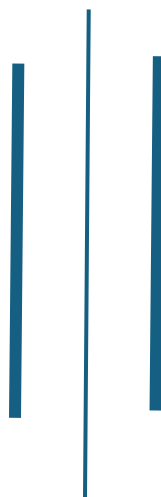


TRIBHUVAN UNIVERSITY
INSTITUTE OF SCIENCE AND TECHNOLOGY
AMRIT SCIENCE CAMPUS



Web Technology

Lab Report

SUBMITTED BY:

Name: Sasank Lama

Roll: 79010254

Date: 2081/12/31

SUBMITTED TO:

Abhimanu Yadav
Department of CSIT

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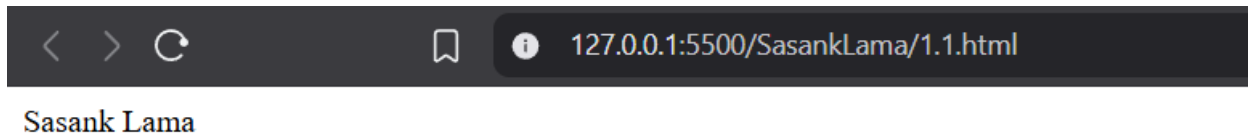
WEB TECHNOLOGY LAB 1 (HTML)

1. Display your name as plain text web browser.

```
<html>

  Sasank Lama

</html>
```



2. Display your name in a web browser declared inside the body.

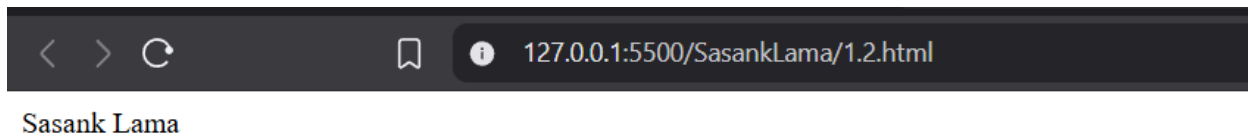
```
<html>

  <body>

    Sasank Lama

  </body>

</html>
```



3. Write a complete source code to demonstrate the use of html, head, title, body tag .

```
<html>

  <head>

    <title>My First HTML Page</title>

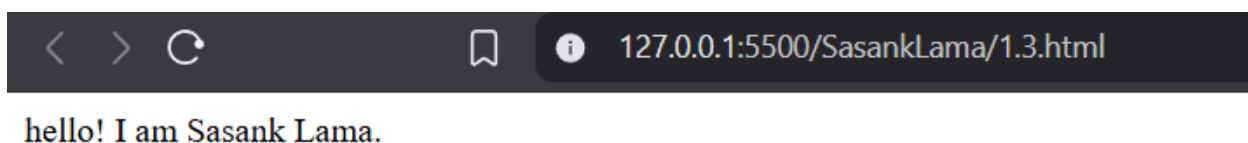
  </head>

  <body>

    hello! I am Sasank Lama.

  </body>

</html>
```



4. Write a source code to demonstrate whitespace collapsing.

```
<html>

<head>

  <title>Q.4 Whitespace Collapsing</title>

</head>

<body>

  <div>

    <h1>Sasank Lama</h1>

    <p>Multiple spaces are collapsed.</p>

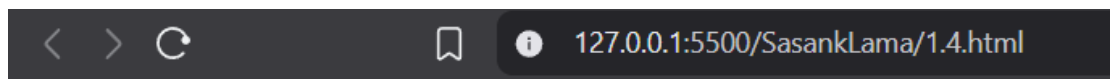
    <p>Leading and trailing spaces are preserved.</p>

    <p>Line breaks are also preserved.</p>

  </div>

</body>

</html>
```



Sasank Lama

Multiple spaces are collapsed.

Leading and trailing spaces are preserved.

Line breaks are also preserved.

5. Create two paragraphs. Paragraph 1 containing the heading as Management Colleges in Nepal and Paragraph 2 containing the heading as Engineering Colleges in Nepal. Heading of Paragraph 2 must be smaller than the heading of Paragraph 2. Also show the use of b, i, sup, sub, small, strong, abbr, acronym, blockquote with cite attribute, city , q tag inside the two paragraphs .

```
<html>

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Nepal Colleges Information</title>

</head>

<body>

  <!-- Paragraph 1 -->

  <p>
```

Management Colleges in Nepal

Nepal's top management colleges include Kathmandu University School of Management and

King's College. Many offer **MBA** programs with ^{international} collaborations. (Note: Admission deadlines vary).

Quality management education is key to business success, says industry expert.

<blockquote cite="https://www.ku.edu.np">

"Management education must adapt to global trends while addressing local needs."

</blockquote>

Institutions like [Nepal College of Management](#) provide H₂O-like

innovative teaching methods. <city>Kathmandu</city> remains the hub for management studies.

<!-- Paragraph 2 -->

$\langle p \rangle$

Engineering Colleges in Nepal

Leading **engineering schools** include **IOE Pulchowk Campus** and

Kathmandu Engineering College. Specializations range from *Computer Engineering*

to ^{AI}-focused programs. Scholarships available for meritorious students.

<blockquote cite="https://www.ioe.edu.np">

"Engineering education should balance theoretical knowledge with practical application."

<q>Hands-on experience is crucial for engineers</q>, according to industry leaders.

<acronym title="Nepal Engineering College">NEC</acronym> emphasizes CO₂ emission studies in civil engineering. Major institutions are clustered in <city>Lalitpur</city> and <city>Pokhara</city>.

</body>

Management Colleges in Nepal

Nepal's **top management colleges** include **Kathmandu University School of Management** and **King's College**. Many offer MBA programs with ^{international} collaborations. (Note: Admission deadlines vary). "Quality management education is key to business success", says industry expert.

"Management education must adapt to global trends while addressing local needs."

Institutions like NCM provide H₂O-like innovative teaching methods. Kathmandu remains the hub for management studies.

Engineering Colleges in Nepal

Leading **engineering schools** include **IOE Pulchowk Campus** and *Kathmandu Engineering College*. Specializations range from CE to ^{AI}-focused programs. Scholarships available for meritorious students.

"Engineering education should balance theoretical knowledge with practical application."

"Hands-on experience is crucial for engineers", according to industry leaders. NEC emphasizes CO₂ emission studies in civil engineering. Major institutions are clustered in Lalitpur and Pokhara.

6. Write the HTML code to display the following output:

**Hi,
My
Name
Is John**

```
<html>

<head> <title>Q.6 Pre text</title></head>

<body>

  <h3>Sasank Lama</h3>

  <pre>

    Hi,

    My

    Name

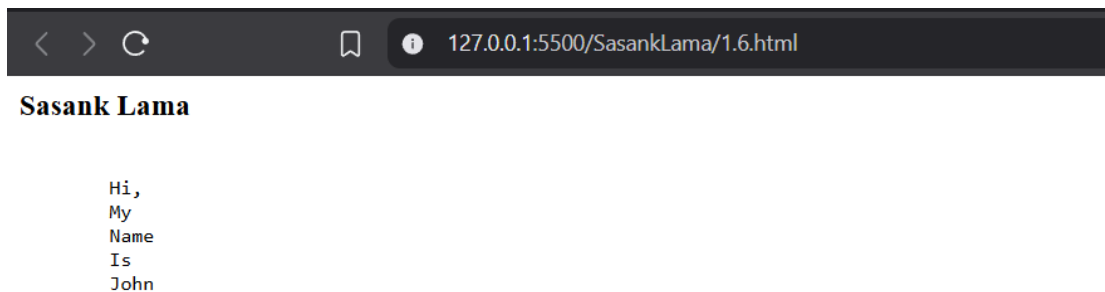
    Is

    John

  </pre>

</body>

</html>
```



7. Write the HTML code to demonstrate:

- a. code
- b. kbd
- c. var
- d. samp

```
<html>

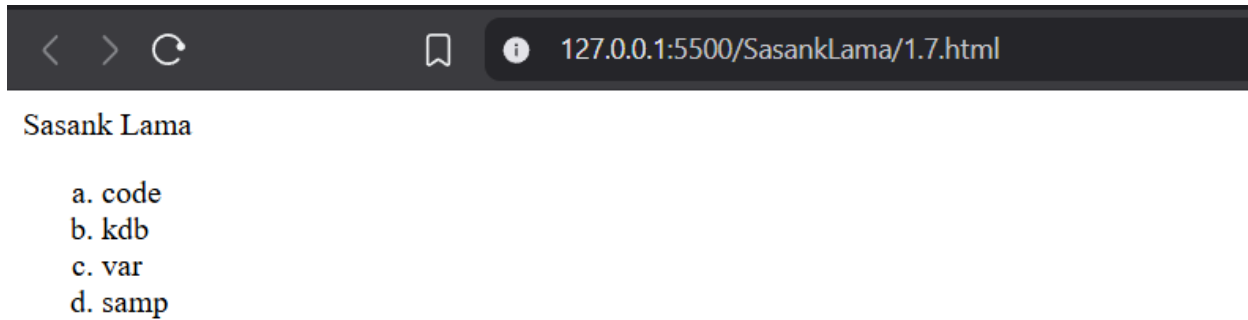
<head><title>Q.7 Ordered list</title></head>

<body>

  <p>Sasank Lama</p>
```



```
<ol type="a">
  <li>code</li>
  <li>kdb</li>
  <li>var</li>
  <li>samp</li>
</ol>
</body>
</html>
```



8. Write a HTML code to demonstrate the concept of:

- Unorderd list
- Ordered list
- Nested unordered list
- Nested orderd list
- Definition list

```
<html>
<head><title>Q.8 List</title></head>
<body>
  <p>Sasank Lama</p>
  <h2>Unordered List:</h2>
  <ul><li>Item 1</li> <li>Item 2</li></ul>
  <h2>Ordered List:</h2>
  <ol><li>First item</li><li>Second item</li></ol>
  <h2>Nested Unordered List:</h2>
  <ul><li>Vegetables<ul><li>Potato</li><li>Tomato</li></ul></li> Fruits<li>
    <ul><li>Mango</li><li>Orange</li></ul></li></ul>
  <h2>Nested Ordered List:</h2>
```

```

<ol><li>School</li><li>Class 1</li><li>Class
2</li></ol></li><li>College</li><li>University<ol><li>Bachelor</li><li>Masters</li></ol></li></ol>

<h2>Definition List:</h2>

<dl>

  <dt>HTML</dt>

  <dd>HyperText Markup Language</dd>

  <dt>CSS</dt>

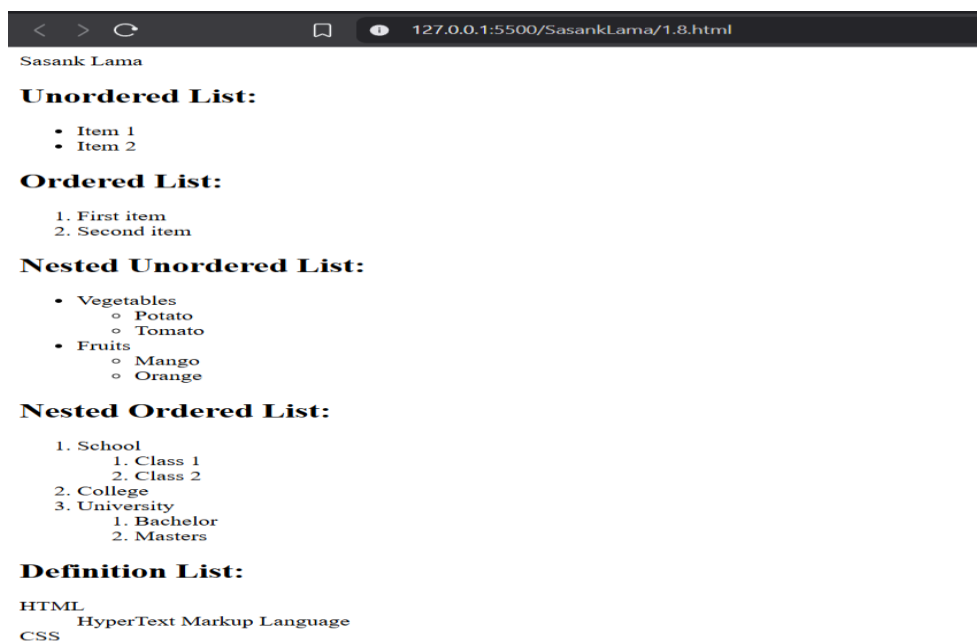
  <dd>Cascading Style Sheets</dd>

</dl>

</body>

</html>

```



9. Write the HTML code to demonstrate image as list .

```

<html>

<head>

  <title>Q.9 Image List</title>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <h2>Image List (Unordered):</h2>

  <ul>

    <li></li>

```

```

    <li></li>
</ul>

<h2>Image List (Ordered):</h2>

<ol>

    <li></li>

    <li></li>

</ol>

</body>

</html>

```



Image List (Unordered):



Image List (Ordered):



10. Write the HTML code to demonstrate the use of URL along with Absolute URL, Relative URL .

```

<html>

<head>

    <title>Q.10 URL</title>

</head>

<body>

    <p>Name: Sasank Lama</p>

    <h2>Absolute URL Example:</h2>

    <p>

        <a href="https://www.example.com" target="_blank">Visit Example.com</a>

    </p>

```

<h2>Relative URL Example:</h2>

<p>

Go to a Relative Page

</p>

<h2>Relative URL within Subdirectory:</h2>

<p>

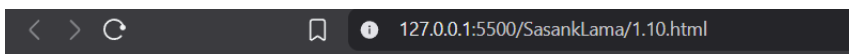
<a href="subdirectory/another-page.html"

>Go to Another Page in Subdirectory

>

</p>

</body></html>



Name: Sasank Lama

Absolute URL Example:

[Visit Example.com](#)

Relative URL Example:

[Go to a Relative Page](#)

Relative URL within Subdirectory:

[Go to Another Page in Subdirectory](#)

11. How can you create link in HTML? Show a proper section of code.

<html>

<head>

<title>Q.11 HTML Link</title>

</head>

<body>

<p>Name: Sasank Lama</p>

<h2>Create a Link in HTML:</h2>

<p>

Visit the

example website.

</p>

</body>

</html>



Name: Sasank Lama

Create a Link in HTML:

Visit the [example website](#).

12. Write the HTML code to generate the following output with the use of anchor tag:

Home About Gallery

The home is in parent directory , about is in sub directory of home and Gallery is in root directory. Write the code for each and every tabs.

<html>

<head>

<title>Q.12 Navigation Tabs</title>

</head>

<style>

nav li { display: inline;}

</style>

<body>

<p>Name: Sasank Lama</p>

<nav>

<ul type="none">

Home

About

Gallery

</nav>

</body>

</html>

Destination Anchor Demo

Table of Contents

- [Section 1 \(using name attribute\)](#)
- [Section 2 \(using id attribute\)](#)
- [Section 3 \(using id attribute\)](#)

Section 1: Using name attribute

This section demonstrates the use of the name attribute for creating a destination anchor. While this method still works, it's considered outdated in HTML5[1].

[Back to top](#)

Section 2: Using id attribute

This section shows how to use the id attribute to create a destination anchor. This is the preferred method in HTML5 and later versions[2].

[Back to top](#)

Section 3: Another example with id

Here's another section using the id attribute as a destination anchor. Remember that id values must be unique within the document[5].

[Back to top](#)

13. Create a web page that demonstrate the use of destination anchor using name and id attributes.

```
<html>

<head>

  <title>Destination Anchor Demo</title>

</head>

<body>

  <p>Name : Sasank Lama</p>

  <h1>Destination Anchor Demo</h1>

  <h2>Table of Contents</h2>

  <ul>

    <li><a href="#section1">Section 1 (using name attribute)</a></li>

    <li><a href="#section2">Section 2 (using id attribute)</a></li>

    <li><a href="#section3">Section 3 (using id attribute)</a></li>

  </ul>

  <hr>

  <h2><a name="section1">Section 1: Using name attribute</a></h2>
```

<p>This section demonstrates the use of the name attribute for creating a destination anchor. While this method still works, it's considered outdated in HTML5[1].</p>

<p>Back to top</p>

<h2 id="section2">Section 2: Using id attribute</h2>

<p>This section shows how to use the id attribute to create a destination anchor. This is the preferred method in HTML5 and later versions[2].</p>

<p>Back to top</p>

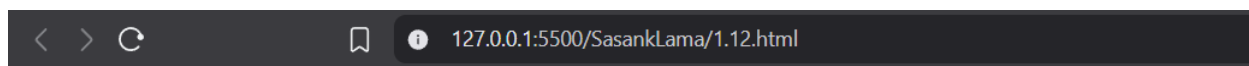
<h2 id="section3">Section 3: Another example with id</h2>

<p>Here's another section using the id attribute as a destination anchor. Remember that id values must be unique within the document[5].</p>

<p>Back to top</p>

</body>

</html>



Name: Sasank Lama

[Home](#) [About](#) [Gallery](#)

14.Add image using img tag

<html>

<head>

<title>My Homepage</title>

</head>

<body>

<p>Name: Sasank Lama</p>

<h1>Welcome to My Homepage</h1>

<div>

</div>

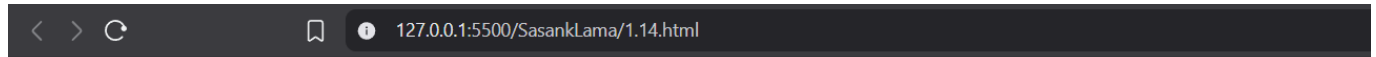
<p>Hello! I'm Sasank Lama. This is a short paragraph about me. I'm passionate about web development and always eager to learn new technologies.</p>

</div>

</div>

</body>

</html>



Name: Sasank Lama

Welcome to My Homepage



Hello! I'm Sasank Lama. This is a short paragraph about me. I'm passionate about web development and always eager to learn new technologies.

15. Create an image gallery of 9 images with 3 images in a row each having 200 width and height 250.

<html>

<head>

<title>Q.15 Image Gallery</title>

</head>

<body>

<h2>Name: Sasank Lama</h2>

<p>

</p>

<p>

</p> <p>


```



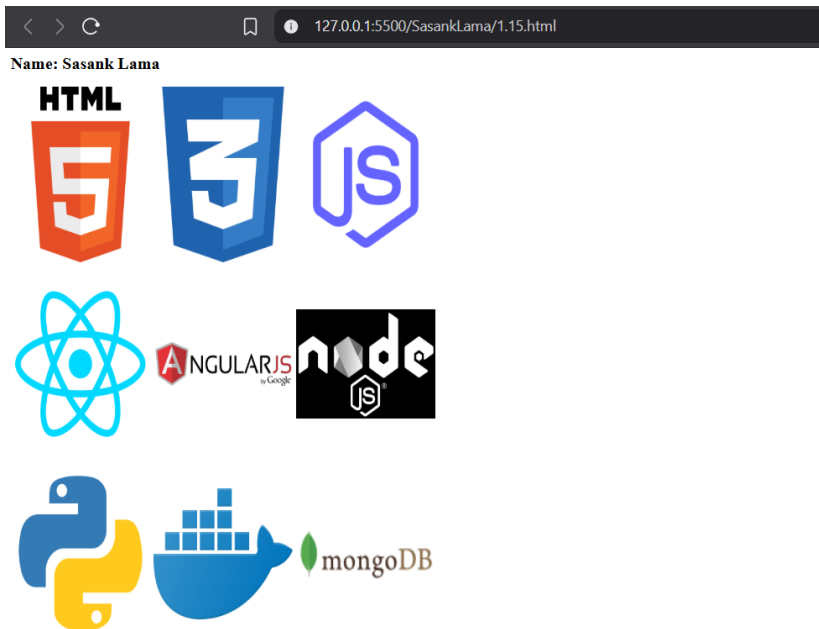


</p>

</body>

</html>

```



16. Write a HTML code to map image as Client side and ServerSide.

```

<html>

<head>

  <title>Q.16 Client-Side and Server-Side Image Map</title>

</head>

<body>

  <h1>Name: Sasank Lama</h1>

  <h2>Click on the image to see client-side and server-side actions</h2>

  <map name="workmap">

    <area shape="rect" coords=" " alt="Computer" href="computer.htm" /><area

    shape="rect"

    coords="290,172,333,250"

```

```

alt="Phone"

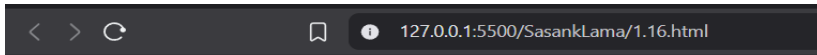
href="phone.htm"

/>

<area shape="circle" coords="337,300,44" alt="Coffee" href="coffee.htm" />

</map></body></html>

```



Name: Sasank Lama

Click on the image to see client-side and server-side actions



17. Write a HTML code to demonstrate how audio, video can be added to the web pages along with all the attributes .

```

<html>

<head>

<title>Audio and Video Demo</title>

</head>

<body>

<p><b>Name: Sasank Lama</b></p>

<h1>Audio and Video Demonstration</h1>

<!-- Audio Section -->

<h2>Audio Example</h2>

<audio controls autoplay loop muted preload="metadata">

```

```
<source src="audio.mp3" type="audio/mpeg">
```

```
<source src="audio.ogg" type="audio/ogg">
```

```
<!-- Fallback for unsupported browsers -->
```

Your browser does not support the audio element.

```
<a href="audio.mp3">Download the audio file</a>.
```

```
</audio>
```

```
<!-- Explanation of Audio Attributes -->
```

```
<p><strong>Attributes used:</strong></p>
```

```
<ul>
```

```
<li><strong>controls:</strong> Adds playback controls (play, pause, volume).</li>
```

```
<li><strong>autoplay:</strong> Automatically plays the audio when the page loads.</li>
```

```
<li><strong>loop:</strong> Replays the audio after it finishes.</li>
```

```
<li><strong>muted:</strong> Starts the audio muted.</li>
```

```
<li><strong>preload:</strong> Specifies how the browser should preload the audio (e.g., metadata).</li>
```

```
</ul>
```

```
<!-- Video Section -->
```

```
<h2>Video Example</h2>
```

```
<video controls autoplay loop muted preload="auto" width="640" height="360">
```

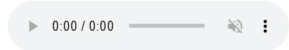
```
<source src="video.mp4" type>
```

```
</body> </html>
```

Name: Sasank Lama

Audio and Video Demonstration

Audio Example



Attributes used:

- **controls**: Adds playback controls (play, pause, volume).
- **autoplay**: Automatically plays the audio when the page loads.
- **loop**: Replays the audio after it finishes.
- **muted**: Starts the audio muted.
- **preload**: Specifies how the browser should preload the audio (e.g., metadata).

Video Example



18. Write the HTML code to print the following output: •

SN	Name		College	Address	Email	Phone
	First name	Last name				

Fill atleast 5 details.

```
<html>

<head>

<title>Q.18 Table</title>

</head>

<body>

<table border="1" width="100%" cellspacing="0" cellpadding="10">

<tr>

<th rowspan="2">SN</th>

<th colspan="2">Name</th>

<th rowspan="2">College</th>

<th rowspan="2">Address</th>

<th rowspan="2">Email</th>


```

	Phone
1	Sasank Lama Amrit Science Campus Gongabu Sasanklama098@gmail.com 9761609133
2	Sandeep Shrestha Amrit Science Campus Swayambhu Sandeepshrestha001@gmail.com 9846464623
3	Oban Lama Amrit Science Campus Lolang ovan123@gmail.com

```

<td>9835424198</td>

</tr>

<tr>

<td>4</td>

<td>Sarad</td>

<td>Thapa</td>

<td>Amrit Science Campus</td>

<td>Kathmandu</td>

<td>thapasarad001@gmail.com</td>

<td>9846646478</td>

</tr>

<tr>

<td>5</td>

<td>Rabin</td>

<td>Shrestha</td>

<td>Amrit Science Campus</td>

<td>Banyatar</td>

<td>rabinrabin02@gmail.com</td>

<td>9844546546</td>

</tr>

</table>

</body>

</html>

```

127.0.0.1:5500/SasankLama/1.18.html						
SN	Name		College	Address	Email	Phone
	First Name	Last Name				
1	Sasank	Lama	Amrit Science Campus	Gongabu	Sasanklama098@gmail.com	9761609133
2	Sandeep	Shrestha	Amrit Science Campus	Swayambhu	Sandeepshrestha001@gmail.com	9846464623
3	Oban	Lama	Amrit Science Campus	Lolang	ovan123@gmail.com	9835424198
4	Sarad	Thapa	Amrit Science Campus	Kathmandu	thapasarad001@gmail.com	9846646478
5	Rabin	Shrestha	Amrit Science Campus	Banyatar	rabinrabin02@gmail.com	9844546546

19. Write XHTML code to demonstrate the use of Nested table with rowspan and colspan attribute .

```
<html xmlns="http://www.w3.org/1999/xhtml">

<head><title>Nested Table with Rowspan and Colspan</title></head>

<body>

  <p>Name: Sasank Lama</p>

  <h1>Nested Table with Rowspan and Colspan</h1>

  <table border="1" cellspacing="0" cellpadding="5">

    <!-- Outer Table Header -->

    <tr>

      <th colspan="3">Outer Table Header (Spanning 3 Columns)</th>

    </tr>

    <!-- Outer Table Row -->

    <tr>

      <td rowspan="2">Rowspan Cell (Spanning 2 Rows)</td>

      <td colspan="2">

        <!-- Nested Table -->

        <table border="1" cellspacing="0" cellpadding="5">

          <tr>

            <th colspan="2">Nested Table Header (Spanning 2 Columns)</th>

          </tr>

          <tr>

            <td>Nested Cell 1</td>

            <td>Nested Cell 2</td>

          </tr>

        </table>

      </td>

    </tr>

    <!-- Outer Table Row -->

    <tr>

      <td>Outer Cell 1</td>

      <td>Outer Cell 2</td>

    </tr>

  </table>

</body>

</html>
```

```
</table>

</body>

</html>
```

Name: Sasank Lama

Nested Table with Rowspan and Colspan

Outer Table Header (Spanning 3 Columns)		
Rowspan Cell (Spanning 2 Rows)	Nested Table Header (Spanning 2 Columns)	
	Nested Cell 1	Nested Cell 2
	Outer Cell 1	Outer Cell 2

20. Create a simple html page to demonstrate the basic structural tags of HTML.

```
<html>

<head><title>Q.20 Basic HTML Structure</title></head>

<body>

  <h1>Name: Sasank Lama</h1>

  <header>

    <h1>Welcome to My Website</h1>

    <p>This is a simple demonstration of basic HTML structural tags.</p>

  </header>

  <nav>

    <ul>

      <li><a href="#">Home</a></li>

      <li><a href="#">About Us</a></li>

      <li><a href="#">Contact Us</a></li>

    </ul>

  </nav>

  <section>

    <h2>Section 1</h2>
```



```
<p>This is the content of Section 1.</p>

</section>

<section>

  <h2>Section 2</h2>

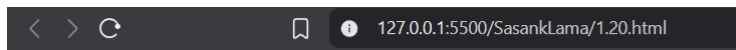
  <p>This is the content of Section 2.</p>

</section>

<footer><p>&copy; Sasank Lama</p></footer>

</body>

</html>
```



Name: Sasank Lama

Welcome to My Website

This is a simple demonstration of basic HTML structural tags.

- [Home](#)
- [About Us](#)
- [Contact Us](#)

Section 1

This is the content of Section 1.

Section 2

This is the content of Section 2.

© Sasank Lama

21. Prepare an html page to display the syntax and usage of any 10 text formatting tags.

```
<html>

  <head><title>Q.21 Text Formatting Tags Syntax and text formatting</title></head>

  <body>

    <h1>Name: Sasank Lama</h1>

    <h1>Text Formatting Tags Examples</h1>

    <section>

      <h2>1. &lt;strong> - Strong Text</h2>

      <p>The <strong>strong</strong> tag is used for important text, often displayed as bold.</p>

    </section>

    <section>
```

<h2>2. ; - Emphasized Text</h2>

<p>The emphasized tag is used for text that should be emphasized, typically displayed as italicized.</p></section>

<section>

<h2>3. <u>; - Underlined Text</h2>

<p>The <u>underlined</u> tag is used for underlining text. It can also be used for hyperlinks.</p>

</section>

<section>

<h2>4. <s>; - Strikethrough Text</h2>

<p>The <s>striktthrough</s> tag is used for indicating deleted or no longer relevant text.</p>

</section>

<section>

<h2>5. <sub>; - Subscript Text</h2>

<p>The _{subscript} tag is used for positioning text below the baseline.</p>

</section>

<section>

<h2>6. <sup>; - Superscript Text</h2>

<p>The ^{superscript} tag is used for positioning text above the baseline.</p>

</section>

<section>

<h2>7. <mark>; - Highlighted Text</h2>

<p>The <mark>highlighted</mark> tag is used for indicating text that has been highlighted or marked for reference. </p>

</section>

<section>

<h2>8. <abbr>; - Abbreviation</h2>

<p>The <abbr title="HTML">HTML</abbr> tag is used for abbreviations or acronyms, providing a title attribute with the full form.</p>

</section>

<section>

<h2>9. - Deleted Text</h2>

<p>The deleted tag is used for indicating deleted or removed text.</p>

</section>

<section>

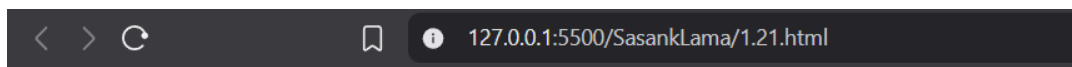
<h2>10. <ins> - Inserted Text</h2>

<p>The <ins>inserted</ins> tag is used for indicating inserted or added text.</p>

</section>

</body>

</html>



Name: Sasank Lama

Text Formatting Tags Examples

1. - Strong Text

The **strong** tag is used for important text, often displayed as bold.

2. - Emphasized Text

The *emphasized* tag is used for text that should be emphasized, typically displayed as italicized.

3. <u> - Underlined Text

The underlined tag is used for underlining text. It can also be used for hyperlinks.

4. <s> - Strikethrough Text

The ~~strikethrough~~ tag is used for indicating deleted or no longer relevant text.

5. <sub> - Subscript Text

The _{subscript} tag is used for positioning text below the baseline.

6. <sup> - Superscript Text

The ^{superscript} tag is used for positioning text above the baseline.

7. <mark> - Highlighted Text

The **highlighted** tag is used for indicating text that has been highlighted or marked for reference.

8. <abbr> - Abbreviation

The **HTML** tag is used for abbreviations or acronyms, providing a title attribute with the full form.

9. - Deleted Text

The ~~deleted~~ tag is used for indicating deleted or removed text.

10. <ins> - Inserted Text

The inserted tag is used for indicating inserted or added text.

22. Create an html page to display your bio data using <pre> tag. (Do not use table).

```
<html>
```

```
<head><title>Q.22 My Bio Data</title></head>
```

```
<body>
```

```
<h1>My Bio Data</h1>
```

```
<pre>
```

Name: Sasank Lama

Age: 22

Location: Kathmandu, Nepal

Education: Bachelor of Science in Computer Science and Information Technology ASCOL College
(2021 - Present)

Skills: Programming Languages: JavaScript, Python, Java, C, C++, PHP, SQL

Web Development: HTML, CSS, Tailwind, React, Express, Node.js

Database: MongoDB, MySQL

Git Projects: Expense Tracker, Tetris game, pong game, Flappy bird game, Todo list, Password
Generator

Contact:

Email: Sasanklama098@gmail.com

Phone: +977 9761609133

LinkedIn: <https://www.linkedin.com/in/sasank-lama-5aa7aa279/>

```
</pre>
```

```
>
```

```
</body>
```

```
</html>
```

My Bio Data

Name: Sasank Lama
Age: 22
Location: Kathmandu, Nepal
Education: Bachelor of Science in Computer Science and Information Technology ASCOL College (2021 - Present)
Skills: Programming Languages: JavaScript, Python, Java, C, C++, PHP, SQL
Web Development: HTML, CSS, Tailwind, React, Express, Node.js
Database: MongoDB, MySQL
Git Projects: Expense Tracker, Tetris game, pong game, Flappy bird game, Todo list, Password Generator

Contact:
Email: Sasanklama098@gmail.com
Phone: +977 9761609133
LinkedIn: <https://www.linkedin.com/in/sasank-lama-5aa7aa279/>

23. Create an html page to write brief description about your college using header tags, paragraph tag and text formatting tags.

```
<html>

<head><title>Amrit Science Campus</title></head>

<body>

<h1>Amrit Science Campus</h1>

<h2>Lainchaur, Kathmandu</h2>

<hr><h2>About the College</h2>

<p><b>Amrit Science Campus</b>, located in the heart of Lainchaur, Kathmandu, is one of the
<i>oldest and most prestigious science colleges in Nepal</i>. It has a long-standing reputation for
excellence in science education. </p>

<h2>Courses Offered</h2>

<p>The college offers a wide range of programs to cater to diverse academic interests:</p>

<ul>

<li>B.Sc. CSIT (Computer Science and Information Technology)</li>

<li>BIT (Bachelor of Information Technology)</li>

<li>MIT (Master of Information Technology)</li>

<li>B.Sc. General</li>

</ul>

<hr>

<p>Name: Sasank Lama</p>
```

</body>

</html>

127.0.0.1:5500/SasankLama/1.23.html

Amrit Science Campus

Lainchaur, Kathmandu

About the College

Amrit Science Campus, located in the heart of Lainchaur, Kathmandu, is one of the *oldest and most prestigious science colleges in Nepal*. It has a long-standing reputation for excellence in science education.

Courses Offered

The college offers a wide range of programs to cater to diverse academic interests:

- B.Sc. CSIT (Computer Science and Information Technology)
- BIT (Bachelor of Information Technology)
- MIT (Master of Information Technology)
- B.Sc. General

Name: Sasank Lama

24. Create an image gallery of any three popular places in Nepal along with their short description with the images aligned in left or right.

<html>

<body>

<p>Name: Sasank Lama</p>

<h2>Nepal's Top 3 Destinations</h2>

<h3>1. Pashupatinath Temple</h3>

<p>One of the most sacred Hindu temples dedicated to Lord Shiva, located on the banks of Bagmati River. A UNESCO World Heritage Site and spiritual hub for devotees worldwide.</p>

<div style="clear:both"></div>

<hr>

<h3>2. Boudhanath Stupa</h3>

<p>One of the largest spherical stupas in Nepal, this UNESCO site in Kathmandu serves as a major center for Tibetan Buddhism and meditation practices.</p>

```
<div style="clear:both"></div>
```

```
<hr>
```

```
<h3>3. Pokhara Valley</h3>
```

```

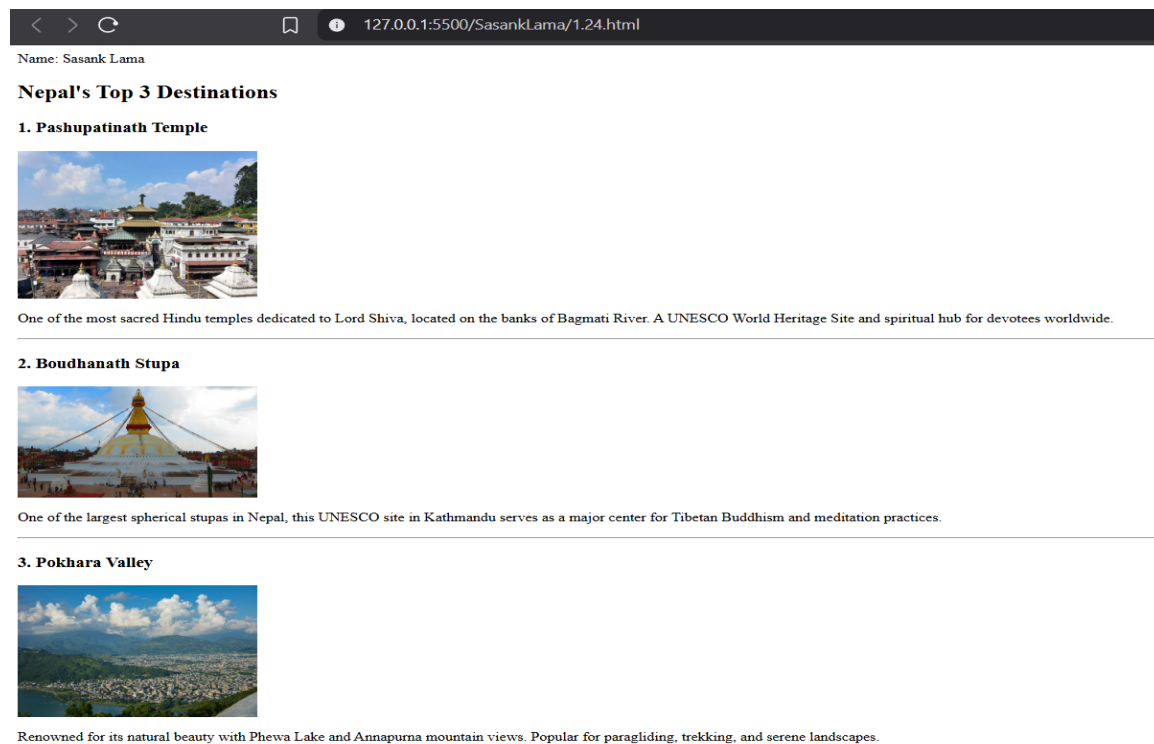
```

```
<p>Renowned for its natural beauty with Phewa Lake and Annapurna mountain views. Popular for  
paragliding, trekking, and serene landscapes.</p>
```

```
<div style="clear:both"></div>
```

```
</body>
```

```
</html>
```



25. Demonstrate the use of align, vspace and hspace attribute using minimum of six images. (Make a gallery)

```
<html>
```

```
    <head><title>Q.25 Image Gallery</title> </head>
```

```
    <body>
```

```
        <h1>Image Gallery</h1>
```

```



 <br />



 <br />

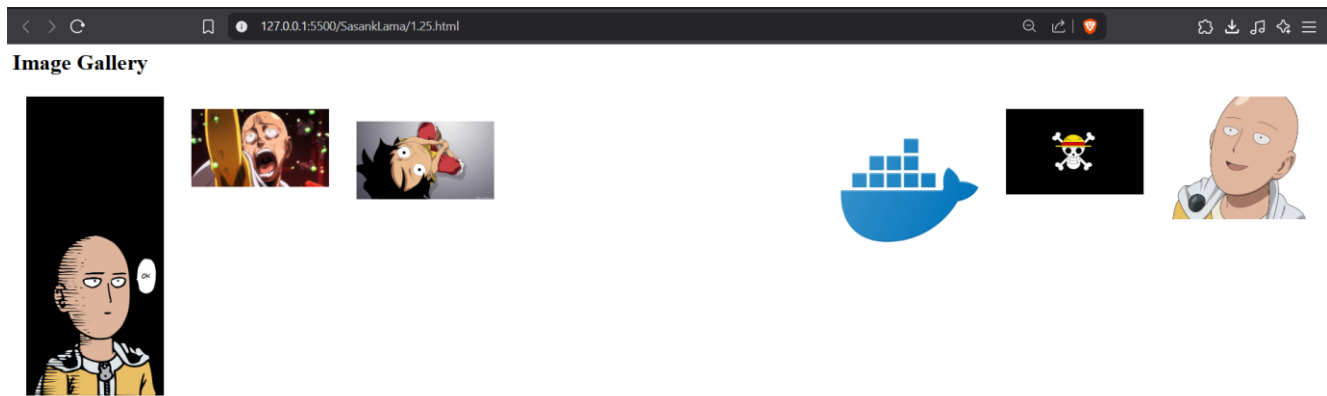




</body>

</html>

```



26. Create a webpage to containing brief description about your college and links to your college and university website.

```

<html>

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Amrit Science Campus</title>

</head>

<body>

<h1>Name: Sasank Lama</h1>

<h1>Amrit Science Campus</h1>

```


Lainchaur, Kathmandu

About the College

Amrit Science Campus, located in the heart of Lainchaur, Kathmandu, is one of the

oldest and most prestigious science colleges in Nepal. Established as a pioneer in science education,

it continues to maintain academic excellence across various disciplines.

Academic Programs

The college offers cutting-edge programs including:

- B.Sc. CSIT (Computer Science & IT)

- Bachelor of Information Technology (BIT)

- Master of Information Technology (MIT)

- B.Sc. General (Physical & Biological Sciences)

Important Links

[Official College Website](https://www.ASCOL.edu.np)

[Tribhuvan University Website](https://tu.edu.np/)

Name: Sasank Lama

Amrit Science Campus

Lainchaur, Kathmandu

About the College

Amrit Science Campus, located in the heart of Lainchaur, Kathmandu, is one of the *oldest and most prestigious science colleges in Nepal*. Established as a pioneer in science education, it continues to maintain academic excellence across various disciplines.

Academic Programs

The college offers cutting-edge programs including:

- B.Sc. CSIT (Computer Science & IT)
- Bachelor of Information Technology (BIT)
- Master of Information Technology (MIT)
- B.Sc. General (Physical & Biological Sciences)

Important Links

[Official College Website](#)
[Tribhuvan University Website](#)

27. Demonstrate the use of top to bottom and bottom to top link using anchor tags.

```
<html>

<head>

  <title>Qn.27 Anchor tags</title>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <div class="content">

    <p><a href="#bottom">Go to bottom</a></p>

    <h1 id="top">This is some long content that scrolls down.</h1>

    <p style="margin-bottom: 500px">

      Lorem ipsum dolor sit amet, consectetur adipisicing elit. Nulla facilisi

      morbi tempus iaculis urna id volutpat. Aenean euismod bibendum

      laoreet.Maecenas aliquam, justo quis rhoncus ultricies, ligula metus

      facilisis nunc, sed mattis libero tortor. Donec non libero ut ante porta

      molestie. Duis a mi quam. Fusce sem purus, aliquam quis blandit eu,

      tincidunt et velit. Pellentesque habitant morbi tristique sem, et

      ullamcorper nibh diam varius condimentum. Nunc sed diam lectus. Morbi a

      magna at nibh venenatis laoreet. Curabitur semper nunc velit, eget
```

varius tellus aliquet sed. Fusce et diam euismod sem dapibus auctor.

Nunc velit risus,eleifend eget tincidunt vitae, suscipit eget massa.

Pellentesque habitant morbi tristique sem, et ullamcorper nibh diam

varius condimentum. Nunc sed diam lectus. Morbi a magna at nibh

venenatis laoreet.

</p>

<h2 id="bottom">This is some long content that scrolls up.</h2>

<p style="margin-bottom: 100px">

Lorem ipsum dolor sit amet consectetur adipisicing elit. Facilis porro

ipsa expedita, tempore minima debitis officiis quod deserunt eum

explicabo voluptatibus consectetur dicta, exercitationem nobis quis.

Corrupti saepe est mollitia eveniet a quod, facere dolorum aut

provident, sit quia iusto, vero iste veniam non nam! Vero animi iusto

voluptates eius autem commodi esse mollitia reiciendis ipsa eaque

dolores cupiditate voluptatem consequuntur perferendis, maxime

voluptatum soluta. Perferendis aut atque aliquam ipsum harum quibusdam

natus vel est unde, quis ducimus expedita sunt fugiat quos

minima.Doloribus quidem voluptatem cum iste quo, aut veniam itaque fugit

velit accusamus adipisci illum ipsa dicta. Magnam.

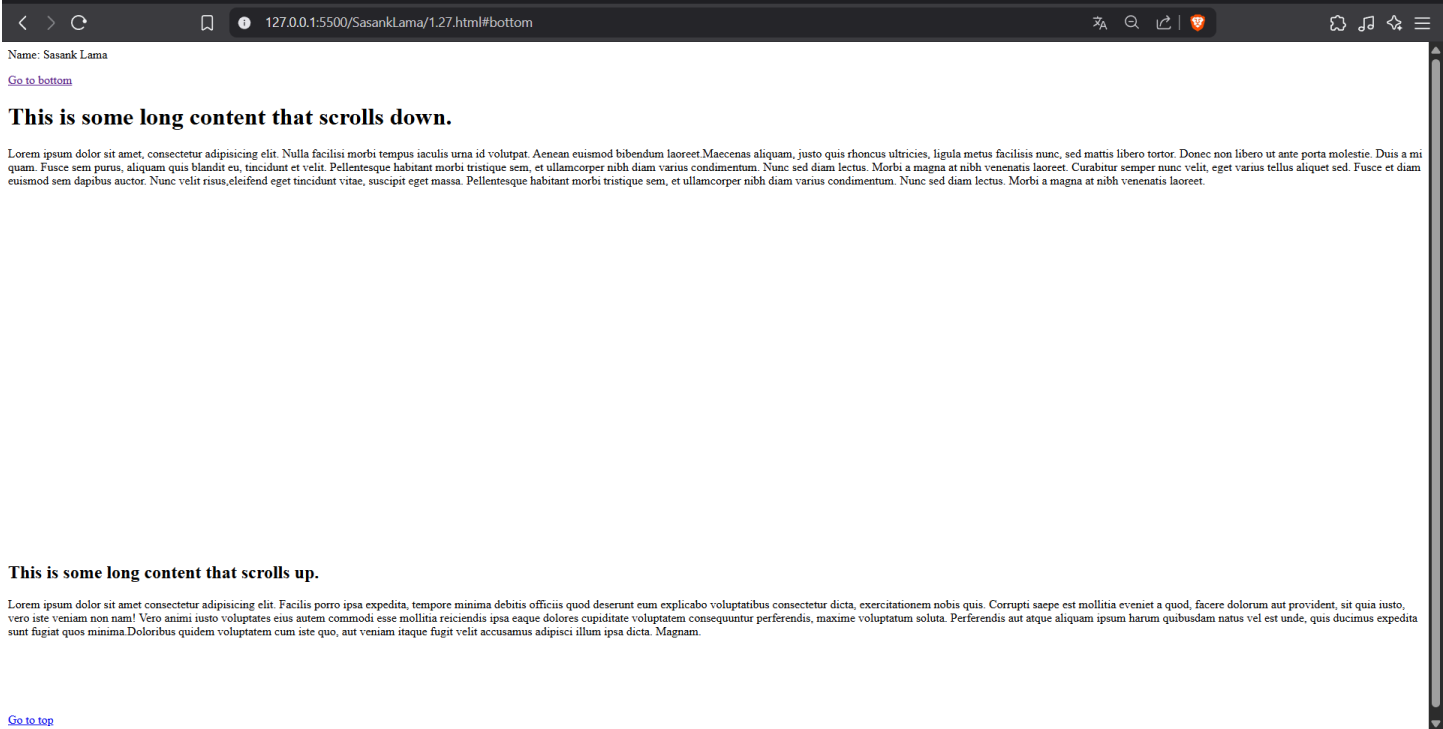
</p>

<p>Go to top</p>

</div>

</body>

</html>



28. Create the following list using html.

- 1. BSCIT
- 2. MSCIT
 - a. Semester 1
 - Subject 1
 - Subject 2
 - Subject 3
 - b. Semester 2
 - c. Semester 3
- 3. BScNT

```
<html>

<head><title>Q.28 List</title></head>

<body>

  <p>Name: Sasank Lama</p>

  <ol><li>BSC.CSIT</li>

    <li>MSC.CSIT<ol type="a"><li>Semester 1

<ul>

  \
```

```

</li>Subject 1</li>
</li>Subject 2</li>
</li>Subject 3</li>
</ul>

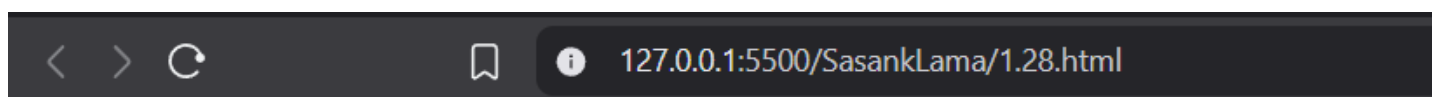
</li></li>Semester 2</li></li>Semester 3</li>

</ol>

</li>

</li>BScNT</li> </ol> </body></html>

```



Name: Sasank Lama

1. BSC.CSIT
2. MSC.CSIT
 - a. Semester 1
 - Subject 1
 - Subject 2
 - Subject 3
 - b. Semester 2
 - c. Semester 3
3. BScNT

29. Create the following list using html.

A. Movies

- i. Nepali**
- ii. Hindi**
- iii. English**

B. Music

C. Travel

D. Reading

E. Social Networking

F. Chatting

```
<html>
```

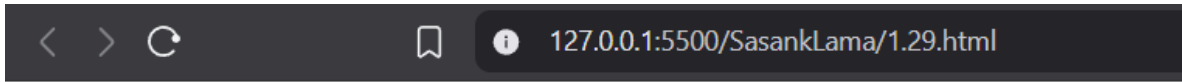
```
<head><title>Q.29 List</title> </head>
```

```
<body>
```

```
<p>Name: Sasank Lama</p>
```

```
<ol type="A"> <li> Movies
```

```
<ol type="i"> <li>Nepali</li> <li>Hindi</li> <li>English</li> </ol>    </li>
<li>Reading</li><li>Music</li><li>Travel</li><li>Social Networking</li> <li>Sports</li> </ol>
</body></html>
```



Name: Sasank Lama

- A. Movies
 - i. Nepali
 - ii. Hindi
 - iii. English
- B. Reading
- C. Music
- D. Travel
- E. Social Networking
- F. Sports

30. Design the following single table using HTML.

A B C D

F

E

G

H J K

L M

```
<html>

<head><title>Qn.30 Table</title> </head>

<body>

<p>Name: Sasank Lama</p>

<table border="1" width="50%" cellspacing="0" cellpadding="5">

<tr>

<td>A</td>

<td style="border-right: none;">B</td>

<td style="border-left: none;"></td>

<td>C</td>

<td>D</td>

</tr>

<tr><td colspan="4" rowspan="2" style="vertical-align: text-top;">E</td>

<td>F</td>

</tr>

<tr>

<td>G</td>

</tr>

<tr><td colspan="2">H</td><td colspan="2">J</td> <td>K</td>

</tr>

<tr><td colspan="3">L</td><td colspan="2">M</td></tr>

</table>

</body>

</html>
```

Name: Sasank Lama

A	B	C	D
E			F
			G
H		J	K
L		M	

31. Design the following table using nested tables in HTML Logo(image)ABC Company: Home(link) About Us(link) Contact Us(link) Content 1 News 1 Content 2 News 2 Copyright Facebook, Twitter(link) Powered By.

```
<html>

<head>

<title>Table Layout</title>

</head>

<body>

<table border="1" width="100%">

  <tr>

    <td width="50%">

    </td>

    <td width="50%">

      ABC Company

    </td>

  </tr>

  <tr>

    <td>

      <table border="1" width="100%">

        <tr>

          <td><a href="#">Home</a></td>

        </tr>

        <tr>

          <td><a href="#">About Us</a></td>

        </tr>

      </table>

    </td>

  </tr>

</table>
```



```
<tr>

  <td><a href="#">Contact Us</a></td>

</tr>

<tr>

  <td>Copyright</td>

</tr>

</table>

</td>

<td>

<table border="1" width="100%">

  <tr>

    <td>Content 1</td>

    <td>News 1</td>

  </tr>

  <tr>

    <td>Content 2</td>

    <td>News 2</td>

  </tr>

  <tr>

    <td><a href="#">Facebook</a>, <a href="#">Twitter</a></td>

    <td>Powered By</td>

  </tr>

</table>

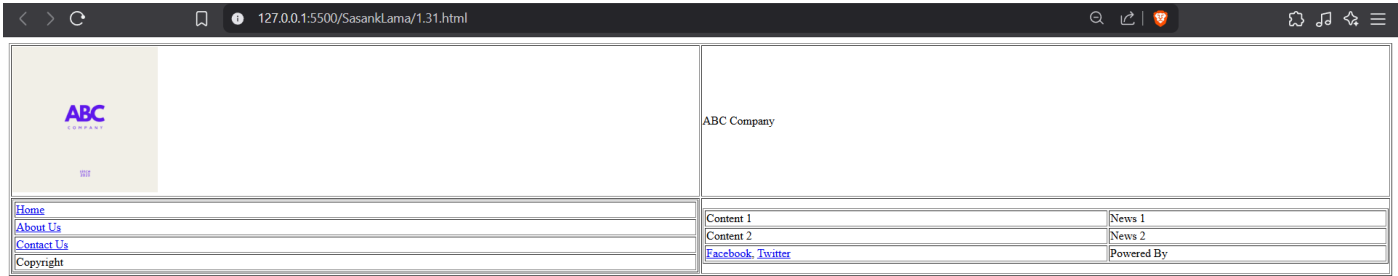
</td>

</tr>

</table>

</body>

</html>
```



32. Design an html form to demonstrate the 10 different types of generated using INPUT tag.

```
<html>

<head>

  <title>Qn.32 10 Different types of controls generated by Input tag</title>

</head>

<body>

  <P>Name: Sasank Lama</P>

  <h2>HTML Form with Different Input Types</h2>

  <form action="#" method="POST"> <label for="text-input">Text Input:</label>

    <input type="text" id="text-input" name="text-input" placeholder="Enter text"><br><br>

  <label for="password-input">Password Input:</label>

  <input type="password" id="password-input" name="password-input" placeholder="Enter password"><br><br>

  <label>Radio Buttons:</label><br>

  <input type="radio" id="radio1" name="radio-group" value="option1">

  <label for="radio1">Option 1</label>

  <input type="radio" id="radio2" name="radio-group" value="option2">

  <label for="radio2">Option 2</label><br><br>

  <label>Checkboxes:</label><br>

  <input type="checkbox" id="checkbox1" name="checkbox1" value="checkbox1">

  <label for="checkbox1">Checkbox 1</label>

  <input type="checkbox" id="checkbox2" name="checkbox2" value="checkbox2">

  <label for="checkbox2">Checkbox 2</label><br><br>

  <label for="number-input">Number Input:</label>

  <input type="number" id="number-input" name="number-input" min="1" max="10"><br><br>

  <label for="date-input">Date Input:</label>

  <input type="date" id="date-input" name="date-input"><br><br>

  <label for="color-input">Color Input:</label>

  <input type="color" id="color-input" name="color-input"><br><br>

  <label for="file-input">File Input:</label>

  <input type="file" id="file-input" name="file-input"><br><br>

  <label for="range-input">Range Input:</label>

  <input type="range" id="range-input" name="range-input" min="0" max="100"><br><br>

  <label for="email-input">Email Input:</label>

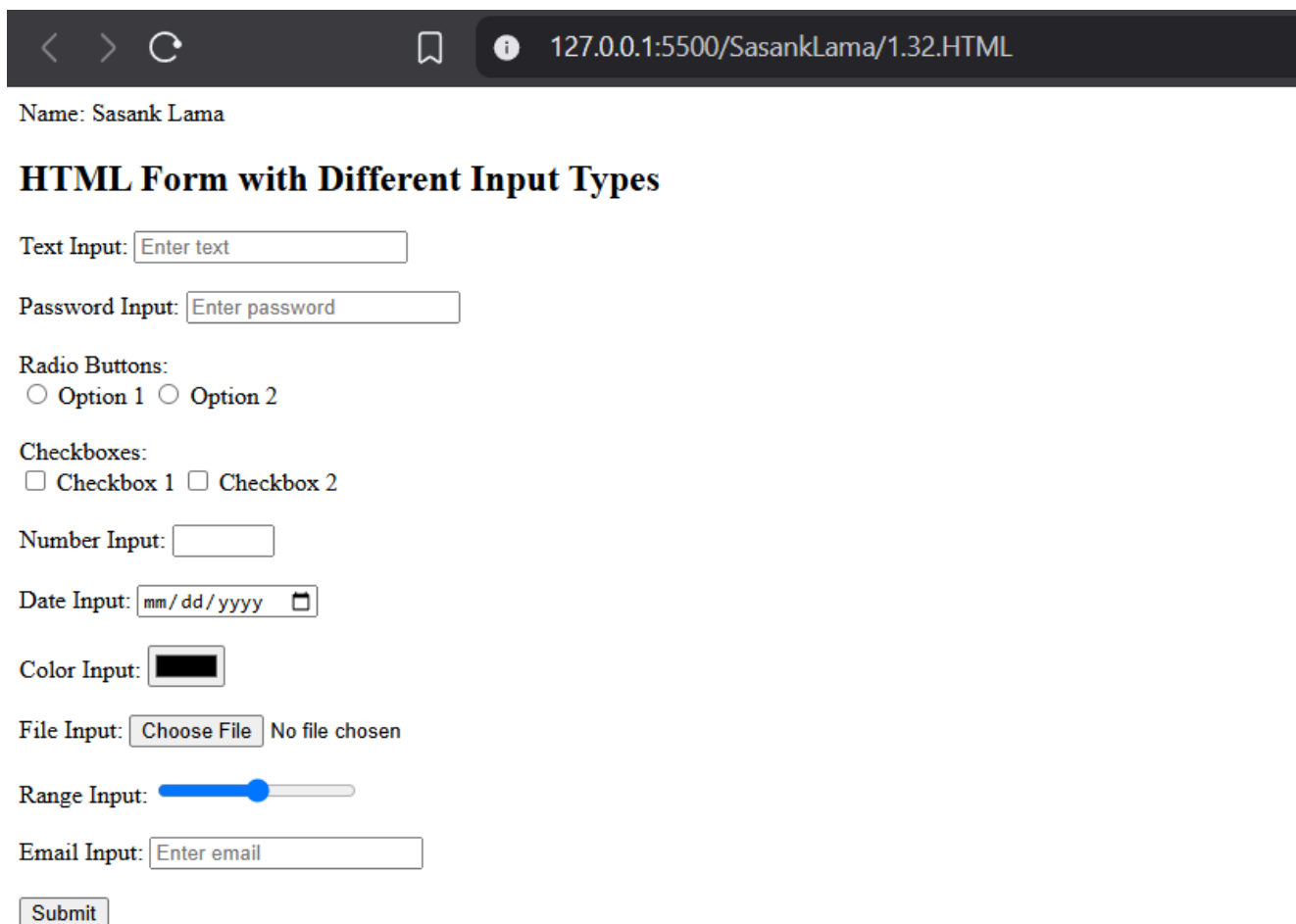
  <input type="email" id="email-input" name="email-input" placeholder="Enter email"><br><br>
```

```
<input type="submit" value="Submit">

</form>

</body>

</html>
```



Name: Sasank Lama

HTML Form with Different Input Types

Text Input:

Password Input:

Radio Buttons:
☐ Option 1 ☐ Option 2

Checkboxes:
☐ Checkbox 1 ☐ Checkbox 2

Number Input:

Date Input:

Color Input:

File Input: No file chosen

Range Input:

Email Input:

33. Design an html form to submit a job application form. Demonstrate use of drop-down list, text areas and file upload control.

```
<html>

<head> <title>Qn.33 Submit a job application form</title> </head>

<body>

  <p>Name: Sasank Lama</p>

  <h1>Job Application Form</h1>

  <form action="#" method="post" enctype="multipart/form-data">

    <p> <label for="name">Full Name:</label>

<input type="text" id="name" name="name" placeholder="Enter your full name" required/> </p>
```

```
<p><label for="email">Email Address:</label>

<input type="email" id="email" name="email" placeholder="Enter your valid email address" required/> </p>

<p><label for="phone">Phone Number:</label>

<input type="tel" id="phone" name="phone" placeholder="Enter your phone number"/> </p> <p> <label
for="position">Job Position:</label>

    <select name="position" id="position" required>

        <option value="">-- Please select a position --</option>

        <option value="developer">Software Developer</option>

        <option value="designer">Graphic Designer</option>

        <option value="writer">Content Writer</option>

        <option value="other">Other</option>

    </select> </p>

<p><label for="experience">Years of Experience:</label> <input type="number" id="experience"
name="experience" min="0" placeholder="Enter your years of experience"/> </p>

<p> <label for="skills">Skills and Technologies:</label>

    <textarea name="skills" id="skills" rows="5" placeholder="List your relevant skills and
technologies"></textarea> </p>

<p><label for="resume">Upload Resume (PDF or DOCX):</label>

<input type="file" id="resume" name="resume" accept="application/pdf,.docx" required/> </p>

<p><label for="cover_letter">Cover Letter (Optional):</label>

<textarea name="cover_letter" id="cover_letter" rows="5" placeholder="Write a brief cover letter
(optional)"></textarea> </p><button type="submit">Submit Application</button>

</form>

</body>

</html>
```



Name: Sasank Lama

Job Application Form

Full Name:

Email Address:

Phone Number:

Job Position:

Years of Experience:

Skills and Technologies:

List your relevant skills and technologies

Upload Resume (PDF or DOCX): No file chosen

Cover Letter (Optional):

Write a brief cover letter (optional)

LAB 2 (CSS)

1. Illustrate the use of background properties in CSS (for image).

```
<html>

<head>

  <title>Q.1 Background Image</title>

  <style>

    body {

      background-image: url("../images/Boudha_Stupa_IMG_7804_2018_42.jpg");

      background-size: cover;

      background-repeat: no-repeat;

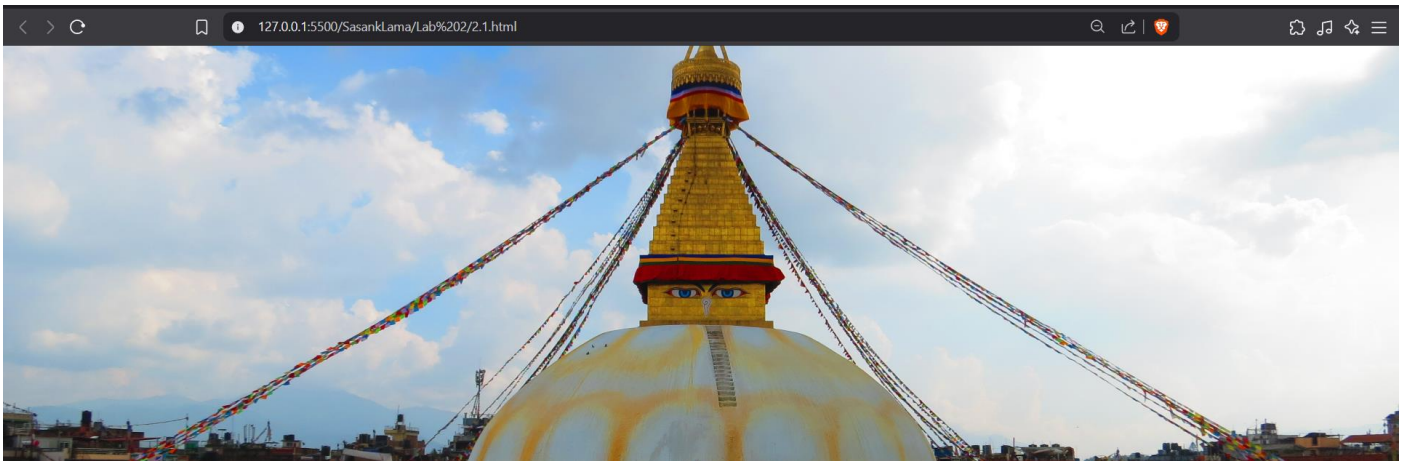
      background-position: center center;

    }

  </style>

</head>

</html>
```



2. Construct a web page with four paragraph and style using CSS.

```
<html>

<head>

  <title>Q.2 Styled Paragraphs</title>

  <style>

    p {

      color: #2fa52b;
```

```

    font-size: 16px;

    line-height: 1.5;

    margin-bottom: 20px;

    font-weight: 900;

}

</style>

</head>

<body>

    <p>Name: Sasank Lama</p>

    <p>This is paragraph 1.</p>

    <p>This is paragraph 2.</p>

    <p>This is paragraph 3.</p>

    <p>This is paragraph 4.</p>

</body>

</html>

```



Name: Sasank Lama

This is paragraph 1.

This is paragraph 2.

This is paragraph 3.

This is paragraph 4.

3. Design a web page with six images and style them using external CSS.

```

<html >

<head><title>Image Gallery</title>

    <link rel="stylesheet" href="styles.css">

</head>

<body>

```

```

<header>

  <p>Name: Sasank Lama</p>

  <h1>Welcome to My Image Gallery</h1>

</header>

<main>

  <div class="image-gallery">

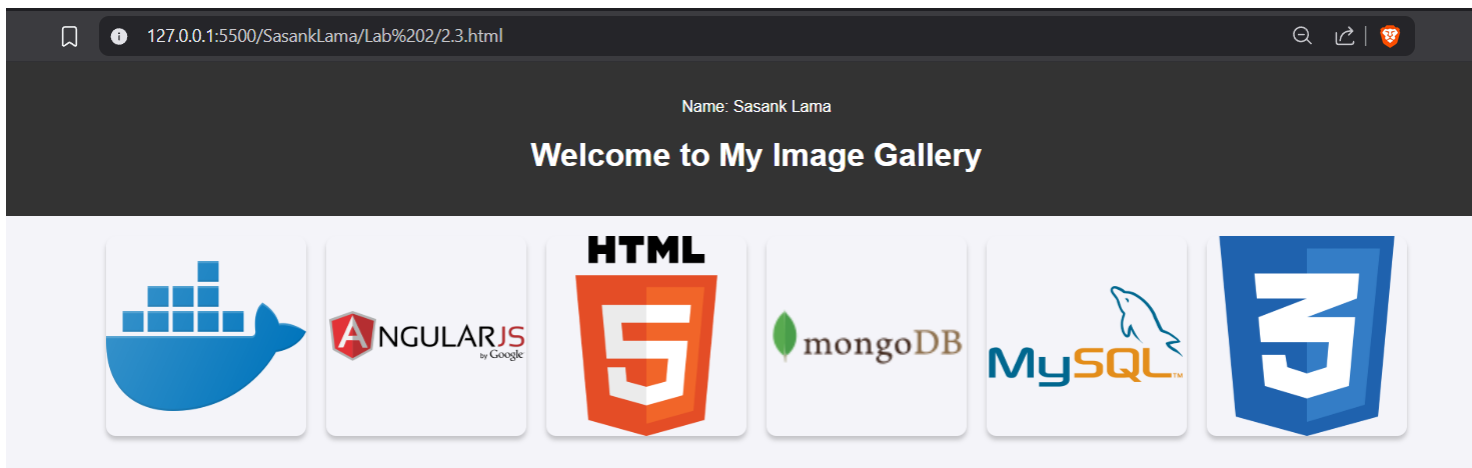
  </div>

</main>

</body>

</html>

```



4. Make a nested list using internal CSS.

```

<html>

<head>

```


<title>Nested List Example</title>

<style>

ul {

list-style-type: square; /* Square bullets for the main list */

padding: 20px;

border: 2px solid #333;

background-color: #f4f4f9;

}

li {

margin: 10px 0;

font-size: 18px;

color: #333;

}

ul ul {

list-style-type: circle; /* Circle bullets for nested lists */

padding-left: 30px; /* Indentation for nested lists */

background-color: #e6e6fa; /* Light lavender background for nested lists */

border-left: 2px dashed #666; /* Dashed border for nested lists */

}

ul ul li {

color: #555; /* Slightly lighter color for nested list items */

}

</style>

</head>

<body>

<p>Name: Sasank Lama</p>

<h1>Nested List Example</h1>

Item 1

Item 2

Subitem 2.1

Subitem 2.2

Subitem 2.3

Item 3

Subitem 3.1

Subitem 3.2

Subitem 3.2.1

Subitem 3.2.2

Subitem 3.3

</body>

</html>

127.0.0.1:5500/SasankLama/Lab%202/2.4.html

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Name: Sasank Lama

Nested List Example

- Item 1
- Item 2
 - Subitem 2.1
 - Subitem 2.2
 - Subitem 2.3
- Item 3
 - Subitem 3.1
 - Subitem 3.2
 - Subitem 3.2.1
 - Subitem 3.2.2
 - Subitem 3.3

5. Make a web page having 3 rows and 2 columns with all the hyperlinks and style it using external CSS.

<html>

<head>

<title>3x2 Grid of Hyperlinks</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<p>Name: Sasank Lama</p>

<header>

<h1>Welcome to My Hyperlink Grid</h1>

</header>

<main class="grid-container">

<div class="grid-item">Google</div>

<div class="grid-item">Facebook</div>

<div class="grid-item">Twitter</div>

<div class="grid-item">LinkedIn</div>

<div class="grid-item">GitHub</div>

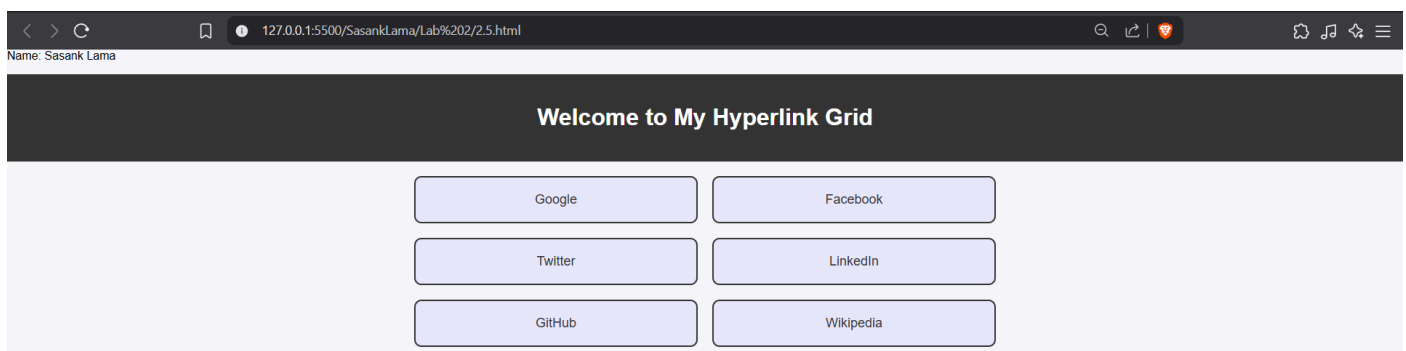
<div class="grid-item">Wikipedia</div>

</main>

</body>

</html>

```
SankLama > Lab 2 > # styles.css > ...
1  /* General Styles */
2  body {
3      font-family: Arial, sans-serif;
4      margin: 0;
5      padding: 0;
6      background-color: #f4f4f9;
7  }
8
9  header {
10     text-align: center;
11     background-color: #333;
12     color: white;
13     padding: 20px;
14 }
15
16 /* Grid Container */
17 .grid-container {
18     display: grid;
19     grid-template-columns: repeat(2, 1fr); /* 2 columns */
20     grid-template-rows: repeat(3, auto); /* 3 rows */
21     gap: 20px; /* Space between grid items */
22     padding: 20px;
23     max-width: 800px;
24     margin: 0 auto; /* Center the grid on the page */
25 }
26
27 /* Grid Items */
28 .grid-item {
29     text-align: center;
30     border: 2px solid #333;
31     border-radius: 10px;
32     background-color: #e6e6fa; /* Light lavender background */
33     padding: 20px;
34 }
35
36 .grid-item a {
37     text-decoration: none; /* Remove underline from links */
38     color: #333; /* Dark text color */
39     font-size: 18px;
40 }
41
42 .grid-item a:hover {
43     color: #007bff; /* Change color on hover */
44 }
45
```



6. Design an html form to demonstrate the 10 different types of controls generated using INPUT tag. Style the form as:

- Set the background color of textbox yellow when it is focused.
- Change the text color blue to textbox.

Increase the height of combo options when it is checked. o Set the border color red if the input is invalid in textbox textarea. o Set green border to valid input. o Design the form using fieldset.

```
<html>

<head>

  <title>Q.6 Styled Form</title>

<style>

body {font-family: Arial, sans-serif;}

fieldset {border: 2px solid #333;padding: 10px;margin: 20px;width: 300px;}

label {display: block;margin-bottom: 5px;}

input[type='text']:focus,textarea:focus {background-color: yellow;color: blue;}

select:checked {height: 150px;}

input:invalid,textarea:invalid {border: 2px solid red;}

input:valid,textarea:valid {border: 2px solid green; }

input,textarea,select {margin-bottom: 10px;width: 100%;padding: 8px;box-sizing: border-box;}

input[type='checkbox'] {width: auto;margin-right: 5px;}

</style>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <form>

    <fieldset>

      <legend>Styled Form Controls</legend>

      <label for="text">Text:</label>

      <input type="text" id="text" required />

      <label for="email">Email:</label>

      <input type="email" id="email" required />      <label for="password">Password:</label>

      <input type="password" id="password" required />
```

<label for="checkbox">Checkbox:</label>

<input type="checkbox" id="checkbox" />

<label for="select">Select:</label>

<select id="select" required>

<option value="option1">Option 1</option>

<option value="option2">Option 2</option>

<option value="option3">Option 3</option>

</select>

<label for="textarea">Textarea:</label>

<textarea id="textarea" rows="4" required></textarea>

<label for="date">Date:</label>

<input type="date" id="date" required />

<label for="number">Number:</label>

<input type="number" id="number" required />

<label for="color">Color:</label>

<input type="color" id="color" required />

<input type="submit" value="Submit" />

</fieldset>

</form>

</body>

</html>

Name: Sasank Lama

Styled Form Controls

Text:

Email:

Password:

Checkbox:
☐

Select:

Option 1 ▾

Textarea:

Date:

mm / dd / yyyy 📅

Number:

Color:

Submit

7. Design the given table and style as:

Class A

Class B

Class C

Class D

<html>

<head>

<title>Styled Table</title>

<style>

/* General Table Styling */

table {

border: 3px solid #333; /* Border style and color */

border-collapse: collapse;

width: 600px; /* Fixed width */

height: 550px; /* Fixed height */

```
}

td {

    text-align: center; /* Center align text */

    font-size: 20px; /* Font size */

    font-weight: bold; /* Bold text */

}

/* Individual Cell Styling */

.classA {

    background-color: #f1c40f; /* Yellow background */

    color: #34495e; /* Dark blue text color */

    text-transform: lowercase; /* Lowercase text */

}

.classB {

    background-color: #2ecc71; /* Green background */

    color: #e74c3c; /* Red text color */

    text-transform: lowercase; /* Lowercase text */

}

.classC {

    background-color: #3498db; /* Blue background */

    color: #ecf0f1; /* White text color */

    text-transform: uppercase; /* Uppercase text */

}

.classD {

    background-color: #9b59b6; /* Purple background */

    color: #2c3e50; /* Dark blue text color */

    text-transform: uppercase; /* Uppercase text */

}

</style>

</head>
```

```

<body>

  <p>Name: Sasank Lama</p>

  <table>

    <tr>

      <td class="classA">Class A</td>

      <td class="classB">Class B</td>

    </tr>

    <tr>

      <td class="classC">Class C</td>

      <td class="classD">Class D</td>

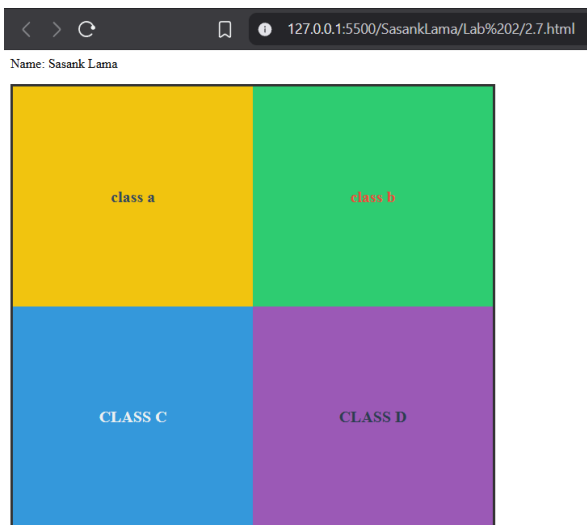
    </tr>

  </table>

</body>

</html>

```



8. Design a horizontal menu of any five options and style as:

- Set border for all links.
- Set different background color and text color.

Change the font color and increase the font size when mouse over it.

- o Remove the underline from link.
- o Change all the default behaviour of links.

```

<html>

<head>

```


<title>Styled Horizontal Menu</title>

<style>

```
.menu {  
    display: flex;  
    justify-content: center;  
    list-style-type: none;  
    margin: 20px;  
    padding: 0;  
}
```

```
.menu li {  
    margin: 0 15px;  
}
```

```
.menu a {  
    text-decoration: none;  
    padding: 10px 20px;  
    border: 2px solid #333;  
    border-radius: 5px;  
    font-size: 16px;  
    font-weight: bold;  
}
```

```
.menu a:nth-child(1) {  
    background-color: #f1c40f;  
    color: #34495e;  
}
```

```
.menu a:nth-child(2) {  
    background-color: #2ecc71;  
    color: #ffffff;  
}
```

```
.menu a:nth-child(3) {
```

```
        background-color: #3498db;

        color: #ecf0f1;

    }

    .menu a:nth-child(4) {

        background-color: #9b59b6;

        color: #ffffff;

    }

    .menu a:nth-child(5) {

        background-color: #e74c3c;

        color: #ffffff;

    }

    .menu a:hover {

        color: #000000;

        font-size: 18px;

        transition: all 0.3s ease-in-out;

    }

</style>

</head>

<body>

    <p>Name: Sasank Lama</p>

    <ul class="menu">

        <li><a href="#home">Home</a></li>

        <li><a href="#about">About</a></li>

        <li><a href="#services">Services</a></li>

        <li><a href="#portfolio">Portfolio</a></li>

        <li><a href="#contact">Contact</a></li>

    </ul>

</body>

</html>
```

9. Develop a web page with a paragraph and add some contents before the paragraph with red color and yellow background using CSS.

```
<html>

<head>

<title>Q.9 Styled Paragraph with Contents</title>

<style>

  body {

    background-color: #fff8dc;

  }

  .highlight {

    background-color: yellow;

    color: red;

    padding: 10px;

  }

  p {

    font-size: 16px;

    line-height: 1.5;

    margin: 20px 0;

  }

</style>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <div class="highlight">

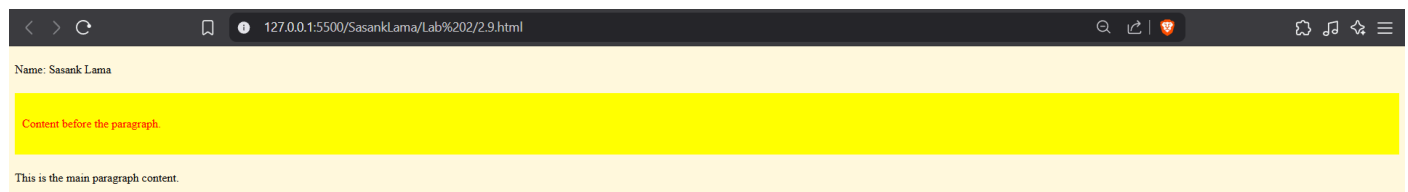
    <p>Content before the paragraph.</p>

  </div>

  <p>This is the main paragraph content.</p>
```

</body>

</html>



10. Illustrate the concept of pseudo elements with example. (::after, ::first-letter, ::selection, ::firstline) .

<html>

<head>

<style>

```
p::first-line {  
  
    color: #3366cc;  
  
    font-weight: bold;  
  
}
```

```
p::first-letter {  
  
    font-size: 24px;  
  
    color: #cc3366;  
  
    float: left;  
  
    margin-right: 6px;  
  
}
```

```
p::after {  
  
    content: " - Read more";  
  
    color: #339966;  
  
    font-style: italic;  
  
}
```

```
::selection {
```

```

background-color: #ffff99;

color: #333;

}

</style>

<title>Q.10 Pseudo Elements</title>

</head>

<body>

<p>Name: Sasank Lama</p>

<p>

    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus

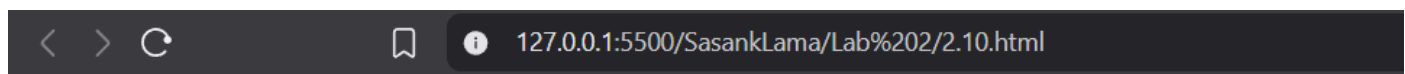
    ultricies efficitur velit, ut venenatis leo varius vel.

</p>

</body>

</html>

```



N ame: Sasank Lama - [Read more](#)

L ore ipsum dolor sit amet, consectetur adipiscing elit. Phasellus ultricies efficitur velit, ut venenatis leo varius vel. - [Read more](#)

11. Design following list using html and CSS:A.mouse B.keyboard C.monitor D.Printer E.Touchpad.

```

<html>

<head>

    <title>Computer Components List</title>

    <style>

        .component-list {

            list-style-type: none;

            padding-left: 0;

        }
    
```

```
.component-list li {  
  
    padding: 12px 20px;  
  
    margin: 8px 0;  
  
    border-left: 4px solid transparent;  
  
    transition: all 0.3s ease;  
  
}
```

```
.component-list li:nth-child(1) {  
  
    background-color: #f0f4ff;  
  
    border-color: #4a90e2;  
  
    color: #2c3e50;  
  
}
```

```
.component-list li:nth-child(2) {  
  
    background-color: #fff0f5;  
  
    border-color: #ff69b4;  
  
    color: #8b0000;  
  
}
```

```
.component-list li:nth-child(3) {  
  
    background-color: #f0fff4;  
  
    border-color: #3cb371;  
  
    color: #006400;  
  
}
```

```
.component-list li:nth-child(4) {  
  
    background-color: #fff8dc;  
  
    border-color: #ffa500;  
  
    color: #8b4513;  
  
}
```

```
.component-list li:nth-child(5) {  
  
    background-color: #f5f5f5;  
  
    border-color: #808080;  
  
    color: #2f4f4f;  
  
}  
  
.component-list li:hover {  
  
    transform: translateX(10px);  
  
    box-shadow: 2px 2px 8px rgba(0,0,0,0.1);  
  
}  
  
.component-list li::before {  
  
    content: "•";  
  
    color: inherit;  
  
    font-size: 1.5em;  
  
    margin-right: 15px;  
  
    vertical-align: middle;  
  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p>Name: Sasank Lama</p>
```

```
<ul class="component-list">
```

```
<li>A.mouse</li>
```

```
<li>B.keyboard</li>
```

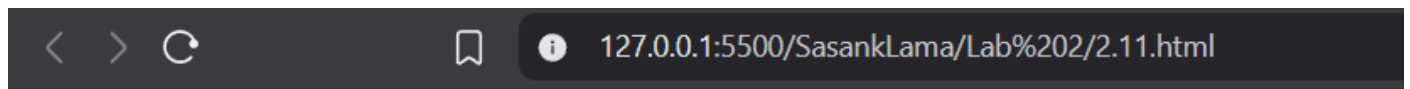
```
<li>C.monitor</li>
```

```
<li>D.Printer</li>
```

```
<li>E.Touchpad</li>
```


</body>

</html>



Name: Sasank Lama

- A.mouse
- B.keyboard
- C.monitor
- D.Printer
- E.Touchpad

LAB 3(JavaScript and XML)

1. Illustrate with examples the concept of alert, confirm and popup boxes .

```
<html>

<head>

  <title>JavaScript Popup Boxes</title>

  <script>

    function showAlert() {

      alert("This is an Alert Box!");

    }

    function showConfirm() {

      let userResponse = confirm("Do you want to proceed?");

      if (userResponse) {

        alert("You clicked OK!");

      } else {

        alert("You clicked Cancel!");

      }

    }

    function showPrompt() {

      let userName = prompt("What is your name?", "John Doe");

      if (userName === null || userName === "") {

        alert("No input provided or prompt canceled.");

      } else {

        alert("Hello, " + userName + "!");

      }

    }

  </script>

</head>

<body>
```

```
<p>Name: Sasank Lama</p>

<h1>JavaScript Popup Boxes Example</h1>

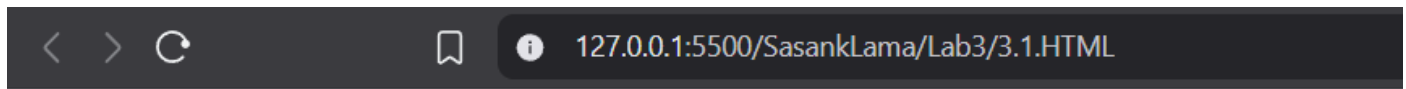
<button onclick="showAlert()">Show Alert Box</button>

<button onclick="showConfirm()">Show Confirm Box</button>

<button onclick="showPrompt()">Show Prompt Box</button>

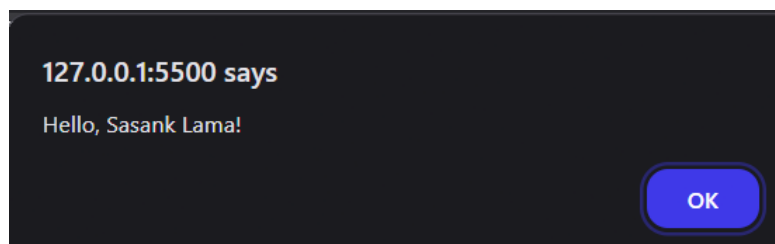
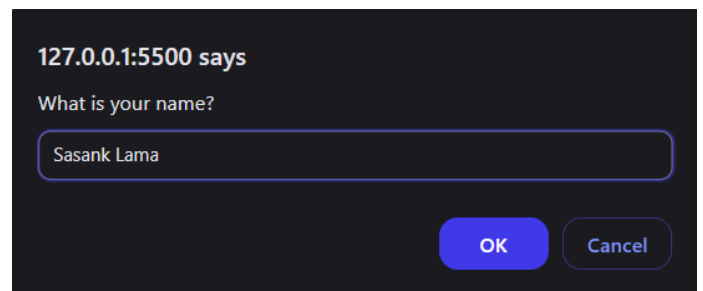
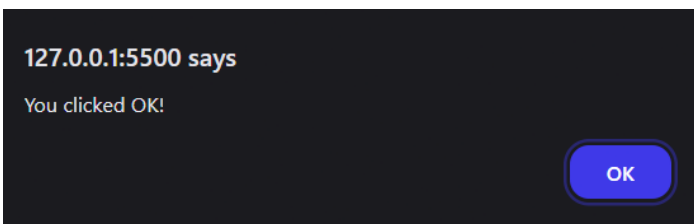
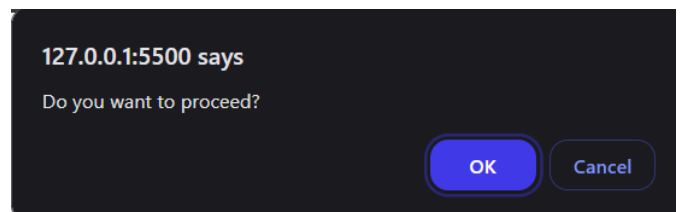
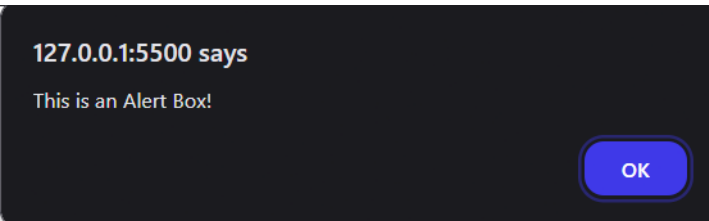
</body>

</html>
```



Name: Sasank Lama

JavaScript Popup Boxes Example



2. WAP in javascript to demonstrate the objects, its properties and constructors with examples

```
<html>

<head>

<title>JavaScript Objects and Constructors</title>

<script>

    const car = {

        brand: "Toyota",

        model: "Corolla",

        year: 2020,

        displayDetails: function() {

            return `Car: ${this.brand} ${this.model} (${this.year})`;

        }

    };

    car.color = "Blue";

    function Person(name, age) {

        this.name = name;

        this.age = age;

        this.greet = function() {

            return `Hello, my name is ${this.name} and I am ${this.age} years old.`;

        };

    }

    const person1 = new Person("Sasank", 22);

    const person2 = new Person("Bob", 30);


    class Animal {

        constructor(type, sound) {

            this.type = type;

            this.sound = sound;

        }

        makeSound() {

            return `${this.type} says "${this.sound}"`;

        }

    }
```

```

const dog = new Animal("Dog", "Woof");

const cat = new Animal("Cat", "Meow");

function displayExamples() {

    document.getElementById("example1").textContent = car.displayDetails();

    document.getElementById("example2").textContent = ` Car color: ${car.color} `;

    document.getElementById("example3").textContent = person1.greet();

    document.getElementById("example4").textContent = dog.makeSound();

}

</script>

</head>

<body onload="displayExamples()">

    <p>Name: Sasank Lama</p>

    <h1>JavaScript Objects and Constructors</h1>

    <h2>Example 1: Object Literal</h2>

    <p id="example1"></p>

    <h2>Example 2: Adding Properties Dynamically</h2>

    <p id="example2"></p>

    <h2>Example 3: Constructor Function</h2>

    <p id="example3"></p>

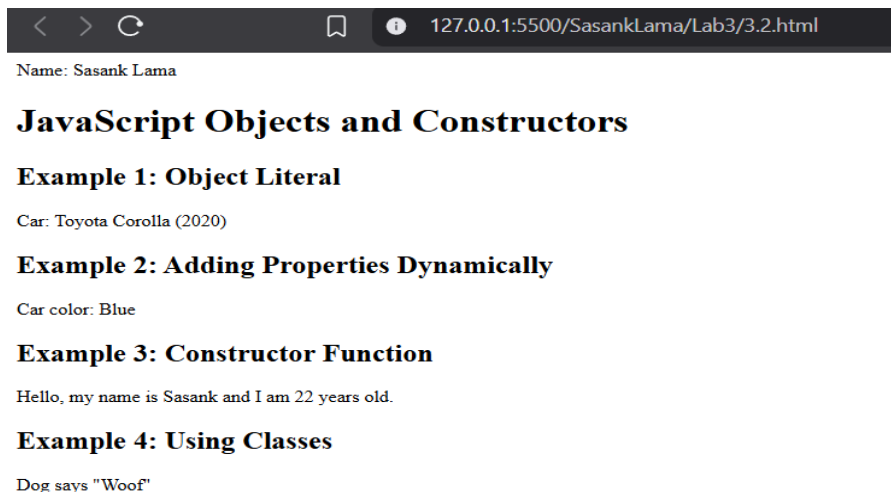
    <h2>Example 4: Using Classes</h2>

    <p id="example4"></p>

</body>

</html>

```



3.How array can be created in javascript? Create 2-D array and display the array in HTML table .

```

<html>

<head>

  <title>Q.3 Array</title>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <script>

    var twoDArray = [

      [1, 2, 3],

      [4, 5, 6],

      [7, 8, 9],

    ];

    document.write("<table border='1' cellspacing='0' cellpadding='5'>");

    for (var i = 0; i < twoDArray.length; i++) {

      document.write("<tr>");

      for (var j = 0; j < twoDArray[i].length; j++) {

        document.write("<td>" + twoDArray[i][j] + "</td>");

      }

      document.write("</tr>");

    }

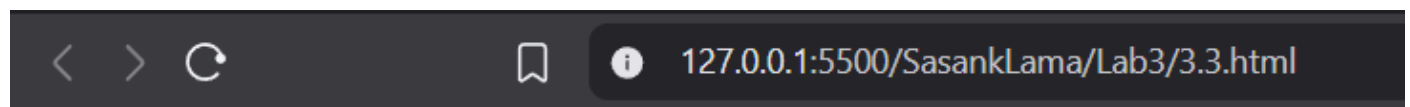
    document.write("</table>");

  </script>

</body>

</html>

```



Name: Sasank Lama

1	2	3
4	5	6
7	8	9

4. Explain all the following built in objects with examples of each:

<html>

<head>

<title>JavaScript Built-in Objects</title>

<script>

// Array Methods Example

```
function arrayMethods() {  
    const fruits = ["Apple", "Banana", "Cherry"];  
    fruits.push("Mango"); // Adds an element to the end  
    const removedFruit = fruits.pop(); // Removes the last element  
    const joinedFruits = fruits.join(", "); // Joins all elements into a string  
    document.getElementById("arrayMethods").innerHTML =  
        `Original Array: Apple, Banana, Cherry<br>` +  
        `After push: ${fruits.join(", ")}<br>` +  
        `Removed Fruit: ${removedFruit}<br>` +  
        `Joined Array: ${joinedFruits}`;  
}
```

// Date Methods Example

```
function dateMethods() {  
    const now = new Date();  
    const year = now.getFullYear(); // Gets the year  
    const month = now.getMonth() + 1; // Gets the month (0-based, so add 1)  
    const day = now.getDate(); // Gets the day of the month  
    const time = now.toLocaleTimeString(); // Gets the current time as a string  
    document.getElementById("dateMethods").innerHTML =  
        `Current Date: ${year}-${month}-${day}<br>` +  
        `Current Time: ${time}`;  
}
```

// String Methods Example

```
function stringMethods() {  
    const text = "Hello, JavaScript!";  
    const upperCaseText = text.toUpperCase();  
    const lowerCaseText = text.toLowerCase();
```

```

const substringText = text.substring(7, 17);

document.getElementById("stringMethods").innerHTML =

    `Original String: ${text}<br>` +

    `Uppercase: ${upperCaseText}<br>` +

    `Lowercase: ${lowerCaseText}<br>` +

    `Substring (7-17): ${substringText}`;

}

// Math Methods Example

function mathMethods() {

    const num = 16.78;

    const rounded = Math.round(num);

    const squareRoot = Math.sqrt(16);

    const randomNum = Math.random();

    document.getElementById("mathMethods").innerHTML =

        `Original Number: ${num}<br>` +

        `Rounded: ${rounded}<br>` +

        `Square Root of 16: ${squareRoot}<br>` +

        `Random Number (0-1): ${randomNum}`;

}

function runExamples() {

    arrayMethods();

    dateMethods();

    stringMethods();

    mathMethods();

}

</script>

</head>

<body onload="runExamples()">

    <p>Name: Sasank Lama</p>

    <h1>JavaScript Built-in Objects Examples</h1>

    <h2>Array Methods</h2>

    <p id="arrayMethods"></p>

    <h2>Date Methods</h2>

```

<p id="dateMethods"></p>

<h2>String Methods</h2>

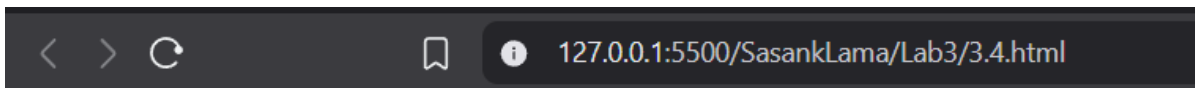
<p id="stringMethods"></p>

<h2>Math Methods</h2>

<p id="mathMethods"></p>

</body>

</html>



Name: Sasank Lama

JavaScript Built-in Objects Examples

Array Methods

Original Array: Apple, Banana, Cherry
After push: Apple, Banana, Cherry
Removed Fruit: Mango
Joined Array: Apple, Banana, Cherry

Date Methods

Current Date: 2025-4-11
Current Time: 8:10:02 PM

String Methods

Original String: Hello, JavaScript!
Uppercase: HELLO, JAVASCRIPT!
Lowercase: hello, javascript!
Substring (7-17): JavaScript

Math Methods

Original Number: 16.78
Rounded: 17
Square Root of 16: 4
Random Number (0-1): 0.8602699754869093

5. WAP that contains a text field for name, age, phone number, email, dropdown for colleges, radio for gender and a checkboxes for i accept all the terms. Perform the client side validations as:

- All fields are required
- Name must contains alphabets and white spaces and of length greater than 6 characters long
- Age must be integer and must be between and 50
- Phone number must be exactly 10 digits long and must start with 98 or 97
- Email must be valid


```
<html>

<head>

  <title>Registration Form with Validation</title>

  <style>

    .error { color: red; }

    .success { color: green; }

  </style>

<body>

  <p>Name: Sasank Lama</p>

  <h1>Registration Form</h1>

  <form onsubmit="return validateForm()">

    <!-- Name Field -->

    <div>

      <label>Full Name:</label>

      <input type="text" id="name">

      <span id="nameError" class="error"></span>

    </div>


    <!-- Age Field -->

    <div>

      <label>Age:</label>

      <input type="number" id="age">

      <span id="ageError" class="error"></span>

    </div>


    <!-- Phone Number Field -->

    <div>

      <label>Phone Number:</label>

      <input type="tel" id="phone">

      <span id="phoneError" class="error"></span>

    </div>


    <!-- Email Field -->

    <div>

      <label>Email:</label>
```

```
<input type="email" id="email">
<span id="emailError" class="error"></span>
</div>
```

```
<!-- College Dropdown -->
<div>
  <label>College:</label>
  <select id="college">
    <option value="">Select College</option>
    <option value="Harvard">Harvard University</option>
    <option value="MIT">Massachusetts Institute of Technology</option>
    <option value="Stanford">Stanford University</option>
  </select>
  <span id="collegeError" class="error"></span>
</div>
```

```
<!-- Gender Radio Buttons -->
<div>
  <label>Gender:</label>
  <input type="radio" name="gender" value="male"> Male
  <input type="radio" name="gender" value="female"> Female
  <span id="genderError" class="error"></span>
</div>
```

```
<!-- Terms Checkbox -->
<div>
  <input type="checkbox" id="terms">
  <label>I accept all the terms</label>
  <span id="termsError" class="error"></span>
</div>
```

```
<button type="submit">Submit</button>
</form>
```

```
<script>
```

```
function validateForm() {  
    // Reset errors  
    document.querySelectorAll('.error').forEach(e => e.textContent = "");  
  
    // Get form values  
    const name = document.getElementById('name').value.trim();  
    const age = document.getElementById('age').value;  
    const phone = document.getElementById('phone').value.trim();  
    const email = document.getElementById('email').value.trim();  
    const college = document.getElementById('college').value;  
    const gender = document.querySelector('input[name="gender"]:checked');  
    const terms = document.getElementById('terms').checked;  
  
    // Validation Flags  
    let isValid = true;  
  
    // Name Validation  
    if (!name) {  
        document.getElementById('nameError').textContent = 'Name is required';  
        isValid = false;  
    } else if (!/^[a-zA-Z\s]{6,}$/.test(name)) {  
        document.getElementById('nameError').textContent = 'Name must contain only alphabets and spaces, and  
be at least 6 characters long';  
        isValid = false;  
    }  
  
    // Age Validation  
    if (!age) {  
        document.getElementById('ageError').textContent = 'Age is required';  
        isValid = false;  
    } else if (!/^\d+$/.test(age)) {  
        document.getElementById('ageError').textContent = 'Age must be a number';  
        isValid = false;  
    } else if (age < 18 || age > 50) {  
        document.getElementById('ageError').textContent = 'Age must be between 18 and 50';  
    }  
}
```

```
        isValid = false;
    }

// Phone Validation
if (!phone) {
    document.getElementById('phoneError').textContent = 'Phone number is required';
    isValid = false;
} else if (!/^(97|98)\d{8}$/.test(phone)) {
    document.getElementById('phoneError').textContent = 'Phone must be 10 digits starting with 97 or 98';
    isValid = false;
}

// Email Validation
if (!email) {
    document.getElementById('emailError').textContent = 'Email is required';
    isValid = false;
} else if (!/^[^\\s@]+@[^\\s@]+\\.[^\\s@]+$/ .test(email)) {
    document.getElementById('emailError').textContent = 'Invalid email format';
    isValid = false;
}

// College Validation
if (!college) {
    document.getElementById('collegeError').textContent = 'College selection is required';
    isValid = false;
}

// Gender Validation
if (!gender) {
    document.getElementById('genderError').textContent = 'Gender selection is required';
    isValid = false;
}

// Terms Validation
if (!terms) {
```

```

        document.getElementById('termsError').textContent = 'You must accept the terms';

        isValid = false;
    }

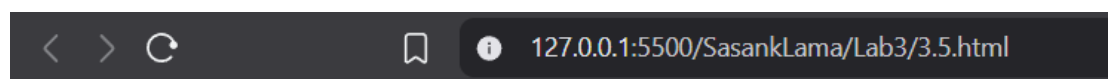
    // Final Validation
    if (isValid) {
        alert('Form submitted successfully!');

        return true;
    }

    return false;
}

</script>
</body>
</html>

```



Name: Sasank Lama

Registration Form

Full Name:

Age:

Phone Number:

Email:

College:

Gender: ☐ Male ☐ Female

☐ I accept all the terms

6.How events are handled in Javascript? Illustrate with examples •

```

<html>

<head>

    <title>Event Handling in JavaScript</title>

    <style>

        .box {

            width: 100px;

            height: 100px;

            background-color: lightblue;

            margin: 20px;

```

```
        text-align: center;

        line-height: 100px;
    }
</style>
</head>
<body>

    <p>Name: Sasank Lama</p>

    <h1>Event Handling Examples</h1>


    <!-- Button Example -->

    <button id="clickButton">Click Me!</button>

    <p id="clickMessage"></p>


    <!-- Input Field Example -->

    <label for="nameInput">Enter your name:</label>

    <input type="text" id="nameInput" placeholder="Your name">

    <p id="nameMessage"></p>


    <!-- Mouse Over Example -->

    <div class="box" id="hoverBox">Hover Me!</div>

    <p id="hoverMessage"></p>


    <!-- Form Submission Example -->

    <form id="myForm">

        <label for="emailInput">Email:</label>

        <input type="email" id="emailInput" required>

        <button type="submit">Submit</button>

    </form>

    <p id="formMessage"></p>


    <script>

        // Using addEventListener (Recommended Method)

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

        clickButton.addEventListener("click", function() {

            document.getElementById("clickMessage").textContent = "Button clicked!";
```

```
});
```

```
// Using onevent properties
```

```
const nameInput = document.getElementById("nameInput");
```

```
nameInput.oninput = function() {
```

```
    const nameValue = nameInput.value.trim();
```

```
    document.getElementById("nameMessage").textContent = nameValue ? `Hello, ${nameValue}!` : "";
```

```
};
```

```
// Mouseover Event Example
```

```
const hoverBox = document.getElementById("hoverBox");
```

```
hoverBox.addEventListener("mouseover", function() {
```

```
    document.getElementById("hoverMessage").textContent = "Mouse is hovering!";
```

```
    hoverBox.style.backgroundColor = "lightgreen";
```

```
});
```

```
hoverBox.addEventListener("mouseout", function() {
```

```
    document.getElementById("hoverMessage").textContent = "";
```

```
    hoverBox.style.backgroundColor = "lightblue";
```

```
});
```

```
// Form Submission Example
```

```
const myForm = document.getElementById("myForm");
```

```
myForm.addEventListener("submit", function(event) {
```

```
    event.preventDefault(); // Prevent default form submission
```

```
    const emailValue = document.getElementById("emailInput").value;
```

```
    if (emailValue) {
```

```
        document.getElementById("formMessage").textContent = `Form submitted successfully with email: ${emailValue}`;
```

```
    } else {
```

```
        document.getElementById("formMessage").textContent = "Please enter a valid email.";
```

```
    }
```

```
});
```

```
</script>
```

```
</body>
```

```
</html>
```

Name: Sasank Lama

Event Handling Examples

Enter your name:



Mouse is hovering!

Email:

7. WAP to show the concept of Try/Catch .

```
<html>
```

```
<head>
```

```
  <title>Try/Catch Demonstration</title>
```

```
  <style>
```

```
    body { font-family: Arial, sans-serif; margin: 40px; }
```

```
    .container { max-width: 600px; margin: 0 auto; }
```

```
    input[type="number"] { width: 100%; padding: 8px; margin: 10px 0; }
```

```
    button { padding: 10px 20px; background-color: #4CAF50; color: white; border: none; cursor: pointer; }
```

```
    .output { margin-top: 20px; padding: 15px; border-radius: 5px; }
```

```
    .error { background-color: #ffebee; color: #c62828; }
```

```
    .success { background-color: #e8f5e9; color: #2e7d32; }
```

```
  </style>
```

```
</head>
```

```
<body>
```

```
  <p>Name: Sasank Lama</p>
```

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

```
    <h1>Try/Catch Demonstration</h1>
```

```
    <p>Enter a number to calculate its reciprocal:</p>
```

```
    <input type="number" id="numberInput" placeholder="Enter a number">
```

```
    <button onclick="calculateReciprocal()">Calculate</button>
```

```
    <div id="output" class="output"></div>
```

```
  </div>
```

```
<script>
```



```
function calculateReciprocal() {  
    const input = document.getElementById('numberInput').value;  
    const outputDiv = document.getElementById('output');  
  
    // Clear previous output  
    outputDiv.textContent = "";  
    outputDiv.className = 'output';  
  
    try {  
        // Convert input to number  
        const num = parseFloat(input);  
  
        // Validate input  
        if (isNaN(num)) {  
            throw new Error("Please enter a valid number");  
        }  
        if (num === 0) {  
            throw new Error("Division by zero is not allowed");  
        }  
  
        // Perform calculation  
        const reciprocal = 1 / num;  
  
        // Display success result  
        outputDiv.textContent = `Reciprocal of ${num} is: ${reciprocal}`;  
        outputDiv.classList.add('success');  
  
    } catch (error) {  
        // Handle errors  
        outputDiv.textContent = `Error: ${error.message}`;  
        outputDiv.classList.add('error');  
  
    } finally {  
        // This always executes  
        console.log("Calculation attempt complete");  
    }  
}
```

```

    }

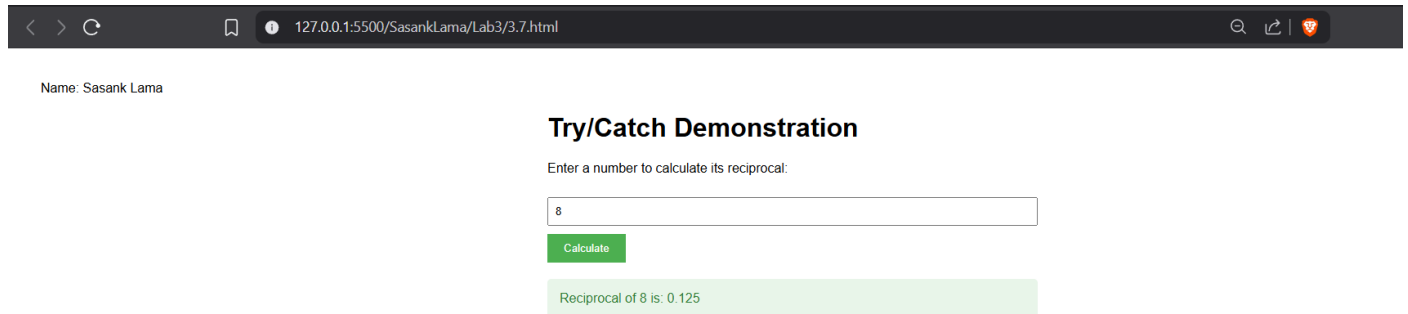
}

</script>

</body>

</html>

```



8. Write jQuery to show the concept of on click, on mouse out, onkeyup, on form submit events .

```

<html>

<head>

    <title>jQuery Events</title>

    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

    <style>.box{width:100px;height:100px;background:lightblue;margin:20px;text-align:center;line-
height:100px}</style>

</head>

<body>

    <p>Name: Sasank Lama</p>

    <h1>jQuery Events</h1>

    <button id="clickBtn">Click Me</button><p id="clickMsg"></p>

    <div class="box">Hover</div><p id="hoverMsg"></p>

    <input id="textInput" placeholder="Type here"><p id="textMsg"></p>

    <form id="form"><input required><button>Submit</button></form><p id="formMsg"></p>

<script>

```

```

$(() => {

    $("#clickBtn").click(() => $("#clickMsg").text("Clicked!"));

    $(".box").mouseout(() => $("#hoverMsg").text("Mouse out!"));

    $("#textInput").keyup(e => $("#textMsg").text("Typing: " + e.target.value));

    $("#form").submit(e => {

        e.preventDefault();

        $("#formMsg").text($("#form input").val() ? "Submitted!" : "Error!");

    });

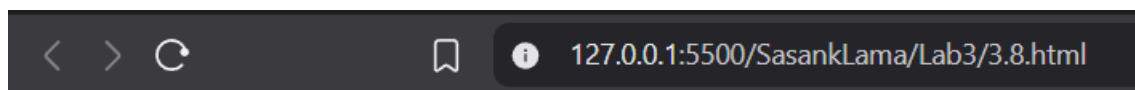
});

</script>

</body>

</html>

```

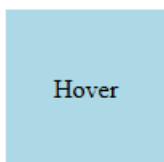


Name: Sasank Lama

jQuery Events

Click Me

Clicked!



Mouse out!

Sasank

Typing: Sasank

Submit

9. Illustrate how jQuery effects(hide/show, fade, stop can be done in any image) .

```
<html>
```

```
<head>
```

```
<meta charset="UTF-8">

<title>jQuery Effects Example</title>

<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

<style>

    img { width: 300px; height: auto; margin: 20px; }

    button { margin: 5px; padding: 10px; cursor: pointer; }

</style>

</head>

<body>

    <p>Name: Sasank Lama</p>

    <h1>jQuery Effects on Image</h1>

    <br>

    <button id="hide">Hide</button>

    <button id="show">Show</button>

    <button id="fadeOut">Fade Out</button>

    <button id="fadeIn">Fade In</button>

    <button id="stop">Stop Animation</button>

    <script>

        $(document).ready(() => {

            $("#hide").click(() => $("#image").hide(1000)); // Hide image

            $("#show").click(() => $("#image").show(1000)); // Show image

            $("#fadeOut").click(() => $("#image").fadeOut(1000)); // Fade out image

            $("#fadeIn").click(() => $("#image").fadeIn(1000)); // Fade in image

            $("#stop").click(() => $("#image").stop()); // Stop ongoing animations

        });

    </script>

</body>
```

```
</html>
```

Name: Sasank Lama

jQuery Effects on Image

Hide

Show

Fade Out

Fade In

Stop Animation

Name: Sasank Lama

jQuery Effects on Image



Hide

Show

Fade Out

Fade In

Stop Animation

10.How animation is done using jQuery? Illustrate with exmaple .

```
<html>

<head>

  <title>jQuery Animation Example</title>

  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

  <style>

    img { width: 100px; height: auto; position: relative; }

    button { margin: 5px; padding: 10px; cursor: pointer; }

  </style>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <h1>jQuery Animation Example</h1>

  <br>

  <button id="moveRight">Move Right</button>

  <button id="moveLeft">Move Left</button>

  <button id="resize">Resize</button>

  <button id="stop">Stop Animation</button>


  <script>

    $(document).ready() => {

      $("#moveRight").click() => $("#image").animate({ left: '+=100px' }, 1000)); // Move right

      $("#moveLeft").click() => $("#image").animate({ left: '-=100px' }, 1000)); // Move left

      $("#resize").click() => $("#image").animate({ width: '200px', height: '200px' }, 1000)); // Resize

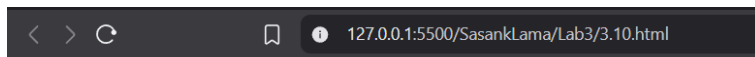
      $("#stop").click() => $("#image").stop(); // Stop ongoing animation

    });

  </script>

</body>
```

</html>



Name: Sasank Lama

jQuery Animation Example

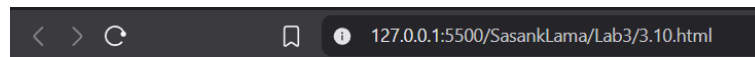


Move Right

Move Left

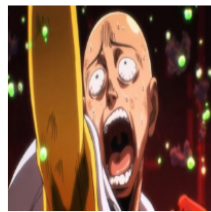
Resize

Stop Animation



Name: Sasank Lama

jQuery Animation Example



Move Right

Move Left

Resize

Stop Animation

11. How json file is created? How can we parse the JSON file using JavaScript?

<html>

<head>

<title>JSON to HTML Table</title>

<style>

table {

width: 50%;

border-collapse: collapse;

margin: 20px auto;

}

th, td {

border: 1px solid #ddd;

padding: 8px;

text-align: left;

}

th {

background-color: #f4f4f4;

}

```
</style>

</head>

<body>

  <p>Name: Sasank Lama</p>

  <h1 style="text-align: center;">JSON Data to HTML Table</h1>

  <div id="table-container"></div>


  <script>

    // Fetch JSON data and display it in an HTML table

    fetch('data.json')

      .then(response => response.json()) // Parse JSON

      .then(data => {

        let table = '<table><thead><tr>';

        // Extract table headers from JSON keys

        const headers = Object.keys(data[0]);

        headers.forEach(header => table += `<th>${header}</th>`);

        table += '</tr></thead><tbody>';

        // Populate table rows with JSON data

        data.forEach(row => {

          table += '<tr>';

          headers.forEach(header => table += `<td>${row[header]}</td>`);

          table += '</tr>';

        });

        table += '</tbody></table>';

        // Insert the table into the HTML container

        document.getElementById('table-container').innerHTML = table;

      })

      .catch(error => console.error('Error fetching JSON:', error));

  </script>

</body>

</html>
```



```
SasankLama > Lab3 > {} data.json > {} 2 > city
1  [
2    { "name": "Sasank", "age": 22, "city": "Kathmandu" },
3    { "name": "Sajan", "age": 21, "city": "Kathmandu" },
4    { "name": "Oban", "age": 22, "city": "Kathmandu" }
5  ]
```



JSON Data to HTML Table

name	age	city
Sasank	22	Kathmandu
Sajan	21	Kathmandu
Oban	22	Kathmandu

12. How AJAX is used to get the data from the server to the client side? Illustrate with example .

```
<html>
<head>
  <title>AJAX Example</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <style>
    table {
      width: 50%;
      border-collapse: collapse;
      margin: 20px auto;
    }
    th, td {
      border: 1px solid #ddd;
      padding: 8px;
      text-align: left;
    }
    th {
      background-color: #f4f4f4;
    }
  </style>
</head>
<body>
  <p>Name: Sasank Lama</p>
  <h1 style="text-align: center;">AJAX Example</h1>
  <button id="fetchData">Fetch Data</button>
  <table id="dataTable" style="display: none;">
```

```
<thead>

  <tr>

    <th>Name</th>

    <th>Age</th>

    <th>City</th>

  </tr>

</thead>

<tbody></tbody>

</table>


<script>

$(document).ready(function() {

  // Fetch data on button click

  $('#fetchData').click(function() {

    $.ajax({

      url: 'data.json', // URL of the JSON file or API endpoint

      type: 'GET', // HTTP method

      dataType: 'json', // Expected data type

      success: function(data) {

        const tableBody = $('#dataTable tbody');

        tableBody.empty(); // Clear previous data

        data.forEach(item => {

          tableBody.append(`<tr><td>${item.name}</td><td>${item.age}</td><td>${item.city}</td></tr>`);

        });

        $('#dataTable').show(); // Show the table

      },

      error: function() {

        alert('Error fetching data.');
```

AJAX Example

Fetch Data

Name	Age	City
Sasank	22	Kathmandu
Sajan	21	Kathmandu
Oban	22	Kathmandu

13. Create a simple XML element .

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<book><title>Introduction to XML</title> <author>Sasank Lama</author>
```

```
<publicationYear>2019</publicationYear>
```

```
</book>
```



14. Create an XML document that conforms to the following DTD.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!DOCTYPE Report SYSTEM "report.dtd">
```

```
<Report>
```

<Students>

<Student StudId="s1">

<Name>

<First>Sasank </First>

<Last>Lama</Last>

</Name>

<Status>Enrolled</Status>

<CrsTaken CrsCode="c1"/>

<CrsTaken CrsCode="c2"/>

</Student>

<Student StudId="s2">

<Name>

<First>Sandeep</First>

<Last>Shrestha</Last>

</Name>

<Status>Graduated</Status>

<CrsTaken CrsCode="c1"/>

</Student>

</Students>

<Classes>

<Class>

<Semester>Fall 2022</Semester>

<ClassRoster Members="s1 s2"/>

</Class>

</Classes>

<Courses>

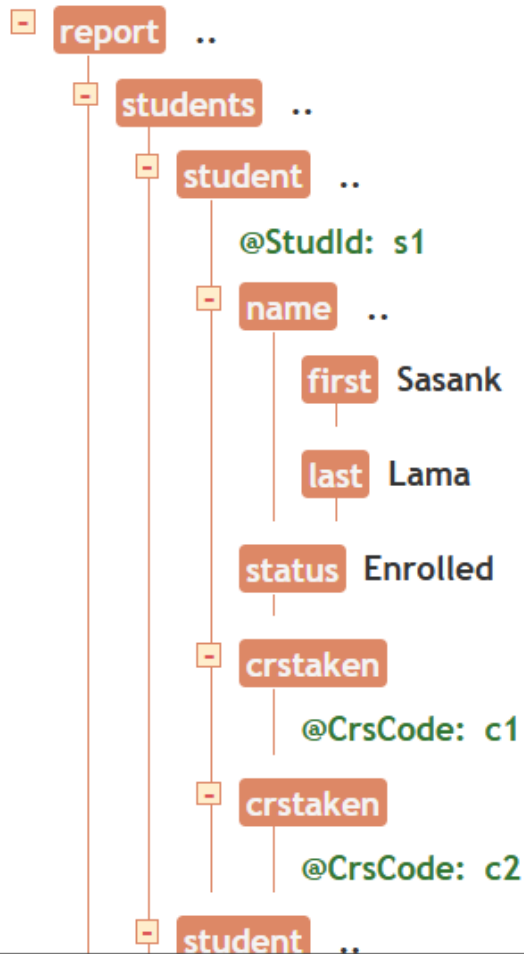
<Course CrsCode="c1">Computer Science</Course>

<Course CrsCode="c2">Mathematics</Course>

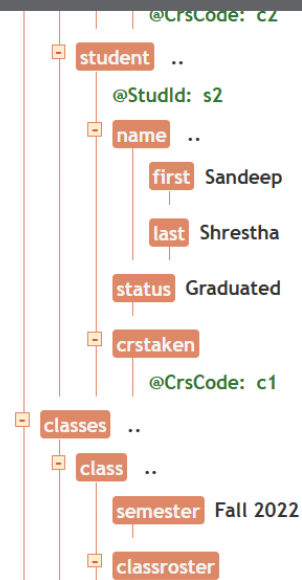
</Courses>

</Report>

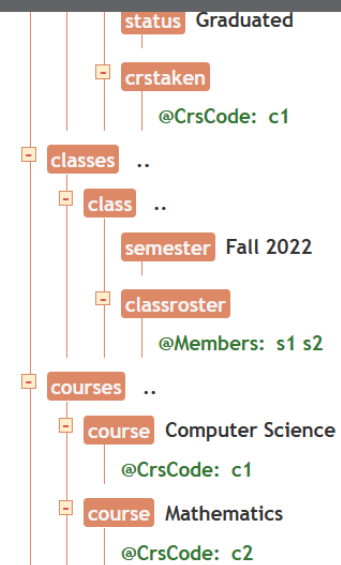
Output



Output



Output



15. Create a XML document with simple and complex type.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<library xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="library.xsd">
```

```
<!-- Simple Type Example -->
```

```
<book>
```

```
<title>Introduction to XML</title>
```

```
<author>Sasank Lama</author>
```

```
<publicationYear>2019</publicationYear>
```

```
<price>25$</price>
```

```
</book>
```

```
<!-- Complex Type Example -->
```

```

<bookstore>

  <book>

    <title>WebDevelopment Basics</title>

    <author>Ram bahadur</author>

    <publicationYear>2021</publicationYear>

    <details>

      <genre>Programming</genre>

      <pages>300</pages>

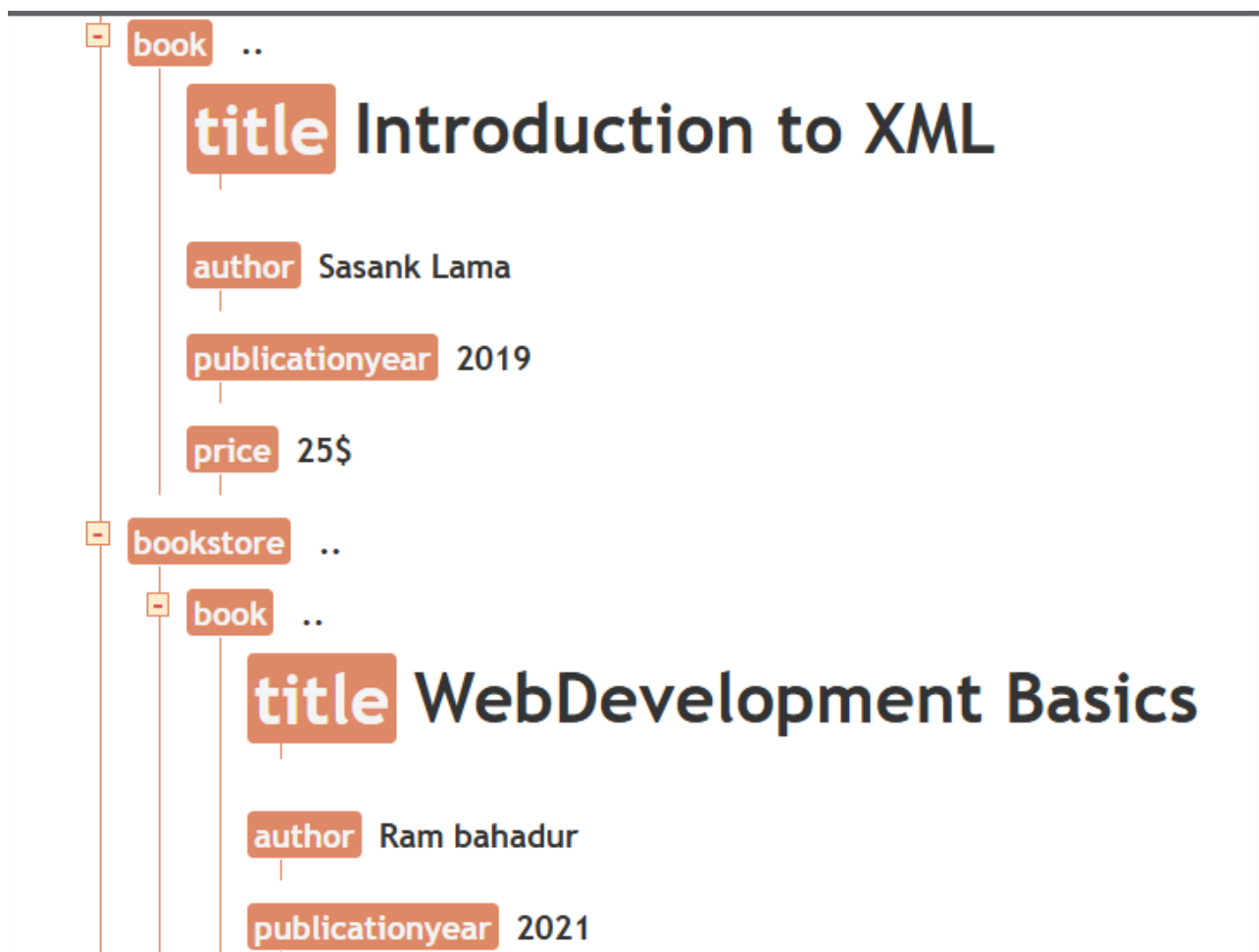
    </details>

  </book>

</bookstore>

</library>

```



16. How XSLT is used to transform the XML document? Illustrate with example .

```

<?xml version="1.0" encoding="UTF-8"?> <library> <book> <title>Six of Crows</title>
<author>Holly</author> </book> <book> <title>The Song of Achilles</title>

```

```
<author>Idk</author> </book> </library>
```

```
lab.html <html> <head> <title>Qn.16</title> </head> <body> <h1>List</h1> <ul> <li> <strong>Title:</strong> Six  
if Crows<br /> <strong>Author:</strong> Holly </li> <li>
```

```
<strong>Title:</strong> The song of Achilles<br /> <strong>Author:</strong> Idk </li>
```

```
</ul> </body></html>
```

transform.xslt

```
<?xml version="1.0" encoding="UTF-8"?> <xsl:stylesheet version="1.0"
```

```
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"> <xsl:template match="/"> <html> <head> <title>List</title>  
</head> <body> <h1>List</h1> <ul> <xsl:apply-templates select="library/book"/> </ul> </body> </html>
```

```
</xsl:template> <xsl:template match="book"> <li> <strong>Title:</strong> <xsl:value-of select="title"/><br/>
```

```
<strong>Author:</strong> <xsl:value-of select="author"/> </li>
```

```
</xsl:template></xsl:stylesheet>
```

Kabir

List

- **Title:** way of living
Author: Rampal ji maharaj
- **Title:** Gyan ganga
Author: Kabir


LAB 4 (PHP)

1. Write a simple PHP script that prints "Hello, PHP!" to the browser .

```
<?php
Echo "Name: Sasank Lama

echo "Hello, PHP!";

?>
```



```
Name: Sasank Lama
Hello, PHP!
```

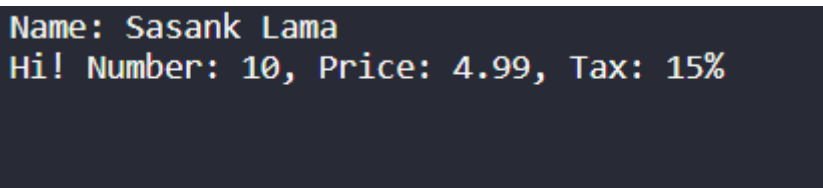
2. Declare variables of different data types (integer, float, string) and demonstrate the usage of constants in PHP .

```
<?php
echo "Name: Sasank Lama\n";
$num = 10;    // Integer
$price = 4.99; // Float
$text = "Hi";  // String

// Constants
define("TAX_RATE", 0.15);

// Output
echo "$text! Number: $num, Price: $price, Tax: " . (TAX_RATE * 100) . "%";

?>
```



```
Name: Sasank Lama
Hi! Number: 10, Price: 4.99, Tax: 15%
```

3. Create a PHP program that uses if-else statements to check if a number is positive, negative, or zero. Utilize different operators for comparison .

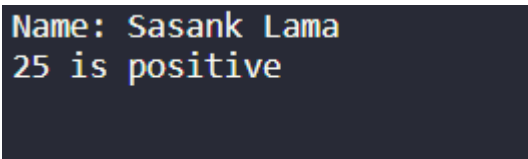
```
<?php

echo "Name: Sasank Lama\n";

$number = 25; // Change this value to test different numbers
```



```
if ($number > 0) {  
  
    echo "$number is positive";  
  
} elseif ($number < 0) {  
  
    echo "$number is negative";  
  
} else {  
  
    echo "The number is zero";  
  
}  
  
?>
```



```
Name: Sasank Lama  
25 is positive
```

4. Develop a function that calculates the average of an array of numbers. Test the function with various arrays •

```
<?php  
  
echo "Name: Sasank Lama \n";  
  
// Function to calculate average  
  
function calculateAverage(array $numbers): float {  
  
    if (empty($numbers)) return 0; // Handle empty array  
  
    $sum = array_sum($numbers);  
  
    $count = count($numbers);  
  
    return $sum / $count;  
  
}  
  
// Test Cases  
  
$test1 = [10, 20, 30];    // Average: 20  
  
$test2 = [0, 0, 0, 0];    // Average: 0  
  
$test3 = [-5, 0, 5];      // Average: 0  
  
$test4 = [1.5, 2.5, 3.5]; // Average: 2.5
```

```

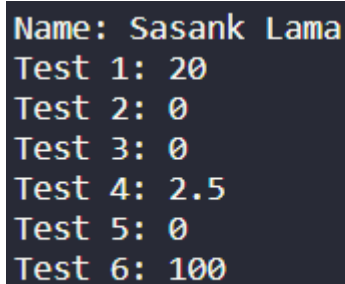
$test5 = [];           // Average: 0 (handled)

$test6 = [100];        // Average: 100 (single element)


echo "Test 1: " . calculateAverage($test1) . "\n";
echo "Test 2: " . calculateAverage($test2) . "\n";
echo "Test 3: " . calculateAverage($test3) . "\n";
echo "Test 4: " . calculateAverage($test4) . "\n";
echo "Test 5: " . calculateAverage($test5) . "\n";
echo "Test 6: " . calculateAverage($test6) . "\n";

?>

```



```

Name: Sasank Lama
Test 1: 20
Test 2: 0
Test 3: 0
Test 4: 2.5
Test 5: 0
Test 6: 100

```

5. Define a PHP class representing a "Book" with properties like title and author. Create objects of this class and display their attributes.

```

<?php

echo "Name: Sasank Lama\n";

class Book {

    // Properties

    public $title;

    public $author;

    // Constructor

    public function __construct($title, $author) {

        $this->title = $title;

        $this->author = $author;
    }
}

```

```

    }

// Method to display book details

    public function displayInfo() {

        return "Book: '{$this->title}' by {$this->author}";

    }

}

// Create book objects

$book1 = new Book("The Great Gatsby", "F. Scott Fitzgerald");

$book2 = new Book("1984", "George Orwell");

// Display book information

echo $book1->displayInfo() . "\n"; // Book: 'The Great Gatsby' by F. Scott Fitzgerald

echo $book2->displayInfo();      // Book: '1984' by George Orwell

?>

```

```

Name: Sasank Lama
Book: 'The Great Gatsby' by F. Scott Fitzgerald
Book: '1984' by George Orwell

```

6. Design a simple HTML form with input fields. Create a PHP script that retrieves and displays the form data when submitted. •

```

<html>

<head> <title>Q.6 Form retrieval</title>

</head>

<body> <form method="post" action="#">

    <input type="text" name="username" placeholder="Username">

    <input type="submit" value="Submit">

</form>

</body>

</html> <?php if ($_SERVER["REQUEST_METHOD"] == "POST") {

```

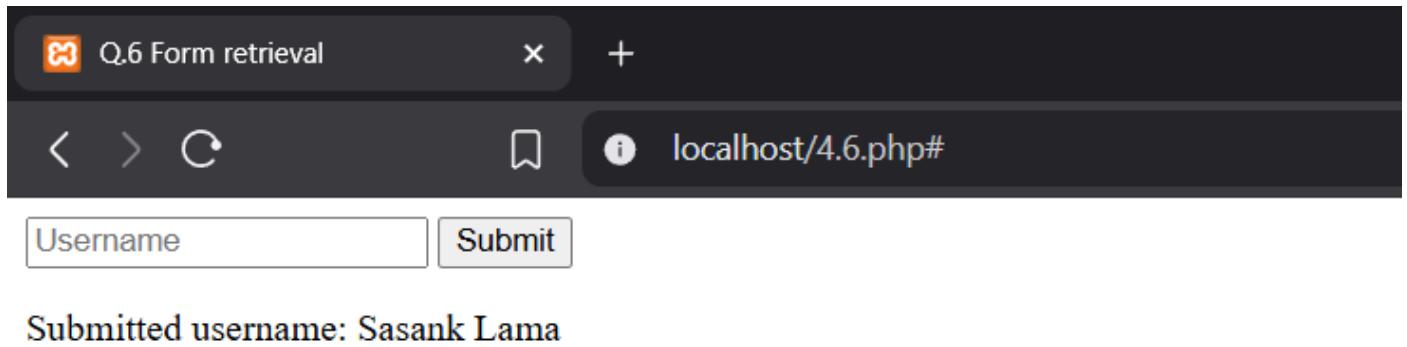
```

$username = $_POST["username"];    echo "Submitted username: $username";

}

?>

```



7.Enhance the previous form with PHP validation. Ensure that required fields are filled, and validate email addresses and make sure the phone number starts with 98 or 97 using regex .

```

<?php if ($_SERVER["REQUEST_METHOD"] == "POST") {

    $username = $_POST["username"];

    $email = $_POST["email"];

    $phone = $_POST["phone"];

    if (empty($username) || empty($email) || empty($phone)) {        echo "All fields are required.";

    } elseif (!filter_var($email, FILTER_VALIDATE_EMAIL)) {        echo "Invalid email address.";

    } elseif (!preg_match("/^(98|97)/", $phone)) {        echo "Phone number must start with 98 or 97.";

    } else {        echo "Form data validated successfully!";    } } ?>

<html>

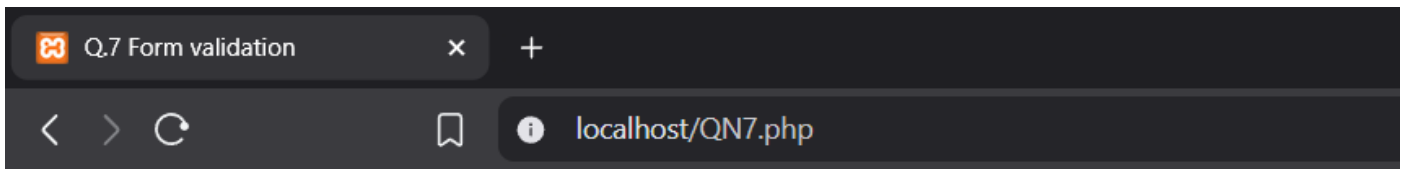
<head><title>Q.7 Form validation</title></head>

<body>

<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>">

<input type="text" name="username" placeholder="Username"> <input type="text" name="email"
placeholder="Email"> <input type="text" name="phone" placeholder="Phone"> <input type="submit"
value="Submit"> </form> </body> </html>

```



Form data validated successfully!

8. Implement PHP code that responds to a button click event on a form. Display a message when the button is clicked .

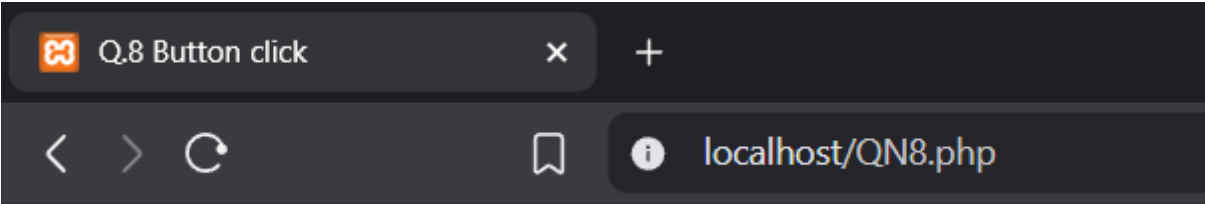
```
<html>

<head><title>Q.8 Button click</title>

</head>

<form method="post"> <input type="submit" name="submitBtn" value="Click me"> </form>

</html> <?php if (isset($_POST["submitBtn"])) {   echo "Button clicked!"; } ?>
```



Button clicked!

9.Create a PHP script that sets a cookie with user preferences.Retrieve and display this information on subsequent visits •

```
<?php

// Set cookie (if not already set)

if (!isset($_COOKIE['prefs'])) {

    setcookie('prefs', 'dark_theme', time()+3600); // 1 hour expiry

}

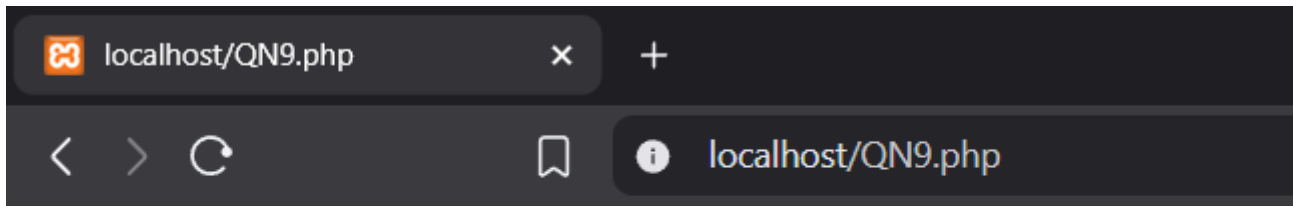

// Check and display

echo isset($_COOKIE['prefs'])
```

```
? "Your preference: " . $_COOKIE['prefs']
```

```
: "First visit! Setting cookie...";
```

```
?>
```



First visit! Setting cookie...

10. Build a form with various elements (textboxes, checkboxes, radio buttons). Use PHP to access and display the selected values .

```
<html>
```

```
<html>
```

```
<head> <title>PHP Form</title> </head>
```

```
<body> <h2>PHP Form Example</h2>
```

```
<?php if ($_SERVER["REQUEST_METHOD"] == "POST") { $name = $_POST["name"]; $email =  
$_POST["email"]; $gender = $_POST["gender"]; $interests = isset($_POST["interests"]) ?  
$_POST["interests"] : []; echo "<h3>Form Submission Results</h3>"; echo "Name:  
$name<br/>"; echo "Email: $email<br/>"; echo "Gender: $gender<br/>"; if  
(!empty($interests)) { echo "Interests: " . implode(" ", $interests) . "<br/>"; } else {echo "No  
interests selected.<br/>"; } }
```

```
?>
```

```
<form action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>" method="post">
```

```
<label for="name">Name:</label> <input type="text" name="name" id="name" required> <br>
```

```
<label for="email">Email:</label><input type="email" name="email" id="email" required><br>
```

```
<label>Gender:</label><input type="radio" name="gender" value="male" id="male">
```

```
<label for="male">Male</label> <input type="radio" name="gender" value="female" id="female">
```

```
<label for="female">Female</label> <br> <label>Interests:</label>
```

```
<input type="checkbox" name="interests[]" value="programming" id="programming">
```

```
<label for="programming">Programming</label>
```

```
<input type="checkbox" name="interests[]" value="reading" id="reading">
```

```
<label for="reading">Reading</label>
```

```
<input type="checkbox" name="interests[]" value="traveling" id="traveling">
```

```
<label for="traveling">Traveling</label>
```

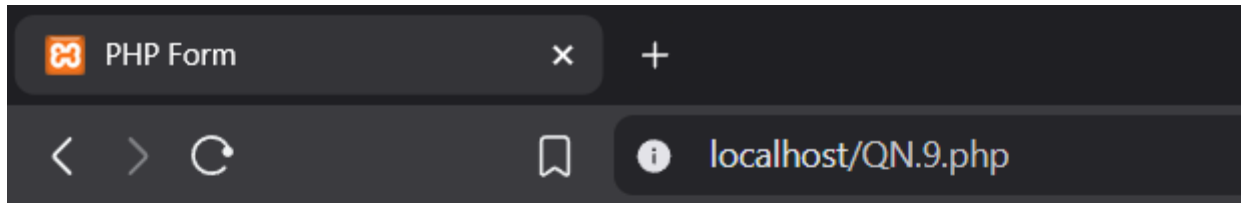
```
<br>

<input type="submit" value="Submit">

</form>

</body>

</html>
```



PHP Form Example

Form Submission Results

Name: Sasank
Email: sasanklama098@gmail.com
Gender: male
Interests: programming
Name:
Email:
Gender: ☐ Male ☐ Female
Interests: ☐ Programming ☐ Reading ☐ Traveling

11. Develop a PHP script that reads content from a text file, modifies it, and then writes the updated content back to the file .

```
<?php

// File path

$filename = "example.txt";


// Writing to the file

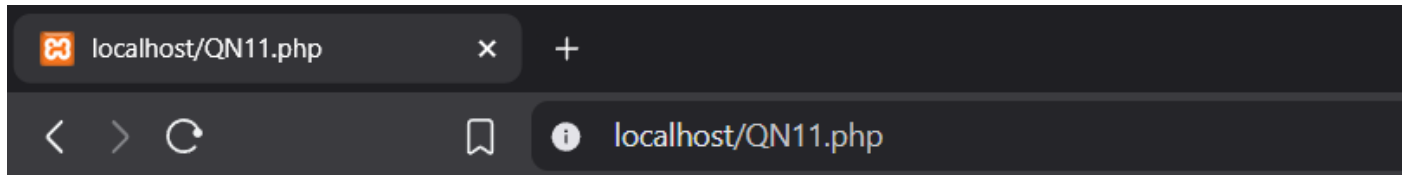
$dataToWrite = "Hello, this is a sample text.";

file_put_contents($filename, $dataToWrite);
```

```
// Reading from the file

if (file_exists($filename)) {
    $fileContents = file_get_contents($filename);
    echo "File Contents: " . $fileContents;
} else {
    echo "File does not exist.";
}

?>
```



File Contents: Hello, this is a sample text.

File updated successfully