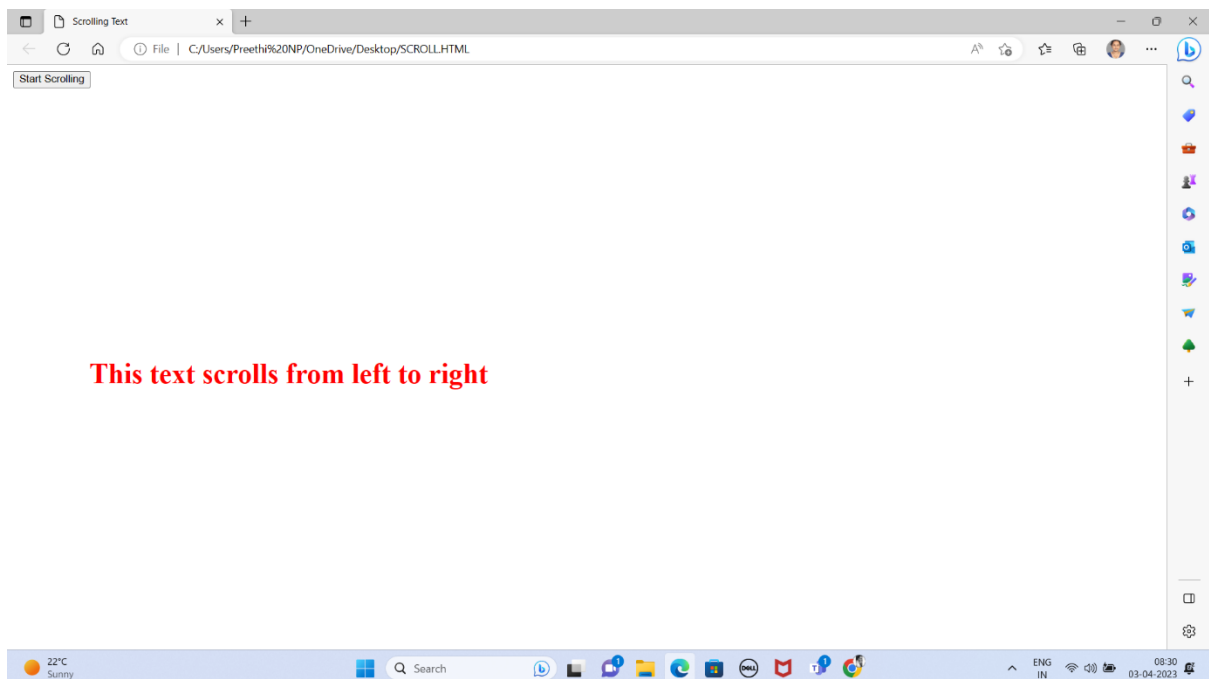
```
        if (position >= window.innerWidth) {  
            position = -300;  
        }  
    }, 20); // Adjust the delay as per requirement  
}  
</script>  
</body>  
</html>
```

Output:



Untitled video -
Made with Clipchamp

OPEN TO VIEW HOW THE OUTPUT WILL RUN



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.

SOLUTION:

HTML CODE:

```
<!DOCTYPE html>

<html>

<head>

  <title>Overlapping Images</title>

  <link rel="stylesheet" type="text/css" href="style.css">

  <script type="text/javascript" src="script.js"></script>

</head>

<body>

  <div class="container">

  </div>

</body>

</html>
```

CSS CODE:

```
.container {

  position: relative;

}

.img {

  position: absolute;

  top: 0;

  left: 0;

  width: 300px;

  height: 200px;

  opacity: 0.7;
```

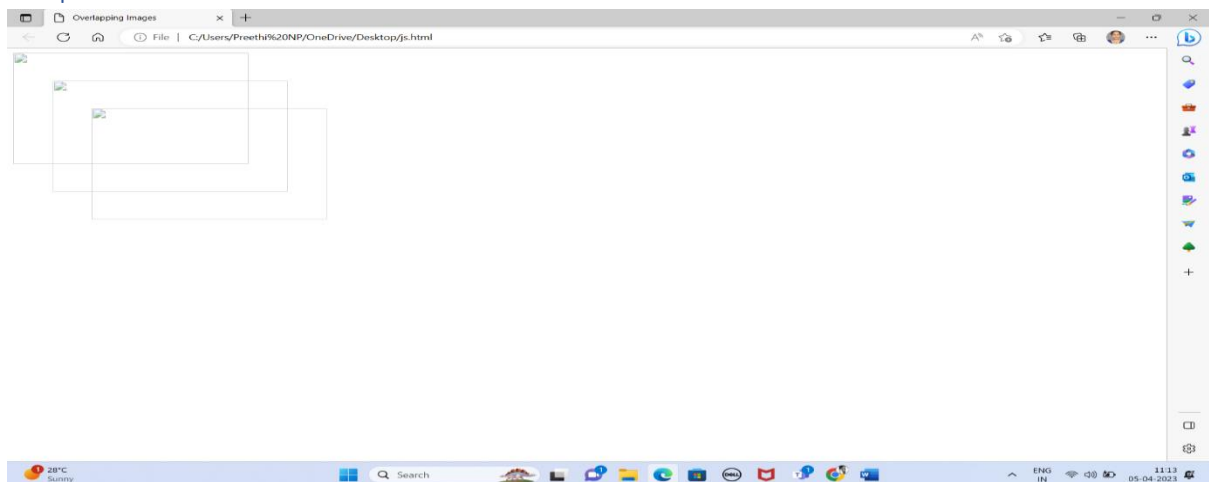
```
    transition: all 0.3s ease;  
}
```

```
#img2 {  
    top: 50px;  
    left: 50px;  
}
```

```
#img3 {  
    top: 100px;  
    left: 100px;  
}
```

```
.img:hover {  
    z-index: 1;  
    opacity: 1;  
    transform: scale(1.2);  
}
```

Output:



THE END
