



Maharaja Education Trust (R), Mysuru

**Maharaja Institute of Technology Mysore**

Belawadi, Sriranga Pattana Taluk, Mandya – 571 477



Approved by AICTE, New Delhi,  
Affiliated to VTU, Belagavi & Recognized by Government of Karnataka



**Lab Manual Of**  
**Web Programming**  
**(21CSL481)**



**Department of Information Science and Engineering**



## **Maharaja Institute of Technology Mysore**

### **Department of Information Science and Engineering**



#### **VISION OF THE DEPARTMENT**

To be recognized as the best centre for technical education and research in the field of information science and engineering.

#### **MISSION OF THE DEPARTMENT**

- To facilitate adequate transformation in students through a proficient teaching learning process with the guidance of mentors and all-inclusive professional activities.
- To infuse students with professional, ethical and leadership attributes through industry collaboration and alumni affiliation.
- To enhance research and entrepreneurship in associated domains and to facilitate real time problem solving.
- 

#### **PROGRAM EDUCATIONAL OBJECTIVES:**

- Proficiency in being an IT professional, capable of providing genuine solutions to information science problems.
- Capable of using basic concepts and skills of science and IT disciplines to pursue greater competencies through higher education.
- Exhibit relevant professional skills and learned involvement to match the requirements of technological trends.

#### **PROGRAM SPECIFIC OUTCOME:**

Student will be able to

- **PSO1:** Apply the principles of theoretical foundations, data Organizations, networking concepts and data analytical methods in the evolving technologies.
- **PSO2:** Analyse proficient algorithms to develop software and hardware competence in both professional and industrial areas



# Maharaja Institute of Technology Mysore

## Department of Information Science and Engineering



### Program Outcomes

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



**Maharaja Institute of Technology Mysore**  
**Department of Information Science and Engineering**



**Course Overview**

**SUBJECT: WEB PROGRAMMING**

**SUBJECT CODE: 21CS481**

Web development typically refers to the coding and programming side of website production. When you learn web development, you might start out writing a simple page of HTML text and build up to creating more complex, feature-rich applications designed to be accessed from various Internet-connected devices. Examples of feature-rich web development include e-commerce websites, content management systems (CMS), and social networks. Common programming languages and software web developers may use include Hypertext Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, o become a Web Developer, There must be an understanding of HTML, CSS, and JavaScript. It is also recommended to learn about CSS and CSS frameworks. Developing these fundamental web development skills will give the foundation and logic for communicating with programming languages.

**Course Objectives**

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

**Course Outcomes**

CO's	DESCRIPTION OF THE OUTCOMES
21CSL481.1	Describe the fundamentals of web and concept of HTML.
21CSL481.1	Use the concepts of HTML, XHTML to construct the web pages.
21CSL481.1	Interpret CSS for dynamic documents.
21CSL481.1	Evaluate different concepts of JavaScript & Construct dynamic documents.
21CSL481.1	Design a small project with JavaScript and XHTML



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**Department of Information Science and Engineering**



**Syllabus**

**SUBJECT: WEB PROGRAMMING**

**SUBJECT CODE: 21CS481**

Topics Covered as per Syllabus	Teaching Hours
<b>MODULE-1: Introduction to WEB Programming:</b>	
Internet, WWW, Web Browsers, and Web Servers, URLs, MIME, HTTP, Security, The Web Programmers Toolbox.	
<b>MODULE-2: HTML and XHTML</b>	
Origins of HTML and XHTML, Basic syntax, Standard XHTML document structure, Basic text markup, Images, Hypertext Links, Lists, Tables. Forms, Frames in HTML and XHTML, Syntactic differences between HTML and XHTML.	
<b>MODULE -3: LINKED LIST</b>	
<b>CSS:</b> Introduction, Levels of style sheets, Style specification formats, Selector forms, Property value forms, Font properties, List properties, Color, Alignment of text, Background images, tags.	
<b>MODULE-4: Java Script – I</b>	
Object orientation and JavaScript; General syntactic characteristics; Primitives Operations, and expressions; Screen output and keyboard input.	
<b>MODULE-5: Java Script – II</b>	
Control statements, Object creation and Modification; Arrays; Functions; Constructor; Pattern matching using expressions; Errors, Element access in JavaScript.	
<b>List of Text Books</b>	
1. Textbooks 1. Robert W Sebesta, “Programming the World Wide Web”, 6th Edition, Pearson Education, 2008.	
<b>List of Reference Books</b>	
1. 1. M.Deitel, P.J.Deitel, A.B.Goldberg, “Internet & World Wide Web How to program”, 3rd Edition, Pearson Education / PHI, 2004. 2. 2. Chris Bates, “Web Programming Building Internet Applications”, 3rd Edition, Wiley India, 2006. 3. 3. Xue Bai et al, “The Web Warrior Guide to Web Programming”, Thomson, 2003. 4. 4. Sklar, “The Web Warrior Guide to Web Design Technologies”, 1st Edition, Cengage Learning India	
<b>List of URLs, Text Books, Notes, Multimedia Content, etc</b>	
1. Fundamentals of WEB Programming: <a href="https://www.youtube.com/watch?v=DR9dr6gxhDM">https://www.youtube.com/watch?v=DR9dr6gxhDM</a> 2. HTML and XHTML: <a href="https://www.youtube.com/watch?v=A1XIIDDxgwg">https://www.youtube.com/watch?v=A1XIIDDxgwg</a> 3. CSS: <a href="https://www.youtube.com/watch?v=J35jug1uHzE">https://www.youtube.com/watch?v=J35jug1uHzE</a> 4. Java Script and HTML Documents: <a href="https://www.youtube.com/watch?v=Gd0RBdFRvF0">https://www.youtube.com/watch?v=Gd0RBdFRvF0</a> 5. Dynamic Documents with JavaScript: <a href="https://www.youtube.com/watch?v=HTFSIJALNKc">https://www.youtube.com/watch?v=HTFSIJALNKc</a>	



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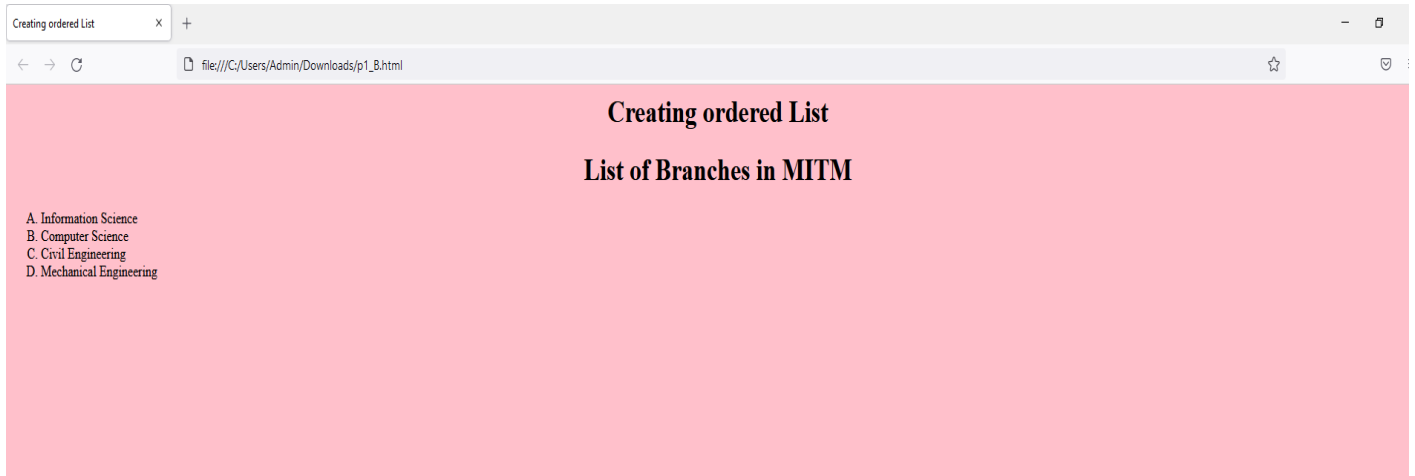
**Index**

- 1. Write a HTML program for the demonstration of Lists.**
  - a. Unordered List
  - b. Ordered List
  - c. Definition List
  - d. Nested List
- 2. Create a web page which defines all text formatting tags of HTML in tabular format**
- 3. Write a HTML program for demonstrating Hyperlinks.**
  - a. Navigation from one page to another.
  - b. Navigation within the page.
- 4. Write a HTML program to develop a static Login Page**
- 5. Write HTML for demonstration of cascading stylesheets.**
  - a. Embedded stylesheets.
  - b. External stylesheets.
  - c. Inline stylesheet.
- 6. Write a javascript program to find a factorial of a number.**
- 7. Write a program to demonstrate control statements in JavaScript:**
  - (a) Fibonacci series
  - (b) To check whether a number is odd or even
- 8. Write a program to demonstrate Element Access in JavaScript.**

**1. Write a HTML program for the demonstration of Lists.****a. Unordered List****b. Ordered List****c. Definition List****d. Nested List****(a) ordered List**

```
<html>
<head>
    <title>Creating ordered List</title>
</head>
<body bgcolor="pink">
<h1 align="center">Creating ordered List</h1>
<h1 align="center">List of Branches in MITM</h1>
<ol type="A">
<li>Information Science</li>
<li>Computer Science</li>
<li>Civil Engineering</li>
<li>Mechanical Engineering</li>
</ol>
</body>
</html>
```

## Output:

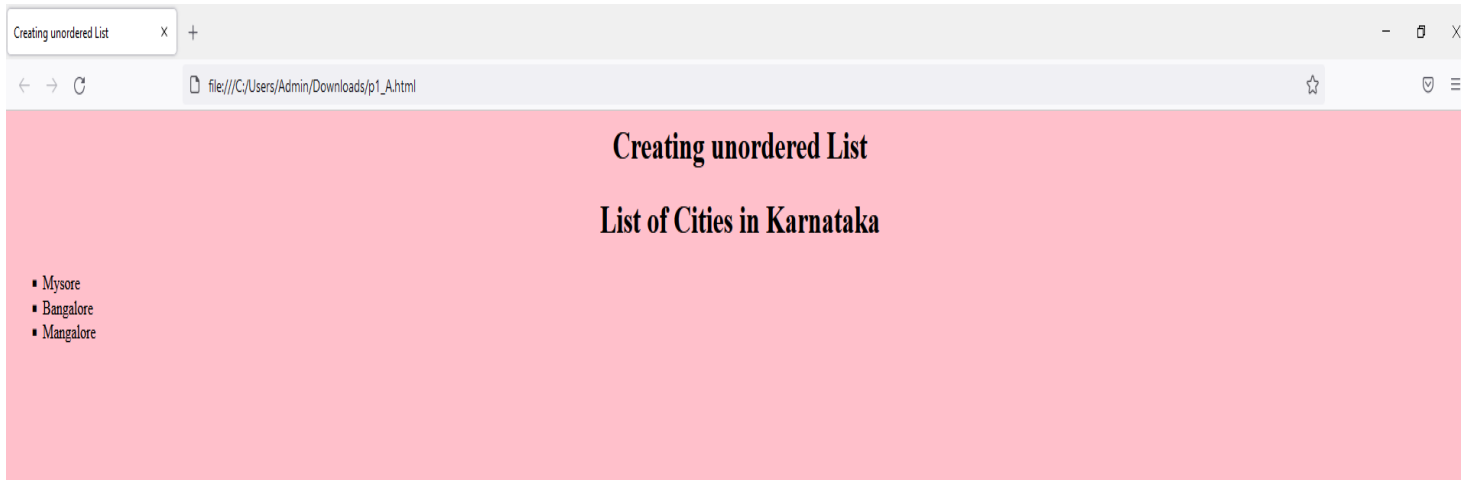


## (b)Unordered List

```
<html>
<head>
    <title>Creating unordered List</title>
</head>
<body bgcolor="pink">
<h1 align="center">Creating unordered List</h1>
<h1 align="center">List of Cities in Karnataka</h1>
<ul type="square">
<li>Mysore</li>
<li>Bangalore</li>
<li>Mangalore</li>
</ul>
</body>
</html>
```



## Output:



## (c) Definition List

```
<html>
```

```
<head>
```

```
<title>Creating Definition List</title>
```

```
</head>
```

```
<body bgcolor="green">
```

```
<h1 align="center">Definition List</h1>
```

```
<dl>
```

```
<dt>CSE</dt>
```

```
<dd>Computer Science & Engineering</dd>
```

```
<dt>ECE</dt>
```

```
<dd>Electronics & Communication Engineering</dd>
```

```
<dt>IT</dt>
```

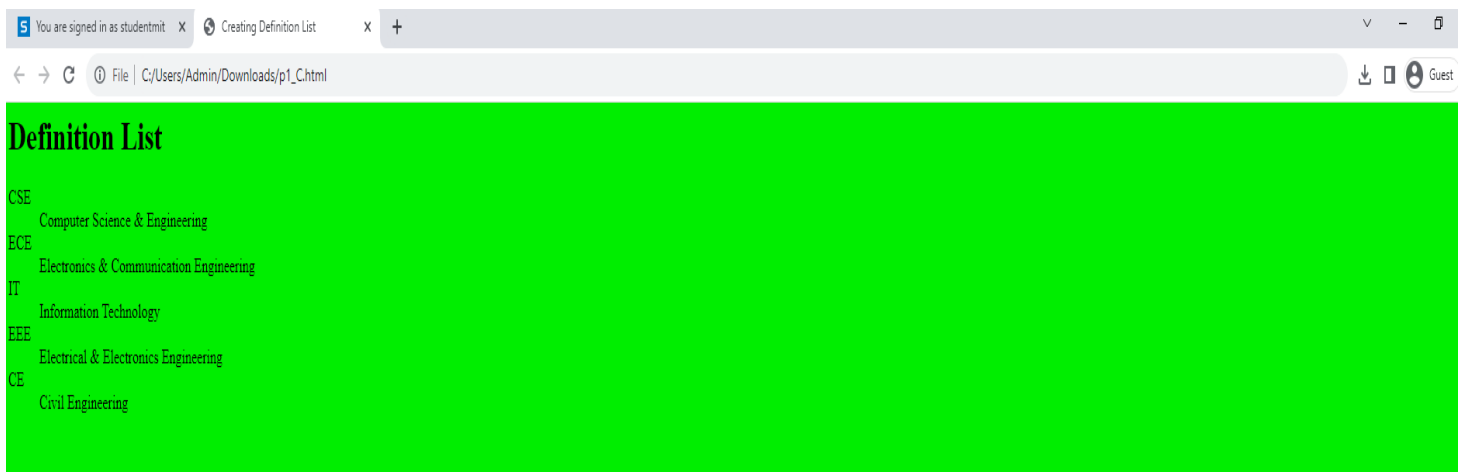
```
<dd>Information Technology</dd>
```

```
<dt>EEE</dt>
```

```
<dd>Electrical & Electronics Engineering</dd>
```

```
<dt>CE</dt>
    <dd>Civil Engineering</dd>
</dl>
</body>
</html>
```

## Output:

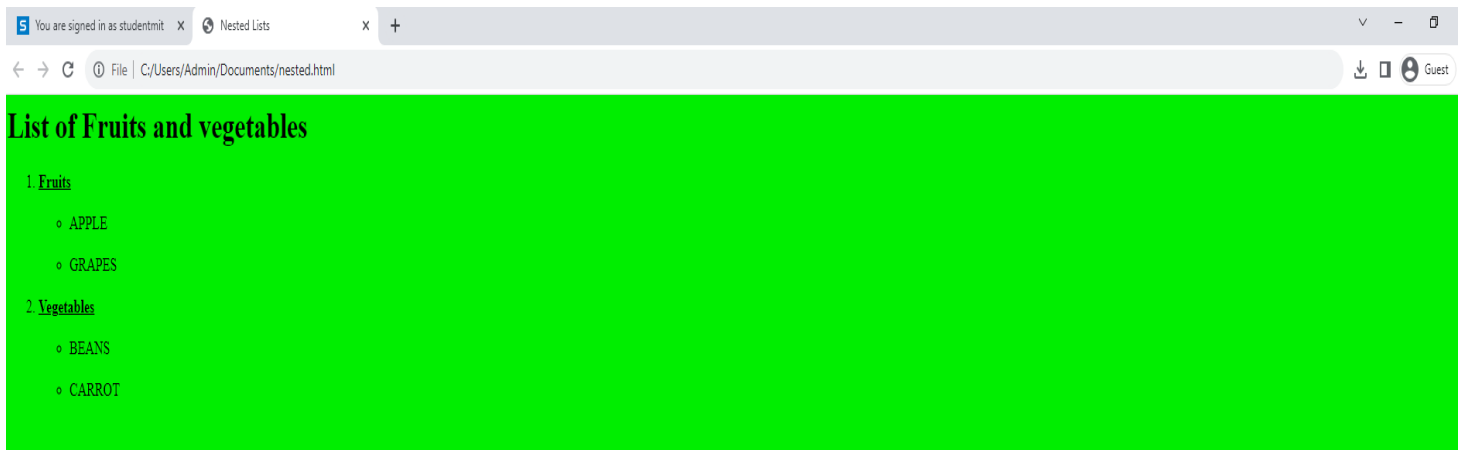


## (d)Nested List

```
<html>
<head>
<title>Nested Lists</title>
</head>
<body bgcolor="green">
<h1 align="center">List of Fruits and vegetables</h1>
<ol>
<li>Fruits</li>
<ul>
<li>APPLE</li>
```

```
<li>GRAPES</li>
</ul>
<li>Vegetables</li>
<ul>
<li>BEANS</li>
<li>CARROT</li>
</ul>
</ol>
</body>
</html>
```

### Output:



## 2.Create a web page which defines all text formatting tags of HTML in tabular format

```
<html>
<head>
    <title>Text Formatting Tags</title>
</head>
<body bgcolor="pink">
```

<center>

<table border=1>

<caption align="top"><font size="+2" color="red">TEXT FORMATTING  
TAGS</font>

</caption>

<tr>

<th>HTML TAGS</th>

<th>Output</th>

</tr>

<tr>

<td>Normal Text</td>

<td>Hello World..!</td>

</tr>

<tr>

<td>Font & its Attributes</td>

<td><font size="+2" color="blue">Hello World</font></td>

</tr>

<tr>

<td>Bold</td>

<td><b>Hello World</b></td>

</tr>

<tr>

<td>Italic</td>

<td><i>Hello World</i></td>

</tr>

<tr>

<td>Underline</td>

<td><u>Hello World</u></td>

</tr>

<tr>

<td>Emphasis</td>

<td><em>Hello World</em></td>

</tr>

<tr>

<td>Strike Through</td>

<td><strike>Strike Through</strike></td>

</tr>

<tr>

<td>In Big Font</td>

<td><big>Text in Big font size</big></td>

</tr>

<tr>

<td>In Small Font</td>

<td><small>Text in small font</small></td>

</tr>

<tr>

<td>Subscript</td>

<td>a<sub>b</sub></td>

</tr>

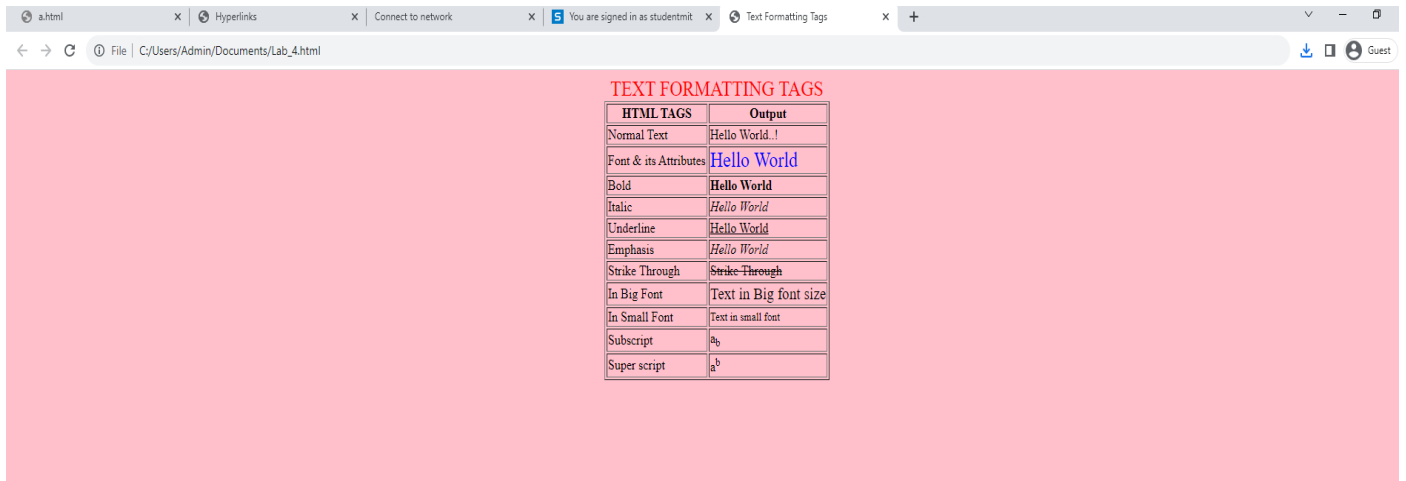
<tr>

<td>Super script</td>

<td>a<sup>b</sup></td>

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

### Output:



### 3. Write a HTML program for demonstrating Hyperlinks.

- Navigation from one page to another.
- Navigation within the page.

#### a. Navigation from one page to another.

##### Hyperlink.html

```
<html>
<head>
    <title>Hyperlink Demo</title>
</head>
<body bgcolor="pink">
<center>
```

```
<h1>HYPERLINK Using Anchor Tag</h1>
```

```
<a href="a.html"><br>Click here</a>
```

```
</center>
```

```
</body>
```

```
</html>
```

**a.html**

```
<html>
```

```
<head>
```

```
<title>Hyperlinks</title>
```

```
</head>
```

```
<body bgcolor="blue">
```

```
<p>
```

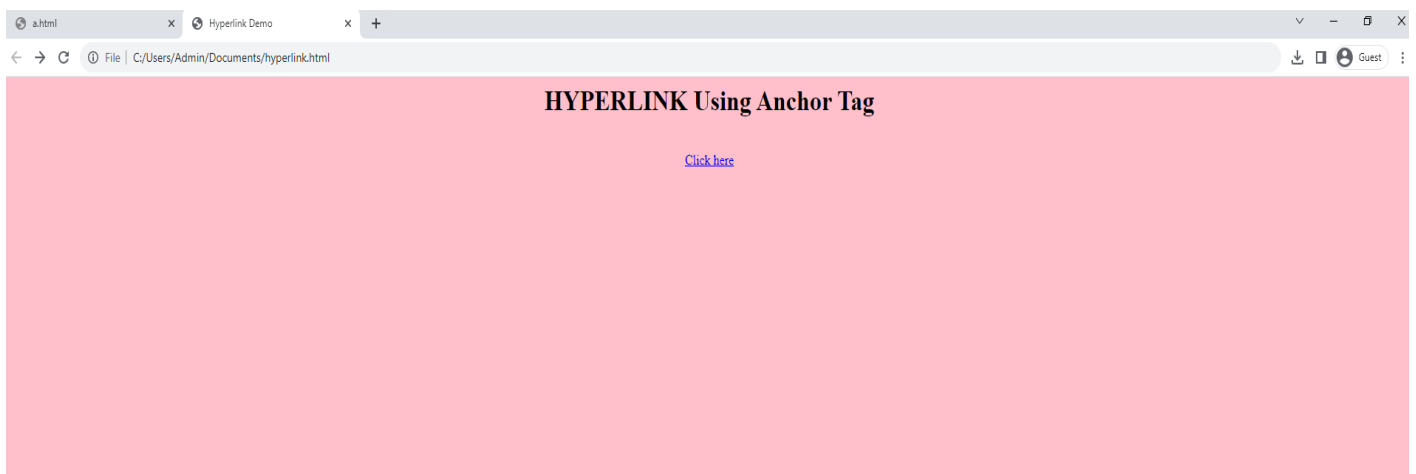
```
<h1>Welcome to new web page</h1>
```

```
</p>
```

```
</body>
```

```
</html>
```

**Output:**





**b. Navigation within the page.**

**<html>**

## <head>

## Nested Lists

&lt;/head&gt;

**<body bgcolor="pink">**

# Linking to a section in a page

**<a name="top">This is the top of the page</a>**

**Click here to goto [bottom](#bottom) of the page**

[illegible][illegible]

**<a name="bottom">This is the bottom of the page</a>**



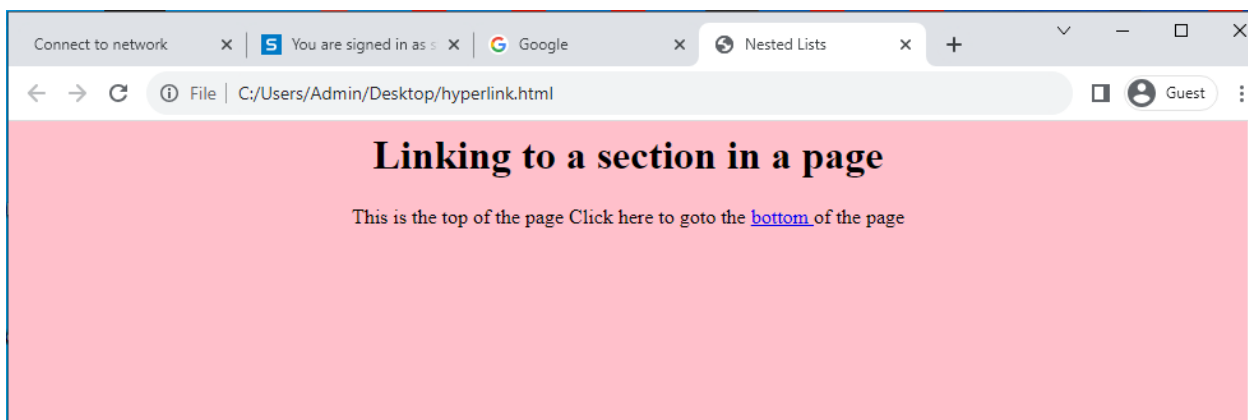
Click here to goto <a href=#top>top</a> of the page

</center>

</body>

</html>

**Output:**



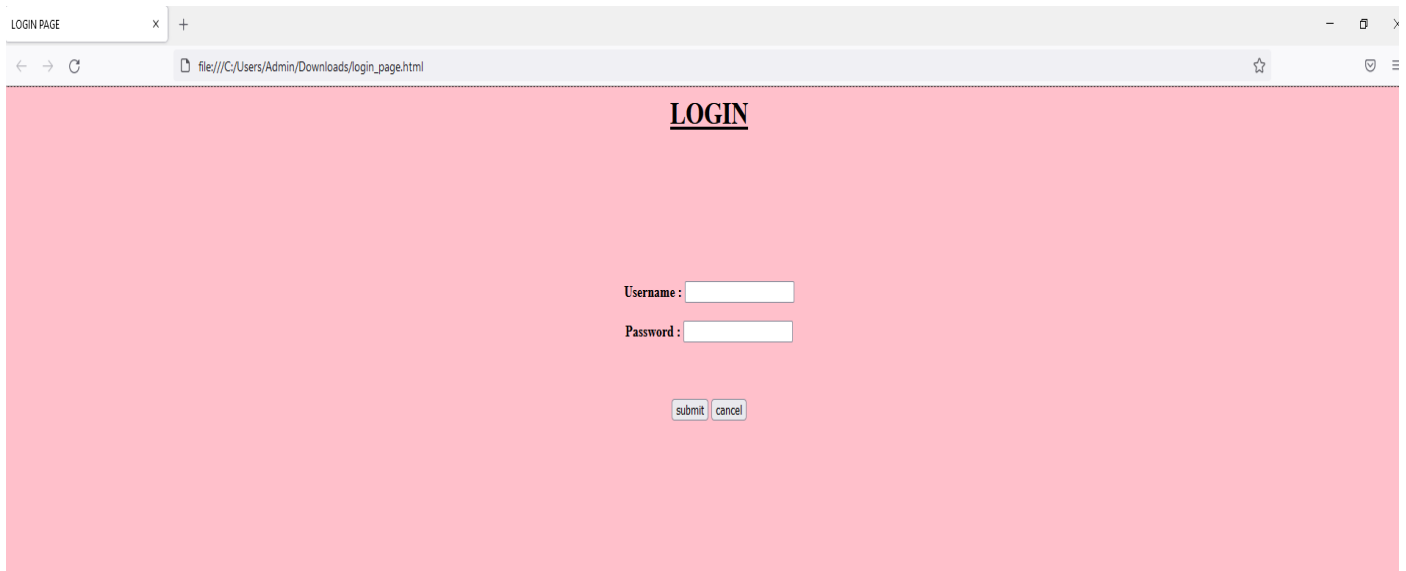
**4. Write a HTML program to develop a static Login Page**

<html>

<head>

```
<title>LOGIN PAGE</title>
</head>
<body bgcolor="pink">
<h1 align="center"><u>LOGIN</u></h1>
<br><br><br><br><br><br>
<h4>
<center>
Username :
<input type="text"><br><br>
Password :
<input type="password"><br><br><br>
</h4>
</center>
<center>
<input type="submit" value="submit">
<input type="reset" value="cancel">
</center>
</body>
</html>
```

## Output:



## 5. Write HTML for demonstration of cascading stylesheets.

a. Inline stylesheets.

b. Embedded stylesheets.

c. External styles.

### (a)Inline CSS

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
body {
```

```
    background-color: linen;
```

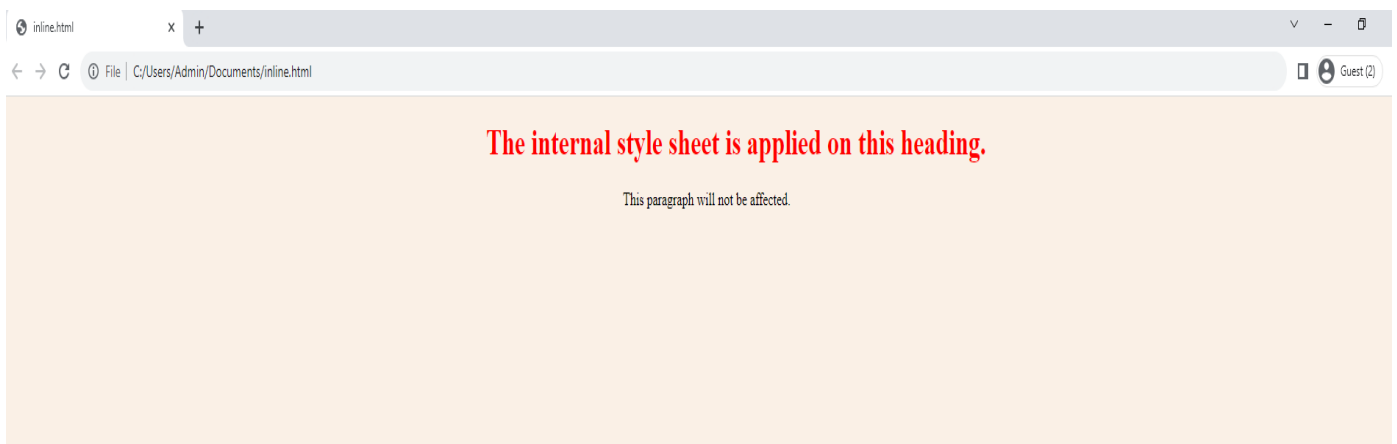
```
}
```

```
h1 {
```

```
    color: red;
```

```
margin-left: 80px;
}
</style>
</head>
<body> <center>
<h1>The internal style sheet is applied on this heading.</h1>
<p>This paragraph will not be affected.</p>
</center>
</body>
</html>
```

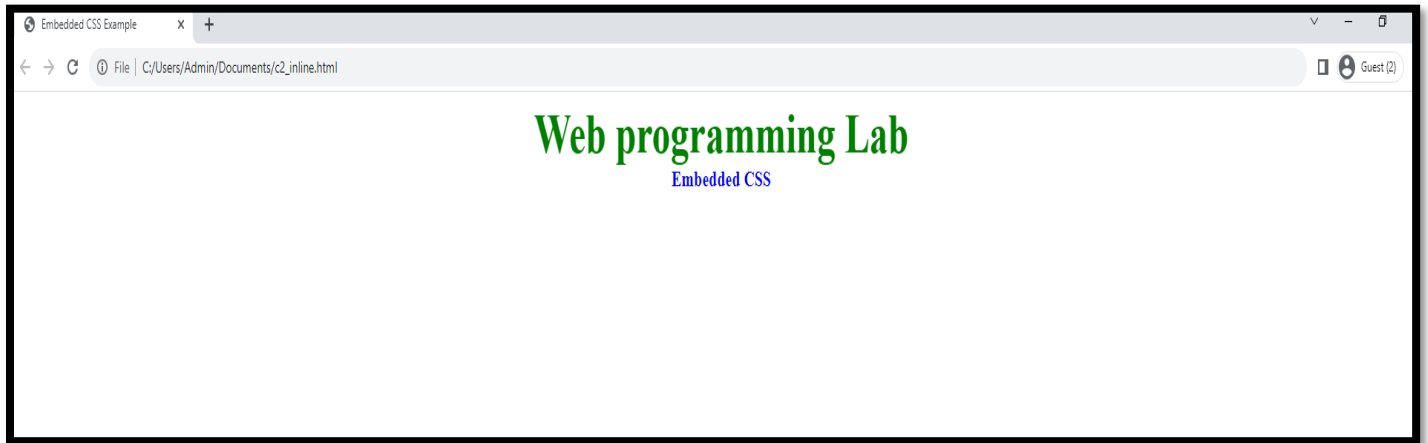
### Output:



### (b)Embedded CSS

```
<html>
<head>
<title>Embedded Style sheets</title>
<style type="text/css">
body {
background-color:"green";
```

```
}  
h1  
{  
color:orange;  
text-align:  
center;  
}  
p {  
font-family: "Times  
New Roman";  
font-size: 20px;  
}  
</style>  
</head>  
<body>  
<h1>Embedded Style Sheets</h1><br>  
<p>This is a paragraph  
</body>  
</html>
```

**Output:****(c)External CSS****External.html**

```
<!DOCTYPE html>

<html>

<head>

<title>External CSS Example</title>

<link rel="stylesheet" href="s1.css"/>

</head>

<body>

    <div class="main">

        <div class="m2"> CSS TYPE:</div>

        <div id="m3"> EXTERNAL CSS</div>

    </div>

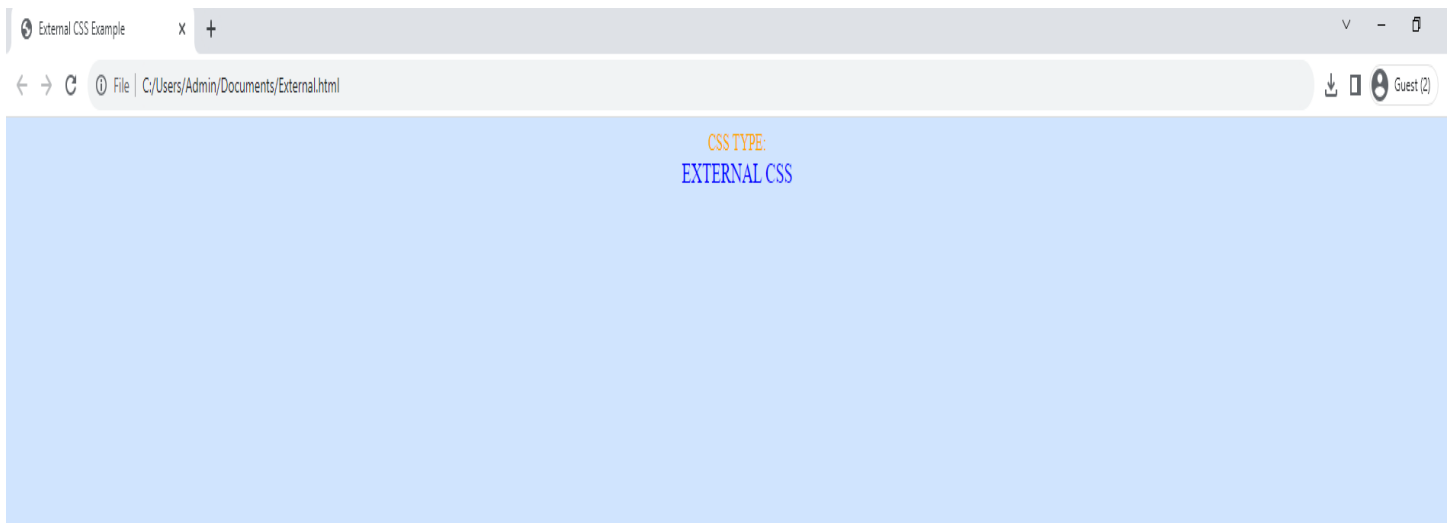
</body>

</html>
```

**s1.css**

```
body {
```

```
background-color: #d0e4fe;
}
.m2 {
color: orange;
text-align: center;
}
#m3 {
font-family: "Times New Roman";
font-size: 20px;
text-align: center;
color:blue;
}
```

**Output:****6. Write a javascript program to find a factorial of a number.**

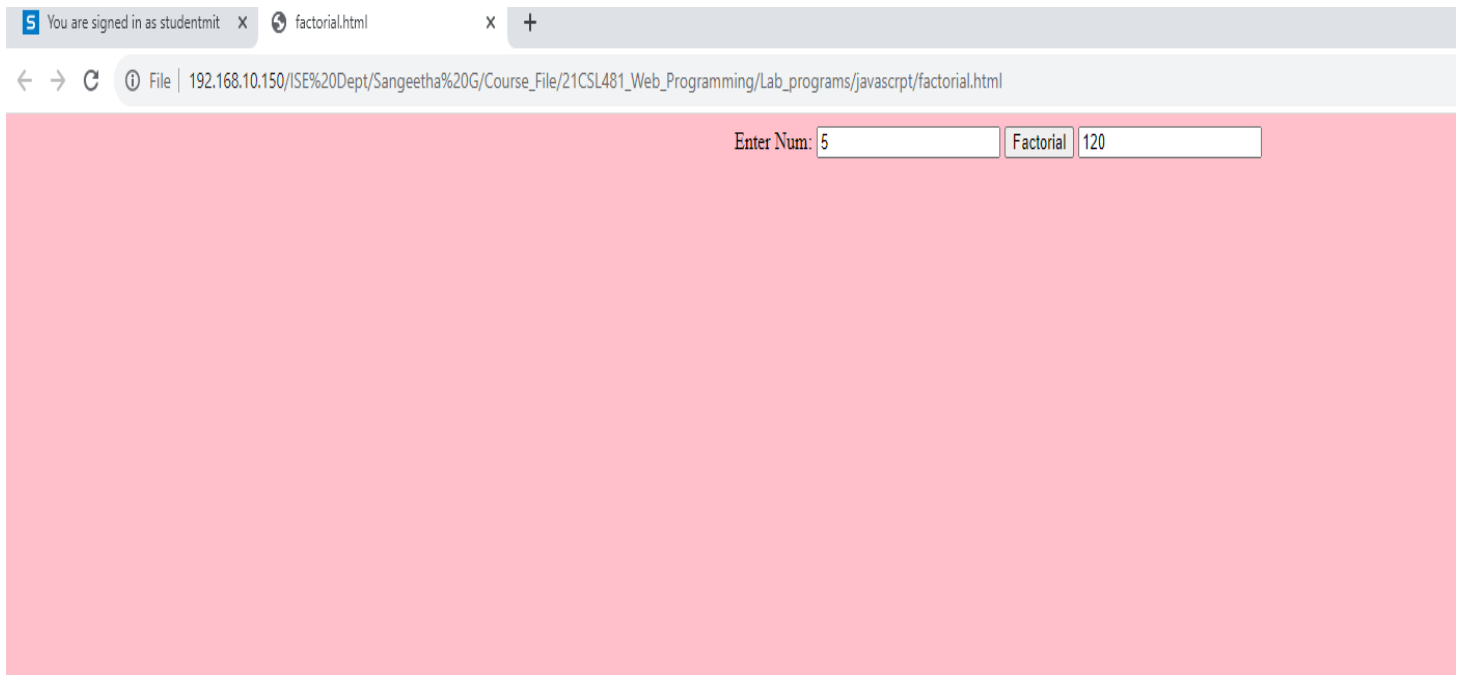
```
<!doctype html>
<html>
```

```
<head>
<script>
function show(){

var i, no, fact;
fact=1;
no=Number(document.getElementById("num").value);
for(i=1; i<=no; i++)
{
fact= fact*i;
}
document.getElementById("answer").value= fact;
}
</script>
</head>
<body bgcolor="pink">
<center>
Enter Num: <input id="num">
<button onclick="show()">Factorial</button>
<input id="answer">
</center>
</body>
</html>
```



## Output:



## 7. Write a program to demonstrate control statements in JavaScript:

(a) Fibonacci series

(b) To check whether a number is odd or even

(a) Fibonacci series

```
<html>
```

```
<body>
```

```
  <script type="text/javascript">
```

```
    var num1=0,num2=1,num3=0;
```

```
    document.write("Fibonacci Series:"+"<br>");
```

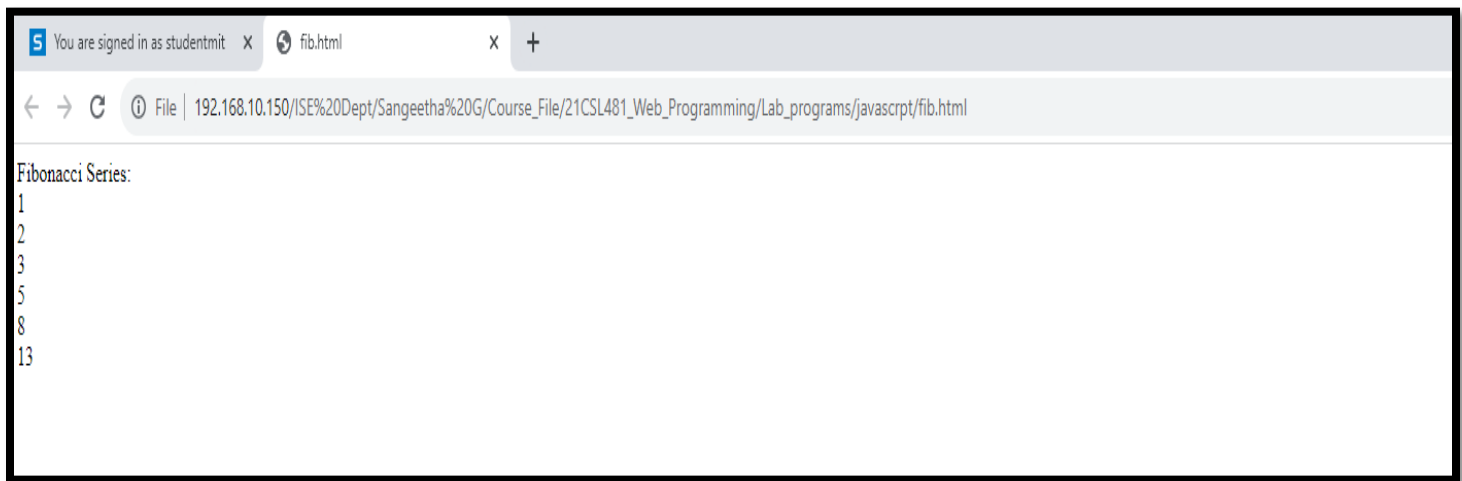
```
    while (num2<=10)
```

```
    {
```

```
      num3 = num1+num2;
```

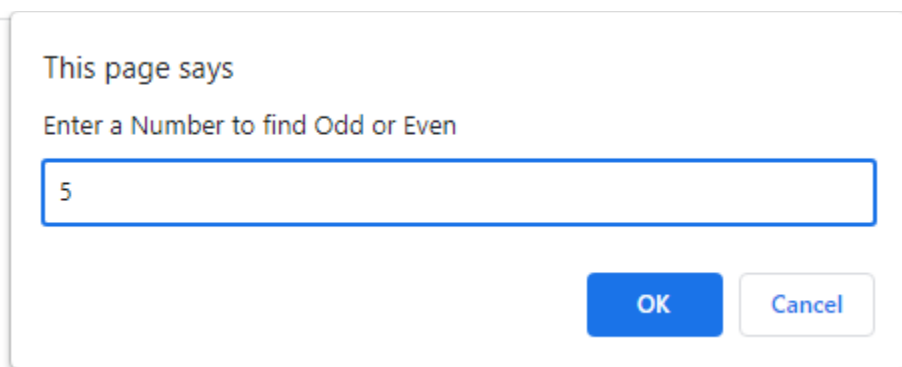
```
      num1 = num2;
```

```
        num2 = num3;  
        document.write(num3+"<br>");  
    }  
</script>  
</body>  
</html>
```

**Output:****(b) To check whether a number is odd or even**

```
<html>  
  <head>  
    <script type="text/javascript">  
      var no = prompt("Enter a Number to find Odd or Even");  
      no = parseInt(no);  
      if (isNaN(no))  
      {  
        alert("Please Enter a Number");  
      }  
      else if (no == 0)
```

```
{  
    alert("The Number is Zero");  
}  
else if (no % 2)  
{  
    alert("The Number is Odd");  
}  
else  
{  
    alert("The Number is Even");  
}  
</script>  
</head>  
</html>
```

**Output:**

This page says

Enter a Number to find Odd or Even

OK Cancel

This page says

The Number is Odd

OK

This page says

Enter a Number to find Odd or Even

OK Cancel

This page says

The Number is Even

OK

This page says

Enter a Number to find Odd or Even

OK Cancel

This page says

Please Enter a Number

OK

This page says

Enter a Number to find Odd or Even

OK Cancel

This page says

The Number is Zero

OK

8. Write a program to demonstrate Element Access in JavaScript.

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>DOM getElementsByClassName() Method</title>
```

```
</head>
```

```
<body bgcolor="pink">
```

```
  <p class="className" style="color: green;"><b>Good Morning</b></p>
```

```
  <h1 id="elementId" style="color: blue;">
```

```
    Web programming Lab
```

```
  </h1>
```

```
  <p name="attrName" style="color: yellow;"><b>Have a Nice  
Day...!</b></p>
```

```
<script>
```

```
var temp = document.getElementsByClassName("className");
```

```
var temp = document.getElementById("elementId");  
var temp = document.getElementsByName("attrName");  
console.log(temp[0]);  
console.log(temp[1]);  
console.log(temp[2]);  
</script>  
</body>  
</html>
```

**Output:**