



**KONGU ENGINEERING COLLEGE**



**(Autonomous)**

PERUNDURAI, ERODE 638060

**School of Communication and Computer Sciences**

**Department of Computer Science and Engineering**

## **LABORATORY MANUAL**

(As per KEC Autonomous Curricula and Syllabi – R2014)

**14ITL52**

**WEB TECHNOLOGY LABORATORY**

**V SEMESTER B.E- CSE**



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## **WEB TECHNOLOGY LABORATORY**

**Prepared by,**

[Dr.K.Nirmaladevi]

[Ms.Geetha.M]

[Ms.C.Sagana]

[Ms.K.Venu]

[Ms.Rajadevi]

[Mr.K.R.Prasannakumar]

**Approved by,**

[Dr.R.R.Rajalaxmi]

## **14ITL52 WEB TECHNOLOGY LABORATORY**

(Common to CSE and IT branches)

### **Objective:**

- To understand the basics of HTML
- To design web pages using JavaScript, CSS, PHP and AJAX

### **LIST OF EXPERIMENTS/EXERCISES**

1. Design a Web Page Using HTML Tags and host it in WebServer
2. Create a XHTML document to implement types of CSS
3. Design a Web Page with menu layout. Apply the various formatting CSS
4. Design a registration page to create email-id validate the information in the web page using JavaScript
5. Write a JavaScript program to use Objects and Collections
6. Design a Web page to create simple interactive CGPA calculator
7. Create a website to load the content dynamically using AJAX
8. Create a Website for student mark maintenance system using PHP and MySQL
9. Create a Website to illustrate Session Tracking in PHP
10. Develop and display online reservation system using JavaScript, CSS, AJAX, PHP, MySQL with Session Tracking

### **REFERENCES/ MANUALS/ SOFTWARE**

1. PHP
2. MySQL
3. Apache WebServer
4. IIS and Browser

### **COURSE OUTCOMES:**

On completion of the course the students will be able to

- Design web pages using HTML and Java Script and deploy it in a web server
- Validate the HTML form data using Java script
- Develop and deploy web application with database connectivity

## TABLE OF CONTENTS

<b>EXP. NO.</b>	<b>LIST OF EXPERIMENTS</b>	<b>CO mapping</b>	<b>PAGE NO.</b>
1.	DESIGN A SIMPLE WEB PAGE USING BASIC HTML TAGS	CO1	5
2.	DESIGN A WEB PAGE USING HTML AND CSS	CO1	16
3.	DESIGN A WEB PAGE WITH MENU LAYOUT USING SUITBALE HTML TAGS AND CSS PROPERTIES	CO1	29
4.	DESGIN A WEB PAGE TO DEMONSTRATE THE PURPOSE OF PAGE STRUCTURE ELEMENTS	CO1	35
5.	DESIGN A REGISTRATION PAGE TO CREATE EMAIL-ID AND VALIDATE THE INFORMATION IN THE WEB PAGE USING JAVA SCRIPT	CO2	48
6.	DEVELOP INTERACTIVE WEB PAGES USING JAVASCRIPT EVENT-HANDLING MECHANISMS	CO1	55
7.	DESIGN SIMPLE WEB PAGES TO SHOW THE PURPOSE OF JAVASCRIPT OBJECTS AND COLLECTIONS	CO1	89
8.	DESIGN AN ONLINE INTERACTIVE CGPA CALCULATOR	CO1	101
9.	DEVELOP A WEB PAGE TO IMPLEMENT AUTOCOMPLETION OF A TEXT FIELD UISNG AJAX & PHP	CO1	113
10.	DATABASE CONNECTIVITY FOR EMPLOYEE DETAILS USING PHP	CO3	118
11.	USER SIGNIN FORM USING SESSION TRACKING	CO3	122
12.	DEVELOPING ONLINE RESERVATION SYSTEM USING JAVASCRIPT, CSS, AJAX, PHP,MYSQL WITH SESSION TRACKING	CO3	130

**Experiment 1:****DESIGN A WEB PAGE USING BASIC HTML TAGS**

**Aim:** To design a web page using the basic HTML tags

**Description:**

HTML Tag	Description
<!DOCTYPE>	Defines the document type
<html>	Defines an HTML document
<head>	Defines information about the document
<title>	Defines a title for the document
<body>	Defines the document's body <b>Attributes</b> background - background image for a document bgcolor: background color of a document
<h1> to <h6>	Defines HTML headings
<mark>	highlight parts of text
<p>	Defines a paragraph
<a>	Defines a hyperlink, which is used to link from one page to another. <b>Attributes</b> href - URL of the page the link goes to name - name of an anchor tag target - where to open the linked document. Possible values are blank, parent, self, top
 	Inserts a single line break
<hr>	Defines a thematic change in the content
<!---->	Defines a comment
<img>	defines an image <b>Attributes</b> align - alignment of an image according to surrounding elements. The possible values are top, bottom, middle, left right alt - an alternate text for an image border - width of the border around an image height - height of an image hspace - whitespace on left and right side of an image src - URL of an image vspace - whitespace on top and bottom of an image width - width of an image

<b>&lt;ol&gt;</b>	Defines an ordered list ‘type’ attribute for <ol> tag to specify the type of numbering Following are the possible options .By default, it is a number. <ol type = "1"> - Default-Case Numerals. <ol type = "I"> - Upper-Case Numerals. <ol type = "i"> - Lower-Case Numerals. <ol type = "A"> - Upper-Case Letters. <ol type = "a"> - Lower-Case Letters.  ‘start’ attribute for <ol> tag to specify the starting point of numbering <ol type = "1" start = "4"> - Numerals starts with 4. <ol type = "I" start = "4"> - Numerals starts with IV. <ol type = "i" start = "4"> - Numerals starts with iv. <ol type = "a" start = "4"> - Letters starts with d. <ol type = "A" start = "4"> - Letters starts with D.
<b>&lt;li&gt;</b>	Defines a list item
<b>&lt;ul&gt;</b>	Defines an unordered list ‘type’ attribute for <ul> tag to specify the type of bullet. Following are the possible options. By default, it is a disc. <ul type = "square"> <ul type = "disc"> <ul type = "circle">
<b>&lt;dl&gt;</b>	Defines a description list
<b>&lt;dt&gt;</b>	Defines a term/name in a description list
<b>&lt;dd&gt;</b>	Describes each term/name
<b>&lt;table&gt;</b>	Defines a table <b>Attributes:</b> align - the alignment of a table according to surrounding text (left/center/right) bgcolor - the background color for a table border - borders around the table and the table’s cells cellpadding- space between the cell wall and the cell content cellspacing- space between cells colspan - number of columns a table cell should span rowspan - number of rows a table cell should span width - width of a table (pixels or %)
<b>&lt;caption&gt;</b>	Defines a table caption
<b>&lt;th&gt;</b>	Defines a header cell in a table

<b>&lt;tr&gt;</b>	Defines a row in a table
<b>&lt;td&gt;</b>	Defines a cell in a table
<b>&lt;thead&gt;</b>	Groups the header content in a table
<b>&lt;tbody&gt;</b>	Groups the body content in a table
<b>&lt;tfoot&gt;</b>	Groups the footer content in a table

### **Program:**

```

<html>
<head>
<title>Web Technology - Online Content</title>
<style type="text/css">

</style>
</head>
<body bgcolor="#ffcb1">
<div align="center"><h1>
<font color="white">14ITT52 &nbsp;&dash;&nbsp;Web Technology&ndash;Usage of Basic
Tags</font></h1>
</div>
<div>
<div align="left" ><h3><b><font color="green">UNIT I&nbsp;&dash;&nbsp;
HTML</font></b></h3>
</div>
<ul>
<li><a href="#comp">Introduction to Computers and the Internet</a></li>
<li><a href="#htm">HTML5</a></li>
<li><a href="basic tags.html" target="blank">Basic Tags</a></li>
<ul>
<li>Links</li>
<li><a href="basic tags.html#img" target="blank">Images</a></li>
</ul>
<li><a href="#IPTags">Input Tags</a></li>
<li><a href="pse.html">Page structured element</a></li>
<li><a href="#cssP1">Cascading Style Sheet –Part I</a></li>
</ul>
<div align="left"><h3><b><font color="green">UNIT&nbsp;II&dash;&nbsp; Client Side
Scripting</font></b></h3></div>

```

```
<ul>
<li>Introduction to Java Script</li>
<li>Control Statements I</li>
<li>Control Statements II</li>
<li>Functions</li>
<li>Arrays</li>
</ul>
<div align="left"><h3><b><font color="green">UNIT III &nbsp;&dash;&nbsp; Java Script Objects</font></b></h3></div>
<ul>
<li>Objects</li>
<li>Document Object Model</li>
<ul>
<li>Objects and Collections</li>
<li>Events</li>
<li>Event Handling</li>
</ul>
</ul>
<div align="left"><h3><b><font color="green">UNIT IV&nbsp;&dash;&nbsp; Web Server</font></b></h3></div>
<ul>
<li>Introduction</li>
<li>HTTP Transaction</li>
<li>Multi Tier Application Architecture</li>
<li>Accessing Web Server</li>
<li>Apache</li>
<li>MySQL</li>
<li>PHP Installation</li>
<li> Microsoft IIS Server</li>
<li>AJAX</li>
<li> XMLHttpRequest</li>
</ul>
<div align="left">
<h3><b><font color="green">UNIT V&nbsp;&dash;&nbsp; Server Side Scripting</font></b></h3>
</div>
<ul>
<li>PHP </li>
<li>Introduction</li>
<li>Operators</li>
```

```
<li>Arrays</li>
<li>Strings</li>
<li>Regular Expressions</li>
```

```
<li>Form Processing</li>
<li> Database Connectivity </li>
<li>Session Tracking</li>
</ul>
</div>
<div>
<h2><font color="brown"><b>Chapter 1</b></font></h2>
<dl>
<dt ><h3>Introduction to Computers and the Internet</h3></dt>
<dd id="comp">
<p>In the past, most computer applications ran on computers that were not connected to one another, whereas today's Internet applications can be written to communicate among computers throughout the world. We rely on computers and the Internet to communicate, navigate, collaborate and more. Table 1.1 gives some examples of how computers and the Internet provide the infrastructure for these tasks.
<table border="3" cellspacing="2" cellpadding="5" bgcolor="lightgreen">
<tr bgcolor="white" valign="center" >
<th>Name</th>
<th>Description</th>
</tr>
<tr bgcolor="pink" valign="center" >
<td ><a href="Docs/CC-1.pptx">
Cloud Computing</a></td>
<td><p align="justify">Allows you to use software, hardware and information stored in the “cloud”—i.e., accessed on remote computers via the Internet and available on demand—rather than having it stored on your personal computer. Cloud computing provides resources as services and is based on pay-per use model. These services, allowing you to increase or decrease resources to meet your needs at any given time, are generally more cost effective than purchasing expensive hardware to ensure that you have enough storage and processing power to meet your needs at their peak levels.</p></td>
</tr>
<tr valign="center" >
<td>GPS</td>
```

<p align="justify">Global Positioning System (GPS) devices use a network of satellites to retrieve location-based information. Multiple satellites send time-stamped signals to the GPS device, which calculates the distance to each satellite based on the time the signal left the satellite and the time the signal arrived. This information is used to determine the exact location of the device.</p>
<p align="center"><b>Robots</b></p> <p align="justify">Robots can be used for day-to-day tasks (e.g., iRobot's Roomba vacuum), entertainment (e.g., robotic pets), military combat, deep sea and space exploration (e.g., NASA's Mars rover) and more.</p> <p align="center"><b>E-mail, Instant Messaging, Video Chat and FTP</b></p> <p align="justify">Internet-based servers support all of your online messaging. E-mail messages go through a mail server that also stores the messages. Instant messaging (IM) and Video Chat apps, such as AIM, Skype, Yahoo! Messenger and others allow you to communicate with others in real time by sending your messages and live video through servers. FTP (file transfer protocol) allows you to exchange files between multiple computers (e.g., a client computer such as your desktop and a file server) over the Internet using the TCP/IP protocols for transferring data.</p>
<p><b>HTML5</b></p> <p align="justify">HTML5 is a markup language that specifies the structure and content of documents that are displayed in web browsers. Some basics HTML5 techniques are:</p> <ul style="list-style-type: none"> <li>&lt;i&gt;&lt;b&gt;tables&lt;/b&gt;&lt;/i&gt; - for structuring information from databases</li> <li>&lt;i&gt;&lt;b&gt;forms&lt;/b&gt;&lt;/i&gt; - to collect information from web-page visitors</li> <li>&lt;i&gt;&lt;b&gt;internal and external links&lt;/b&gt;&lt;/i&gt; - for easier page navigation</li> </ul>

```

<li><i><b>meta elements</b></i> - for specifying information about a document</li>
</ul>
</dd>
<dt><font size="4"><b><i>Editing HTML5</i></b></font></dt>
<dd>
<p align="justify">HTML5 documents are created by typing HTML5 markup text in a text editor
(such as Notepad,TextEdit, vi, emacs) and saved with the .html or .htm filename extension. They are
stored in computers called web servers and the Clients can request the documents through web
browsers running on your local computer or smartphone</p>
</dd>

<dt><font size="4"><b><i>First HTML5</i></b></font></dt>
<dd>
<p align="justify">Following figure shows a simple HTML5 document named main.html</p>

</dd>
<dt><font size="4"><b><i>Headings</i></b></font></dt>
<dd>
<p align="justify">
HTML5 provides six heading elements (h1 through h6) for specifying the relative importance of
information. Heading element h1 is considered the most significant one and is typically rendered in a
larger font than the other five. Each successive heading element is typically rendered in a progressively
smaller font. Following figure describes the usage of the heading elements:
</p>

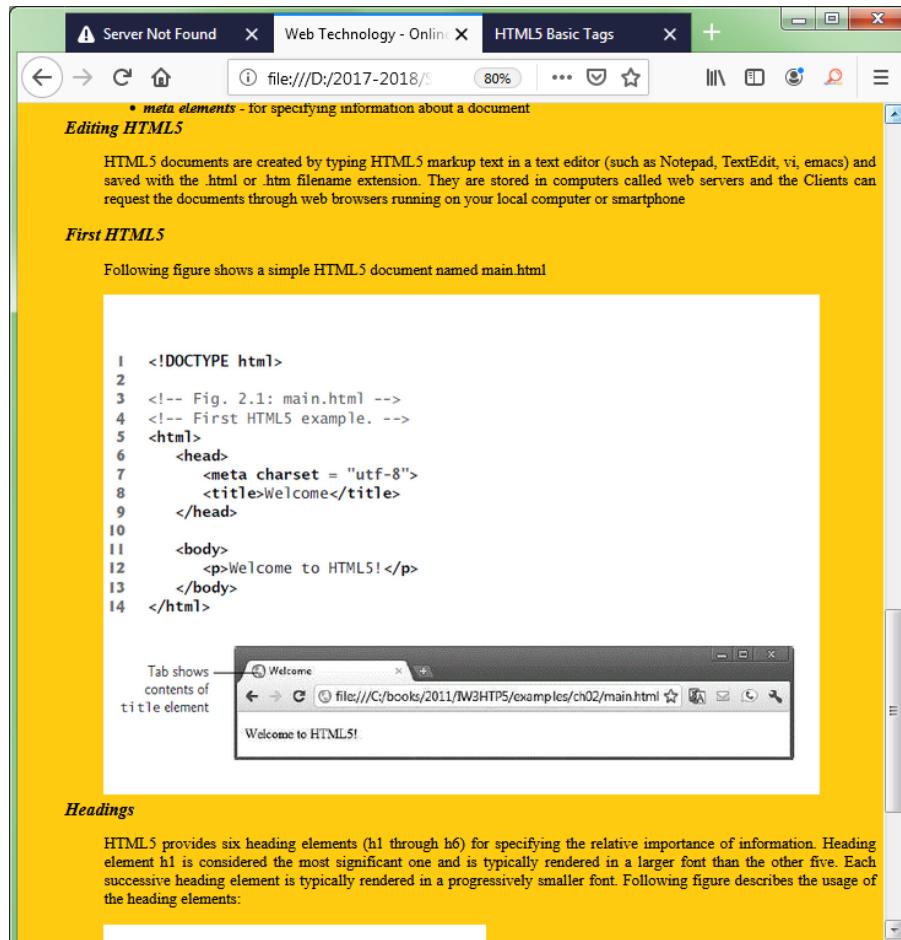
</dd>
</dl>
</dl>
</div>
</body>
</html>

```

## Output:

The screenshot shows a web browser window with a yellow background. At the top, it says "14ITT52 - Web Technology–Usage of Basic Tags". Below that, there are four main sections with headings in green:

- UNIT I - HTML**
  - [Introduction to Computers and the Internet](#)
  - [HTML5](#)
  - [Basic Tags](#)
    - [Links](#)
    - [Images](#)
  - [Input Tags](#)
  - [Page structured element](#)
  - [Cascading Style Sheet –Part I](#)- UNIT II- Client Side Scripting**
  - Introduction to Java Script
  - Control Statements I
  - Control Statements II
  - Functions
  - Arrays
- UNIT III - Java Script Objects**
  - Objects
  - Document Object Model
    - Objects and Collections
    - Events
    - Event Handling
- UNIT IV - Web Server**
  - Introduction



In the past, most computer applications ran on computers that were not connected to one another, whereas today's Internet applications can be written to communicate among computers throughout the world. We rely on computers and the Internet to communicate, navigate, collaborate and more. Table 1.1 gives some examples of how computers and the Internet provide the infrastructure for these tasks.

Name	Description
<a href="#">Cloud Computing</a>	Allows you to use software, hardware and information stored in the "cloud"—i.e., accessed on remote computers via the Internet and available on demand—rather than having it stored on your personal computer. Cloud computing provides resources as services and is based on pay-per use model. These services, allowing you to increase or decrease resources to meet your needs at any given time, are generally more cost effective than purchasing expensive hardware to ensure that you have enough storage and processing power to meet your needs at their peak levels.
GPS	Global Positioning System (GPS) devices use a network of satellites to retrieve location-based information. Multiple satellites send time-stamped signals to the GPS device, which calculates the distance to each satellite based on the time the signal left the satellite and the time the signal arrived. This information is used to determine the exact location of the device.
Robots	Robots can be used for day-to-day tasks (e.g., iRobot's Roomba vacuum), entertainment (e.g., robotic pets), military combat, deep sea and space exploration (e.g., NASA's Mars rover) and more.
E-mail, Instant Messaging, Video Chat and FTP	Internet-based servers support all of your online messaging. E-mail messages go through a mail server that also stores the messages. Instant messaging (IM) and Video Chat apps, such as AIM, Skype, Yahoo! Messenger and others allow you to communicate with others in real time by sending your messages and live video through servers. FTP (file transfer protocol) allows you to exchange files between multiple computers (e.g., a client computer such as your desktop and a file server) over the Internet using the TCP/IP protocols for transferring data.

## HTML5

### Introduction

HTML5 is a markup language that specifies the structure and content of documents that are displayed in web browsers. Some basics HTML5 techniques are:

- *tables* - for structuring information from databases
- *forms* - to collect information from web-page visitors
- *internal and external links* - for easier page navigation
- *meta elements* - for specifying information about a document

### Editing HTML5

HTML5 documents are created by typing HTML5 markup text in a text editor (such as Notepad,TextEdit, vi, emacs) and saved with the .html or .htm filename extension. They are stored in computers called web servers and the Clients can request the documents through web browsers running on your local computer or smartphone

### First HTML5

## Result:

Thus a web page has been designed using the basic HTML Tags.

## VIVA Questions

1. Write a HTML code to display your department name as a heading in different sizes.
2. How do you make use of a picture as a background image of a web page?
3. Identify each of the following items as either a HTML5 element or an attribute:

a) htlm	f) a
b) width	g) src
c) href	h) name
d) br	i) select
e) h3	j) type
4. How do you insert a copyright symbol on a browser page?
5. Write a HTML document to create links to sections within the same page?
6. Create an HTML document containing an ordered list of three items—ice cream, soft serve and frozen yogurt. Each ordered list should contain a nested, unordered list of your favourite flavors. Provide three flavors in each unordered list.
7. Use the correct HTML attribute to make the link open in a new window.  
`<a href="html_images.asp" _____>HTML Images</a>`
8. Create the following table format

A test table with merged cells			
	Average		Red eyes
	height	weight	
Males	1.9	0.003	40%
Females	1.7	0.002	43%

9. Write a HTML document to Insert an image and create a link such that clicking on image takes user to other page
10. Create the HTML5 markup that displays the following table on a web page.

**Objectives**

- To be able to create tables with rows and columns of data.
- To be able to control the display and formatting of tables.
- To be able to create and use forms.

*Yea, from the table of my memory I'll wipe away all trivial fond records.*  
William Shakespeare

## **Experiment 2:**

### **DESIGN A WEB PAGE USING DIFFERENT TYPES OF CSS**

**Aim:** To design a web page by applying different types of CSS.

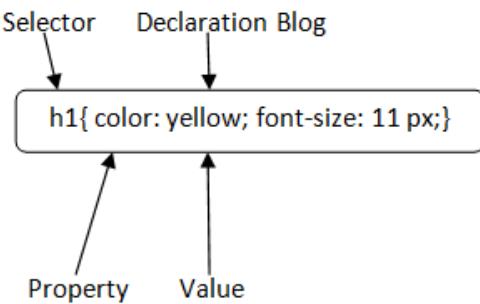
#### **Description:**

#### **CSS**

CSS stands for Cascading Style Sheets, which describes how HTML elements are to be displayed on screen, paper, or in other media. It defines styles for web pages, including the design, layout and variations in display for different devices.

#### **CSS Syntax**

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



- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.

<b>CSS Selectors</b>	<b>Select HTML elements according to its id, class, type, attribute etc.</b>
<b>Element Selector</b>	Selects the HTML element by name.
<b>Id Selector</b>	Selects the id attribute of an HTML element to select a specific element. An id is always unique within the page so it is chosen to select a single, unique. It is written with the hash character (#), followed by the id of the element
<b>Class Selector</b>	selects HTML elements with a specific class attribute. It is used with a period (.) character followed by the class name. A class name should not be started with a number.
<b>Universal Selector</b>	used as a wildcard character. It selects all the elements on the pages.
<b>Group Selector</b>	Select all the elements with the same style definitions. Grouping selector is used to minimize the code. Commas are used to separate each selector in grouping.

**There are three ways to associate styles with HTML document.**

1. Inline style sheet
2. Embedded style sheet / Internal style sheet
3. External style sheet

### **Inline style sheet**

Use style attribute of any HTML element to define style rules. These rules will be applied to that element only.

```
<h1 style="color:pink"> This is inline CSS </h1>
```

### **Embedded style sheet/Internal style sheet**

CSS rules to be available inside of <style> element and this tag is placed inside the <head>...</head> tags. Rules defined using this syntax will be applied to all the elements available in the document.

```
<head>
<style type="text/css" >
h1{
color: pink;
}
</style>
</head>
```

### **External style sheet**

The <link> element can be used to include an external stylesheet file in the HTML document.

An external style sheet is a separate text file with .css extension and it contains all the Style rules. This can be used to apply similar styles to multiple documents with <link> element.

mystyle.css

```
h1, h2, h3 {
color: red;
...
}
```

mystyle.css linked in head part of the any HTML document as follows:

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css" />
</head>
```

<b>CSS Properties</b>	<b>Values</b>	<b>Description</b>
position	static, relative, fixed absolute, sticky	Specifies the type of positioning method used for an element.
overflow	visible, hidden, scroll auto	Add scrollbars when the content of an element is too big to fit in the specified area.
float	left, right, inherit, none	Used for positioning and formatting content

display	none, block, inline inline-block	specifies how an element is displayed
---------	-------------------------------------	---------------------------------------

list-style-type	none	specifies the type of list item marker
z-index	number	Specifies the stack order of an element. Element with greater stack order is always in front of an element with a lower stack order
padding	padding-top padding-right padding-bottom padding-left	generate space around an element's content
border	dotted, dashed, solid none	Specify the style, width, and color of an element's border

CSS Selector	Description
:hover	specifies mouse over link
:link	specifies unvisited link
:visited	specifies visited link
:active	specifies selected link

### Program:

```
<html>
    <head><title>CSE Home Page</title></head>
    <!--External Style Sheet-->
    <link rel="stylesheet" type="text/css" href="navBar.css">
    <style>
        <!--Embedded Style Sheet-->
        #header{
            position:relative;
            top:-50px;
        }
        .main_content{
            position:absolute;
            padding-top:10px;
            background-color:rgb(154,191,229);
            //opacity:0.5;
            height:550px;
        }
    </style>
</html>
```

```
width:78%;  
left:275px;  
top:200px;  
  
}  
.sidenav{  
    position:absolute;  
    size:35% 100%;  
    background-color:black;  
    top:200px;  
}  
.sidenav a{  
    display:block;  
    padding:10px 15px;  
    color:rgb(0,110,185);  
    font-size:15pt;  
    font-weight:bold;  
    text-decoration:none;  
    border-bottom-style:solid;  
    border-bottom-width:2px;  
}  
.sidenav a:hover{  
    background-color:lightgrey;  
    color:blue;  
}  
h3{  
    position:relative;  
    top:0;  
    width:150px;  
    font-family:cambria;  
    color:white;  
    margin-left:15px;  
    background-color:black;  
}  
p{  
    text-indent:25px;  
}  
p, li{  
    text-align:justify;  
    font-family:cambria;  
    font-size:13pt;  
    margin-left:15px;
```

```
        }
    img{
        //float:right;
        overflow:auto;
    }
    #footer{
        position:relative;
        bottom:-600px;
        //background-color:green;
        width:100%;
        height:5%;
    }
    .hods_msg{
        position:relative;
        margin-top:250px;
    }

#footer p{
    text-align:center;
    color:white;
    background-color:blue;
}
article{
    float:left;
    position:absolute;
    left:260px;
    top:200px;
    background-color:lightgrey;//rgb(199,251,204);
    width:1000px;
    height:100%;
}
section{
    width:400px;
    float:left;
    padding:30px;
}

</style>
```

<body>

```

<div id="header">
<!--Inline Style Sheet-->
<div style="height:30%;width:100%;">
<h1 style="color:white;font-size:50pt;background-color: rgb(0,110,185);
width:50%;height:100%">
Computer Science<br/> and Engineering</h1>

</div>
<div class="content">
    <div class="sidenav">
        <a href="cse_home.html">Home</a>
        <a href="#">Highlights</a>
        <a href="#">Students Activities </a>
        <a href="#">Department Library</a>
    </div>
    <aside class="hods_msg">
        <figure style="position:absolute;left:-38px;">
            <figcaption style="font-size:20pt;background-color:black;text-
align:center;color:white;font-family:cambria;">
                HoD's Desk</figcaption>
            
        </figure>
    </aside>
    <article>

        <h3>About CSE</h3>
        <p>Department of CSE was started in the year 1988 with B.E. Programme. With the increasing demand in Computer Science and Engineering, M.E programme was started in the year 1999. The department is recognized to offer research programme leading to Ph.D. The department aims at developing intellectually alert, scientifically progressive, globally competent and dynamic young IT professionals.</p>
        <h3>Vision</h3>
        <p>To be a centre of excellence for nurturing competent computer professionals of high calibre and quality for catering to the ever-changing needs of the industry and society</p>
        <h3>Mission</h3>
    </article>
</div>

```

```

<p>Department of Computer Science & Engineering is
committed to

<ul>
    <li>Develop innovative, competent and ethically strong
computer engineers to meet global challenges.</li>
    <li>Foster consultancy and basic as well as applied research
activities to solve real world problems.</li>
    <li>Endeavour for constant upgradation of technical expertise to
cater to the needs of the industry and society</li>
</ul>
</p>

</article>
</div>
<div id="footer"><p>Maintained by KEC Web Group</p>
</div>
</div>

</body>
</html>

```

### navBar.css

```

#header{
    position:relative;
    top:-50px;
}

.nav{
    position:absolute;
    top:143px;
    right:0;
    margin-right:8px;
}

.nav ul {
    list-style-type: none;
    z-index:1;
    margin: 0;
    padding: 0;
    overflow:hidden;
    background-color: #e0f0ff;
}

.nav ul li {

```

```
float: left;
font-size:15pt;
font-weight:bold;
font-family:cambria;
padding:6px 10px;
background-color: black;
}
li a{
    color:white;
    text-decoration:none;
}
.menu:hover{
    color:black;
    background-color:blue;
}

.submenu{
    display: none;
    position: relative; //absolute;
    margin-left:-15;
    float:left;
    top:120px;
    background-color:white;
    z-index: 1;
    width:167px;
}
.submenu a {
    color: black;
    padding: 6px 15px;
    text-decoration: none;
    display: block;
    text-align: left;
}
.menu:hover .submenu{
    display:block;
    background-color:blue;
    position: relative;
    top:20px;
}
.submenu a:hover {
    background-color:lightgrey;//white;
```

```
}

.ssmenu{
    display: none;
    position: absolute;
    margin-left:170;
    top:40;
    z-index: 1;
    width:167px;
}

#sccs:hover .ssmenu{
    display:block;
    background-color:lightgrey;
}

.ssmenu a:hover {
    background-color:rgb(0,110,185);
}
```

```
li a{
    color:rgb(0,110,185);
    text-decoration:none;
}

.menu:hover{
    color:black;
    background-color:lightgrey;
}

.submenu{
    display: none;
    position: absolute;
    margin-left:-15;
    top:30px;
    background-color:white;
    //z-index: 1;
    width:167px;
}

.submenu a {
    color: black;
    padding: 6px 15px;
    text-decoration: none;
    display: block;
    text-align: left;
```

```
}

.menu:hover .submenu{
    display:block;
    background-color:rgb(0,110,185);
}
.submenu a:hover {
    background-color:lightgrey;//white;
}
.ssmenu{
    display: none;
    position: absolute;
    margin-left:170;
    top:70;
    z-index: 1;
    width:167px;
}
#sccs:hover .ssmenu{
    display:block;
    background-color:lightgrey;
}

.ssmenu a:hover {
    background-color:rgb(0,110,185);
}
```

## **Output:**

The screenshot displays a web browser window with the title "CSE Home Page". The address bar shows the URL "file:///D:/2017-2018/Subjects/WT (19-20)/Programs/Lab Manual/HTML/cse\_index2.html". The main content area features a large blue banner with the text "Computer Science and Engineering". Below the banner is a navigation menu with links to "Home", "Highlights", "Students Activities", "Department Library", and "HoD's Desk". The "HoD's Desk" section includes a portrait of a woman. The main content area contains three sections: "About CSE", "Vision", and "Mission". The "About CSE" section describes the department's history and aims. The "Vision" section states the goal of being a center of excellence for nurturing competent computer professionals. The "Mission" section lists three goals: developing innovative engineers, fostering consultancy and research, and providing constant upgradation of technical expertise.

## **Result:**

Thus a web page is designed by applying the different types of CSS.

## Viva Questions

1. How do you make a rounded corner by using CSS?
2. Consider the following HTML/CSS code:

```
<style>
    .text span { color: red; }
    span { color: blue; }
    div { color: green; }
    div span { color: black; }
    p span { color: yellow; }
</style>

<div>
    <p>
        <span class="text">
            <span>Text</span>
        </span>
    </p>
</div>
```

What color will be applied to the text?

3. Display image and a text overlapping on each other.
4. Demonstrate the difference between visibility: hidden and display:none.
5. Name three ways to define a color in html.
6. How to create a scrollable content?
7. Write CSS Script to make an image remain in place when the user scrolls up or down.
8. Write a CSS rule that changes the color of all elements containing attribute class = "green-Move" to green and shifts them down 25 pixels and right 15 pixels.
9. Create two paragraphs and line them as columns side by side.
10. Create a rule that displays all links in blue without underlining them.

### **Experiment 3:**

#### **DESIGN A WEB PAGE WITH MENU LAYOUT USING CSS**

**Aim:** To design a web page with menu layout using appropriate CSS properties.

#### **Description:**

<b>HTML Tags That Can Be Used</b>		
<b>Tags</b>	<b>Description</b>	
<div>	Specifies a division or a section in an HTML document – used to enclose the menubar	
<nav>	Defines a set of navigation links.	
<ul>, <ol>, <li>	Defines a ordered or unordered list – used to design menubar	
<a>	Specifies a link from one page to another	
<b>CSS Properties Applied</b>		
<b>Properties</b>	<b>Values</b>	<b>Description</b>
position	static, relative, fixed, absolute, sticky	Specifies the type of positioning method used for an element.
overflow	visible, hidden, scroll, auto	Add scrollbars when the content of an element is too big to fit in the specified area.
float	left, right, inherit, none	Used for positioning and formatting content
display	none, block, inline, inline-block	specifies how an element is displayed
list-style-type	none	specifies the type of list item marker
z-index	number	Specifies the stack order of an element. Element with greater stack order is always in front of an element with a lower stack order
padding	padding-top padding-right padding-bottom padding-left	generate space around an element's content
border	dotted, dashed, solid, none	Specify the style, width, and color of an element's border
:hover (CSS Selector)	specifies mouse over link	

**Program:**

```
<html>
<head>
    <title>Popular Books by Bloomsbury Publishing</title>
    <style>

        #hmenu{
            width:100%;
            height:30px;
            background-color:purple;
            position:fixed;
            top:0;
        }
        #hmenu ul {
            padding:1; list-style:none;
            position:relative;
            top:-15;
        }
        #hmenu li {
            float:left; position:relative; padding-right:30;
        }
        #hmenu li a{
            color:aqua;
            font-size:16pt;
            text-decoration:none;
        }
        #hmenu li ul {
            display:none;
            position:absolute;
            top:25;
        }
        #hmenu li:hover ul{
            display:block;
            background:purple;
            width:10em; height:auto;
        }

        div{
            //position:absolute;
            //display:inline;
            color:yellow;
        }
    </style>
</head>
<body>
    <div id="hmenu">
        <ul>
            <li><a href="#">Home</a></li>
            <li><a href="#">Books</a></li>
            <li><a href="#">About</a></li>
            <li><a href="#">Contact</a></li>
        </ul>
    </div>
</body>
</html>
```

```

        width:500px;
        height:315px;
        background-color:rgb(0,100,250); //lightblue;
    }

    img{
        width:100px;
        height:100px;
        float:left;
    }


```

</style>

</head>

<body bgcolor="lightgrey">

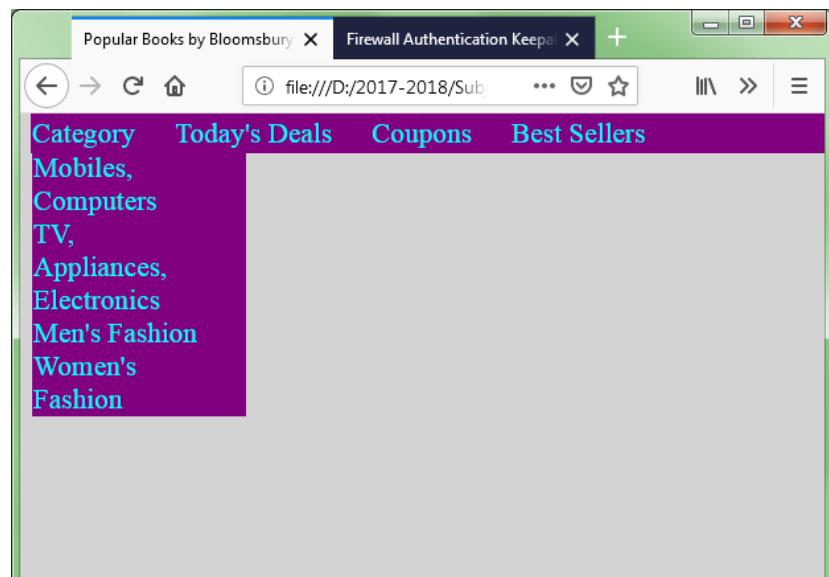
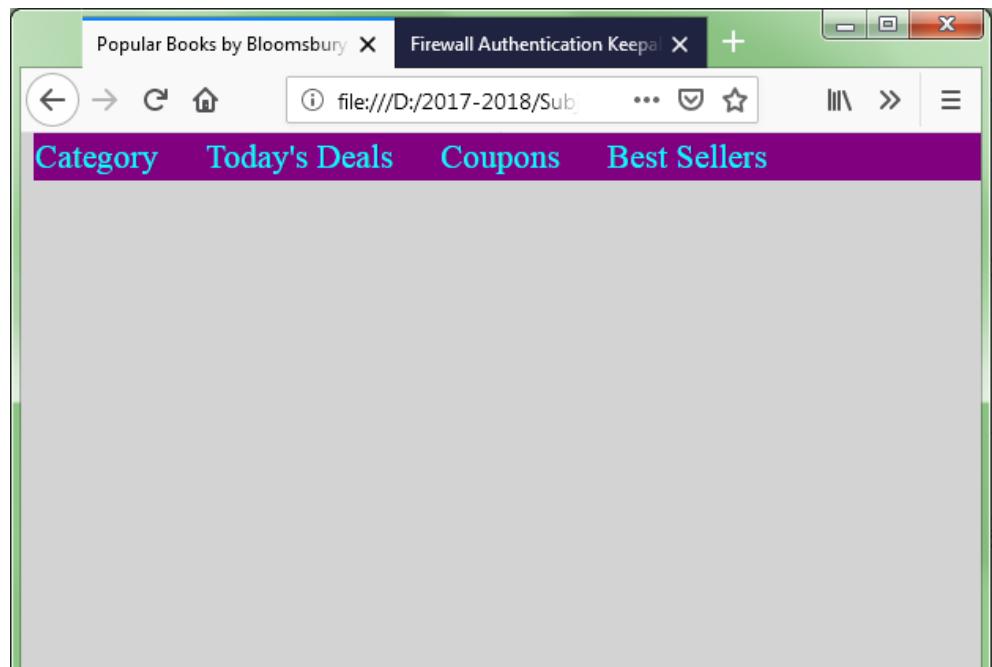
```

<div id="hmenu">
<ul> <li><a href="#">Category</a>
    <ul> <li><a href="#">Mobiles, Computers</a></li>
        <li><a href="#">TV, Appliances, Electronics</a></li>
        <li><a href="#">Men's Fashion</a></li>
        <li><a href="#">Women's Fashion</a></li>
    </ul>
    </li>
    <li> <a href="#">Today's Deals</a>
        <ul> <li><a href="#">IT/Software</a></li>
            <li><a href="#">Hardware</a></li>
            <li><a href="#">Iphone</a></li>
            <li><a href="#">Neuro-Science</a></li>
        </ul>
    </li>
    <li> <a href="#">Coupons</a>
        <ul> <li><a href="#">Cricket</a>
            <li><a href="#">Tenis</a></li>
            <li><a href="#">Badminton</a></li>
            <li><a href="#">Hockey</a></li>
        </ul>
    </li>
    <li><a href="#">Best Sellers</a>
        <ul> <li><a href="#">India</a></li>
            <li><a href="#">America</a></li>
            <li><a href="#">France</a></li>
            <li><a href="#">Pakistaan</a></li>
        </ul>
    </li>

```

```
        </ul>
    </li>
</ul>
</div>
```

### Output:

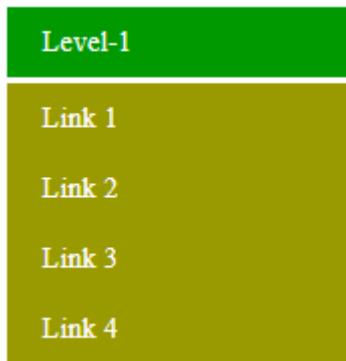


### Result:

Thus a web page with menu layout has been designed using suitable CSS properties.

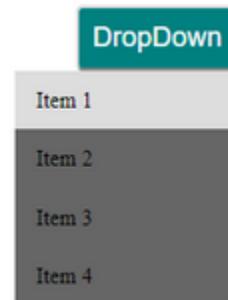
## Viva Questions

1. How to sets all the border properties in one declaration?
2. Create a dropdown menu as given below



3. Create a dropdown menu that allows the user to choose an option from a list
4. Write a CSS property to display drop-down content at right side of the screen.

Example:



5. Set the color for unvisited links to "red" and the color of the visited links to "blue".
6. Update the CSS code given below to set the top and bottom paddings for <p> to "25px", and left and right paddings to "50px".

```
<html>
<head>
<style>
p {
background-color: lightblue;
}
</style>
</head>
<body>
<h1>This is a Heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

7. What happens if the list-style-type property is used on a non-list element like a paragraph?
8. How block elements can be centered with CSS?
9. How do margin, border and padding fit together in the box model
10. Position the <h1> element relative to the browser window. 50px from the top, and 50px from the right.

```
<html>
<head>
<style>
h1 {
color: red;

.....
}

</style>
</head>
<body>
<h1>This is a Heading</h1>
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
</body>
</html>
```

## **Experiment 4:**

### **DESIGN A WEB PAGE USING HTML5 PAGE STRUCTURE ELEMENTS**

**Aim:** To design a web page using HTML Page Structure Elements

**Description:**

#### **Page Structure Elements**

HTML5 introduces several new page-structure elements that meaningfully identify areas of the page as headers, footers, articles, navigation areas, asides, figures and more. The page structure elements provided by HTML5 are:

- header
- section
- article
- aside
- nav
- figure and figcaption
- meter
- mark
- wbr
- summary and details
- footer

#### **I. header Element**

The header element creates a header for this page that contains both text and graphics. The header element can be used multiple times on a page and can include HTML headings, navigation, images and logos and more. For an example, see the top of the front page of your favorite newspaper.

##### **time Element**

The time element which does not need to be enclosed in a header, enables you to identify a date (as we do here), a time or both.

#### **II. nav Element**

The nav element groups navigation links. In this example, we used the heading Recent Publications and created a ul element with seven li elements that link to the corresponding web pages for each book.

### **III. figure Element and figcaption Element**

The figure element describes a figure (such as an image, chart or table) in the document so that it could be moved to the side of the page or to another page. The figure element does not include any styling, but you can style the element using CSS. The figcaption element provides a caption for the image in the figure element.

### **IV. article Element**

The article element describes standalone content that could potentially be used or distributed elsewhere, such as a news article, forum post or blog entry. You can nest article elements. For example, you might have reader comments about a magazine nested as an article within the magazine article.

### **V. summary Element and details Element**

The summary element (line 92) displays a right-pointing arrow next to a summary or caption when the document is rendered in a browser (Fig. 3.19). When clicked, the arrow points downward and reveals the content in the details element (lines 91–125).

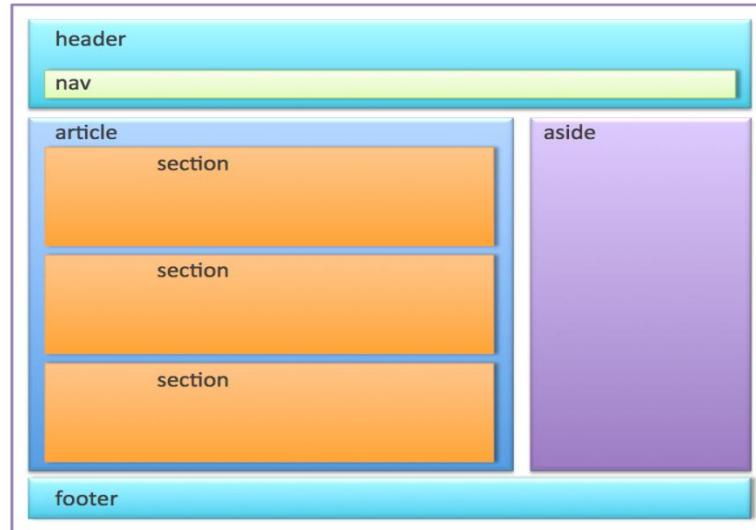
### **VI. section Element**

The section element describes a section of a document, usually with a heading for each section—these elements can be nested. For example, you could have a section element for a book, then nested sections for each chapter name in the book. In this example, we broke the document into three sections—the first is Recent Publications (lines 21–43). The section element may also be nested in an article.

### **VII. aside Element**

The aside element describes content that's related to the surrounding content (such as an article) but is somewhat separate from the flow of the text. For example, an aside in a news story might include some background history. A print advertisement might include an aside with product testimonials from users.

## Structure of a Web Page with Page Structure Elements



### **Program:**

```
<html>
<head><title>Stylesheet and Menus</title>
<link rel="stylesheet" type="text/css" href="CSS1.css">
<style>
    .ssmenu{
        display: none;
        position: absolute;
        margin-left:170;
        top:70;
        z-index: 1;
        width:167px;
    }
    #sccs:hover .ssmenu{
        display:block;
        background-color:lightgrey;
    }
    .ssmenu a:hover {
        background-color:rgb(0,110,185);
    }

    #mainContent{
        background-color:black;
        opacity:.8
    }

```

```
#content{
    position:absolute;
    background-color:black;
    color:white;
    font-family:cambria;
    font-size:13pt;
    text-align:justify;
    top:250px;
    left:190px;
    width:1070px;
    height:800px;
    padding-left:15px;
    padding-top:15px;
}
.hods_msg{
    background-color:black;
    color:yellow;
    width:13%;
    height:60%;
    font-family:cambria;
    font-size:13pt;
    text-align:justify;
    position:relative;
    left:0;
    top:200px;
    opacity:.8;
}
figure{
    position:relative;
    margin:0;
    top:5px;
    padding-left:10px;
}
#events{
    background-color:grey;
    opacity:.7;
}
summary a{
    color:white;
}
.event{
    border:groove 2px grey;
```

```
        width:330px;
        height:260px;
        float:left;
        padding:0px;
        margin:6px;
    }
.eventPic{
    position:relative;
    width:300px;
    height:200px;
}
.eventContent{
    position:relative;
    bottom:230px;
    left:7px;
    width:300px;
    height:200px;
    background-color:lightgrey;
    color:brown;
}
footer h4{
    position:absolute;
    bottom:-465px;
    text-align:center;
    background-color:lightgrey;
    width:100%;
    height:20px;
}
#others{
    position:absolute;
    top:700px;
    width:1050px;
    height:100px;
    background-color:rgb(242,234,181);/*black*/
}
h3{
    background-color:rgb(242,234,181);
    color:black;
    opacity:.8;
}
</style>
```

```

</head>
<body>
    <header id="header">
        

    <nav class="main_menu">
        <ul>
            <li class="menus"><a href="kec_home.html">Home</a></li>
            <li class="menus"><a href="#">About KEC</a></li>
            <li class="menus"><a href="#">Schools</a>
                <nav class="smenus">
                    <a href="#">SBMS</a>
                    <a href="#">SES</a>
                    <div id="sccs"><a href="#">SCCS</a>
                        <nav class="ssmenu">
                            <a href="#">CSE</a>
                            <a href="#">IT</a>
                            <a href="#">ECE</a>
                        </nav>
                </div>
            </li>
            <li class="menus"><a href="#">S & H</a>
                </nav>
            </li>
            <li class="menus"><a href="#">Facilities</a>
                <nav class="smenus">
                    <a href="#">Class Rooms</a>
                    <a href="#">Laboratories</a>
                    <a href="#">Seminar Halls</a>
                </nav>
            </li>
            <li class="menus"><a href="#">R&D</a>
                <nav class="smenus">
                    <a href="#">Projects</a>
                    <a href="#">Workshops</a>
                    <a href="#">Seminars</a>
                    <a href="#">Publications</a>
                </nav>
            </li>
            <li class="menus"><a href="#">Placement</a></li>
        </ul>
    </nav>

```

```

</header>
<aside id="sidenav">
    <nav>
        <a href="#">Student Centric Activities</a>
        <a href="#">Students' Achievements</a>
        <a href="#">Kongu CRS</a>
        <a href="#">KEC Virtual Tour</a>
    </nav>
</aside>

<article class="hods_msg">
    <h3>HoD's Desk</h3>
    
    <p>Message from HoD</p>
</article>
<article id="CSEA" style="position: absolute; top: 840px; height: 350px; left: 40px; ">
    
</article>
<div id="mainContent">
    <article id="content">
        <h3>Vision</h3>
        <p>To be a centre of excellence for development and dissemination of knowledge in Electronics and Communication Engineering for the Nation and beyond.</p>
        <h3>Mission</h3>
        <p>Department of Electronics and Communication Engineering is committed
            <ul>
                <li>To impart industry and research based quality education for developing value based Electronics and Communication engineers</li>
                <li> To enrich the academic activities by continual improvement in the teaching learning process</li>
                <li>To infuse confidence in the minds of students to develop as entrepreneurs</li>
                <li>To develop expertise for consultancy activities by providing thrust for Industry Institute Interaction</li>
                <li>To endeavor for constant up gradation of technical expertise for producing competent professionals to cater to the needs of the society and to meet the global challenges</li>
            </ul>
        </p>
    </article>
</div>

```

```

</p>

<article id="events">
    <h3>Events Scheduled</h3>
    <section class="event" style="font-color:yellow;font-family:callibri;">
        <details style="font-size:12pt;">
            <summary><a href="http://keci2c2sw.kongu.edu/ " target="blank"><mark>I2C2SW 2018</mark></a>
                <figure>
                    
                    <figcaption style="text-align:center;font-size:13pt;">I2C2SW</figcaption>
                </figure>
            </summary>
            <p class="eventContent" style="font-color:yellow;">

```

The Conference focuses on the core technological developments in the emerging fields like Intelligent Computing, Communications and Control. These technologies have the potential to attract many intellectuals from India and abroad as a congregation to deliberate on the above themes and applications.

```

                </p>
                </details>
            </section>
            <section class="event">
                <details style="font-size:12pt;">
                    <summary><a href="eeebrns.pdf">DAE-BRNS Sponsored National Seminar</a>
                        <figure>
                            
                            <figcaption style="text-align:center;font-size:13pt;">
                                National Seminar</figcaption>
                        </figure>
                    </summary>
                    <p class="eventContent">

```

In the present scenario, green technologies are playing significant role in changing the course of nation's economic growth towards sustainability and providing an alternative socio-economic model that will enable present and future generations to live in a clean and healthy environment, in harmony with nature.

```

                </p>
                <p>
                <dl>
                    <dt>SCHEDULED DATES:</dt>
                    <dd>Last Date for receipt of Applications: 16.07.2018<br/>

```

Intimation of Participants : 17.07.2018<br/>
 Confirmation of Participants : 18.07.2018<br/></dd>
 </dl>
 </p>
 </details></section>

<section class="event"><details style="font-size:12pt;">
 <summary><a href="eeebrns.pdf">AICTE Sponsored National Seminar</a>
 <figure>
 
 <figcaption style="text-align:center;font-size:13pt;">
 National Workshop</figcaption>
 </figure>
 </summary>
 <p class="eventContent">
 In the present scenario, green technologies are playing significant role in changing the course of nation's economic growth towards sustainability and providing an alternative socio-economic model that will enable present and future generations to live in a clean and healthy environment, in harmony with nature.
 </p>
 </details></section>
 </article>

<aside id="others">
 <h3 style="text-align:center;color:black;opacity:.8;">Other Events</h3>
 </aside>

</article>
 </div>
 <footer><h4>Website maintained by KEC Web Group</h4></footer>
 </body>
 </html>

## Output:

The screenshot shows the homepage of Kongu Engineering College. At the top, there is a banner with the college's name "KONGU ENGINEERING COLLEGE" in large green letters, "AUTONOMOUS" below it, and "PERUNDURAL, ERODE - 638 060" underneath. To the left is the college crest with the text "ESTD : 1984". To the right is a logo with the text "Transform Yourself". Below the banner, a navigation menu includes "Home", "About KEC", "Schools", "Facilities", "R&D", and "Placement". A sidebar on the left contains links for "Student Centric Activities", "Students' Achievements", "Kongu CRS", and "KEC Virtual Tour". A section titled "HoD's Desk" features a portrait of a man and a link to "Message from HoD". The main content area has a "Vision" section stating the college's goal to be a center of excellence for development and dissemination of knowledge in Electronics and Communication Engineering for the Nation and beyond. It also includes a "Mission" section detailing the department's commitment to imparting quality education, developing entrepreneurs, and providing consultancy services. A "Events Scheduled" section lists three upcoming events: "I2C2SW 2018", "DAE-BRNS Sponsored National Seminar", and "AICTE Sponsored National Seminar".

This screenshot shows a detailed view of the "Events Scheduled" section from the previous page. The "I2C2SW 2018" event is expanded, showing its description: "The Conference focuses on the core technological developments in the emerging fields like Intelligent Computing, Communications and Control. These technologies have the potential to attract many intellectuals from India and abroad as a congregation to deliberate on the above themes and applications." Below this description is a button labeled "I2C2SW". The "DAE-BRNS Sponsored National Seminar" and "AICTE Sponsored National Seminar" sections are also shown, each with their respective descriptions and a "National Seminar" or "National Workshop" button. A "Other Events" section is visible at the bottom.

Website maintained by KEC Web Group

Stylesheet and Menus    Firewall Authentication Keepalive X +

file:///D:/2017-2018/Subjects/WT (19-20)/Programs/Lab Manual/HTML/CSE\_CSS.html

You must log in to this network before you can access the Internet.

To infuse confidence in the minds of students to develop as entrepreneurs  
To develop expertise for consultancy activities by providing thrust for Industry Institute Interaction  
To endeavor for constant up gradation of technical expertise for producing competent professionals to cater to the needs of the society and to meet the global challenges

Message from HoD



Events Scheduled

I2C2SW 2018

The Conference focuses on the core technological developments in the emerging fields like Intelligent Computing, Communications and Control. These technologies have the potential to attract many intellectuals from India and abroad as a congregation to deliberate on the above themes and applications.

I2C2SW

DAE-BRNS Sponsored National Seminar

National Seminar

AICTE Sponsored National Seminar

National Workshop

Other Events

Website maintained by KEC Web Group

## Result:

Thus a web page has been designed using HTML Page Structure Elements.

## Viva Questions:

1 & 2. Identify the suitable page structure elements to design the content that is pointed in the following web page

The screenshot shows a web browser window with the URL <https://www.careerride.com/mcq/html-programming-language-n>. The page title is "CareerRide.com". The navigation bar includes links for Interview, Aptitude, Reasoning, English, GD, Placement papers, HR, Current affairs, Engineering, MCA, MBA, and Online test. A "Login" button is also present. The main content area features a sidebar with "Topics" and a list of programming and technology categories with their counts: Networking (207), C programming (58), SQL (5), Web Technologies (11), Operating System (96), Oracle (5), Algorithms (7), JavaScript (7), CSS (1), Database (97), Software Engineering (28), HTML (74), Data Structure (140), Java (25), C++ (50), PL/SQL (13), and XML (0). Below the sidebar is a blue footer bar with links to Home, About us, Contact us, Terms of use, Ask Us, and Follow us on Facebook! It also includes a copyright notice: © Copyright 2016. All Rights Reserved.

3. Design the content that is pointed in the web page shown below using appropriate page structure element and HTML5 elements

The screenshot shows a web browser window with the URL [https://webplatform.github.io/docs/guides/html\\_structural\\_ele](https://webplatform.github.io/docs/guides/html_structural_ele). The page title is "HTML structural elements". On the left, there's a sidebar with a green header "Ready to Use" and a note "This page is Ready to Use". The main content area has a "Summary" section stating that the article provides a tour through HTML structural elements. It then moves to an "Introduction" section, followed by "A typical page structure" which describes common structural elements like header, main content column, sidebars, and navigation menus. To the right is a "CONTENTS" sidebar with a tree-like structure: Summary, Introduction, A typical page structure, Structuring a page with HTML 4, Enter HTML5 structural elements (with bullet points for <section>, <article>, <header> and <footer>, <nav>, <aside>, and "Where does that leave <div>?"), HTML5 element support, Conclusion, and See also (with a bullet point for "Exercise questions"). An arrow points from the "Conclusion" link in the sidebar back towards the main content area.

4. Make use of ‘figure’ and ‘figcaption’ elements to display the photograph of any event along with the event’s title on a web page.
5. Display the details of the above event using ‘summary’ and ‘details’ tags.

## **Experiment 5:**

### **DESIGN A REGISTRATION FORM AND VALIDATE THE FORM DATA USING JAVASCRIPT**

**Aim:** To design a registration page to create email-id and validate the information in the web page using JavaScript

#### **Description:**

<b>Tag</b>	<b>Description</b>																				
<form>	<p>The &lt;form&gt; tag is used to create an HTML form for user input.</p> <p>The &lt;form&gt; element can contain one or more of the following form elements:</p> <ul style="list-style-type: none"><li>• &lt;input&gt;, &lt;textarea&gt;, &lt;button&gt;, &lt;select&gt;, &lt;option&gt;, &lt;optgroup&gt;, &lt;fieldset&gt;, &lt;label&gt;, &lt;output&gt;</li></ul>																				
<input>	<p>The &lt;input&gt; tag specifies an input field where the user can enter data.</p> <table border="1"><thead><tr><th><b>Attribute</b></th><th><b>Value</b></th><th><b>Description</b></th></tr></thead><tbody><tr><td>type</td><td>Button, checkbox, color, date datetime-local, email, file, hidden, image, month, number, password, radio, range reset, search submit, tel, text, time, url, week</td><td>Specifies the type &lt;input&gt; element to display</td></tr><tr><td>align</td><td>left, right, top, middle, bottom</td><td>Specifies the alignment of an image input (only for type="image")</td></tr><tr><td>autocomplete</td><td>on, off</td><td>Specifies whether an &lt;input&gt; element should have autocomplete enabled</td></tr><tr><td>autofocus</td><td>autofocus</td><td>Specifies that an &lt;input&gt; element should automatically get focus when the page loads</td></tr><tr><td>height</td><td>pixels</td><td>Specifies the height of an &lt;input&gt; element (only for type="image")</td></tr></tbody></table>			<b>Attribute</b>	<b>Value</b>	<b>Description</b>	type	Button, checkbox, color, date datetime-local, email, file, hidden, image, month, number, password, radio, range reset, search submit, tel, text, time, url, week	Specifies the type <input> element to display	align	left, right, top, middle, bottom	Specifies the alignment of an image input (only for type="image")	autocomplete	on, off	Specifies whether an <input> element should have autocomplete enabled	autofocus	autofocus	Specifies that an <input> element should automatically get focus when the page loads	height	pixels	Specifies the height of an <input> element (only for type="image")
<b>Attribute</b>	<b>Value</b>	<b>Description</b>																			
type	Button, checkbox, color, date datetime-local, email, file, hidden, image, month, number, password, radio, range reset, search submit, tel, text, time, url, week	Specifies the type <input> element to display																			
align	left, right, top, middle, bottom	Specifies the alignment of an image input (only for type="image")																			
autocomplete	on, off	Specifies whether an <input> element should have autocomplete enabled																			
autofocus	autofocus	Specifies that an <input> element should automatically get focus when the page loads																			
height	pixels	Specifies the height of an <input> element (only for type="image")																			

	max	number date	Specifies the maximum value for an <input> element													
	maxlength	number	Specifies the maximum number of characters allowed in an <input> element													
	min	number date	Specifies a minimum value for an <input> element													
	multiple	multiple	Specifies that a user can enter more than one value in an <input> element													
	name	Text	Specifies the name of an <input> element													
	placeholder	Text	Specifies a short hint that describes the expected value of an <input> element													
	required	required	Specifies that an input field must be filled out before submitting the form													
	size	number	Specifies the width, in characters, of an <input> element													
	value	Text	Specifies the value of an <input> element													
	width	pixels	Specifies the width of an <input> element (only for type="image")													
<select>	The <select> element is used to create a drop-down list.															
<option>	The <option> tags inside the <select> element define the available options in the list.															
<textarea>	The <textarea> tag defines a multi-line text input control.															
	<table border="1"> <thead> <tr> <th>Attribute</th><th>Value</th><th>Description</th><th></th></tr> </thead> <tbody> <tr> <td>cols</td><td>number</td><td>Specifies the visible width of a text area</td><td></td></tr> <tr> <td>rows</td><td>number</td><td>Specifies the visible height of a text area</td><td></td></tr> </tbody> </table>				Attribute	Value	Description		cols	number	Specifies the visible width of a text area		rows	number	Specifies the visible height of a text area	
Attribute	Value	Description														
cols	number	Specifies the visible width of a text area														
rows	number	Specifies the visible height of a text area														
<button>	The <button> tag defines a clickable button.															
	<table border="1"> <thead> <tr> <th>Attribute</th><th>Value</th><th>Description</th><th></th></tr> </thead> <tbody> <tr> <td>type</td><td>button reset submit</td><td>Specifies the type of button</td><td></td></tr> <tr> <td>value</td><td>text</td><td>Specifies an initial value for the button</td><td></td></tr> </tbody> </table>				Attribute	Value	Description		type	button reset submit	Specifies the type of button		value	text	Specifies an initial value for the button	
Attribute	Value	Description														
type	button reset submit	Specifies the type of button														
value	text	Specifies an initial value for the button														

Forms are used in webpages for the user to enter their required details that are further sent to the server for processing. The data entered into a form needs to be in the right format and certain fields need to be filled in order to effectively use the submitted form. JavaScript is used to validate the form.

**Program:**

```
<html>
<head><title>Email and Password Validation using JavaScript String Object</title>
    <style>
        div{
            width:500px;
            height:auto;
            background-color:dodgerblue;
            opacity:.9;
            position:fixed;top:50px;left:450px;
            text-align:left;
            border-radius:50px;
        }
        form{
            margin-left:50px;
        }
        input{
            border-radius:50px;
            height:30px;width:200px;
        }
        label{
            color:brown;
            font-size:15pt;
        }
    </style>

</head>
<body style="background-image:url('../Images/bg.png');">
    <div>
        <h1 style="text-align:center;color:yellow;">Sign Up</h1>
        <form>
            <label>Emial-ID</label>
            <input type="text" id="mail1" onblur="validate()" style="margin-left:100px;"/><br/><br/>
            <label> Password</label>
            <input type="password" id="pass" onblur="del()" style="margin-left:100px;"/><br/><br/>
            <label> Re-type Password</label>
            <input type="password" id="cpass" onblur="cmp()" style="margin-left:40px;"/><br/><br/>
            <br/><input type="submit" value="Sign-Up"/>
    </div>
</body>
```

```

</form>
</div>

<script>
    var email,pass1,pass2,el,pl,em;

    function validate()
    {

        email=document.getElementById("mail1");
        em=email.value;
        if(em=="")
        {
            window.alert("Please enter your email ID");
            email.focus();
        }
        //Email Validation

        else if(em.indexOf('@')<=3)
        {
            alert("Enter a valid Email ID");
        }
        else{
            alert(em);
            var x=em.split("@");
            var dotPos=x[1].indexOf('.');
            var xl=x[0].length;
            xl=xl+1;
            var y=x[1].split(".");
            if(dotPos==xl)
                alert("Enter the email in correct format");
            else if(y[1]!="com" || y[1]!="edu" || y[1]!="co" || y[1]!="ac")
                alert("Enter the email in correct format");
            else
                window.location.href="personalInfo.html";
        }
    }

```

```

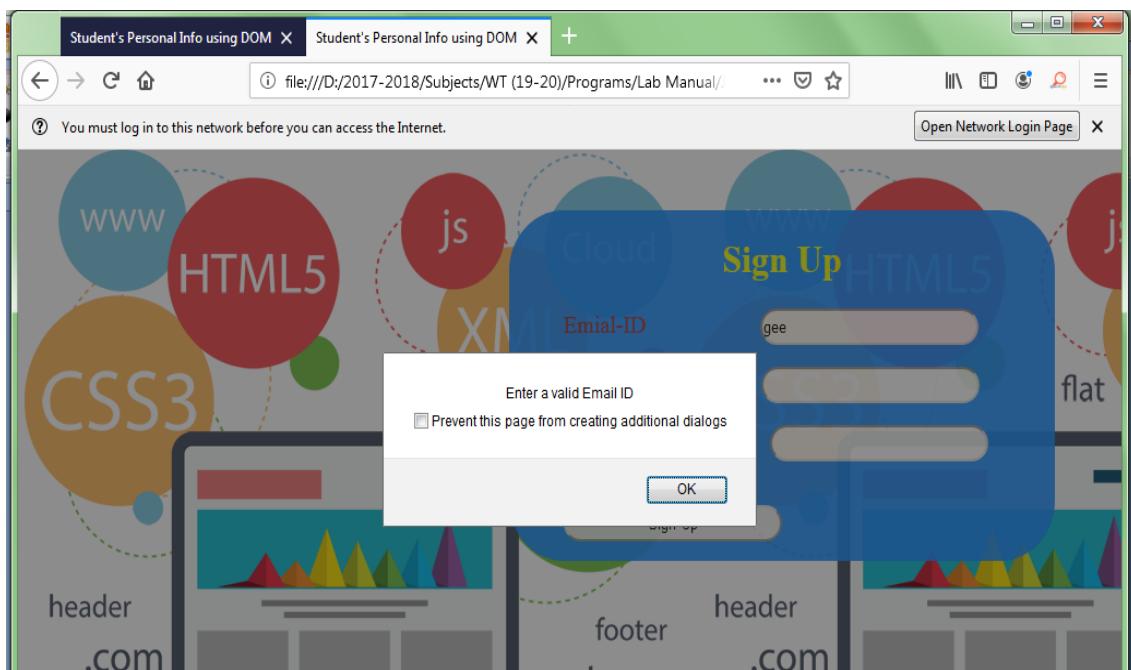
function del()
{
    //Password Validation
    pass1=document.getElementById("pass");
    pl=pass1.value.length;
    if( pass1.value=="")
    {
        alert("Please fill the password field")
        pass1.focus();
    }
    else{
        if(pl<6)
            alert("Weak Password");
        else if(pl>10)
            alert("Strong Password");
        else
            alert("Frame strong password to secure it");
    }
}
function cmp()
{
    pass1=document.getElementById("pass").value;
    pass2=document.getElementById("cpass").value;
    if(pass1!=pass2)
        alert("Confirm password does not match with password field");

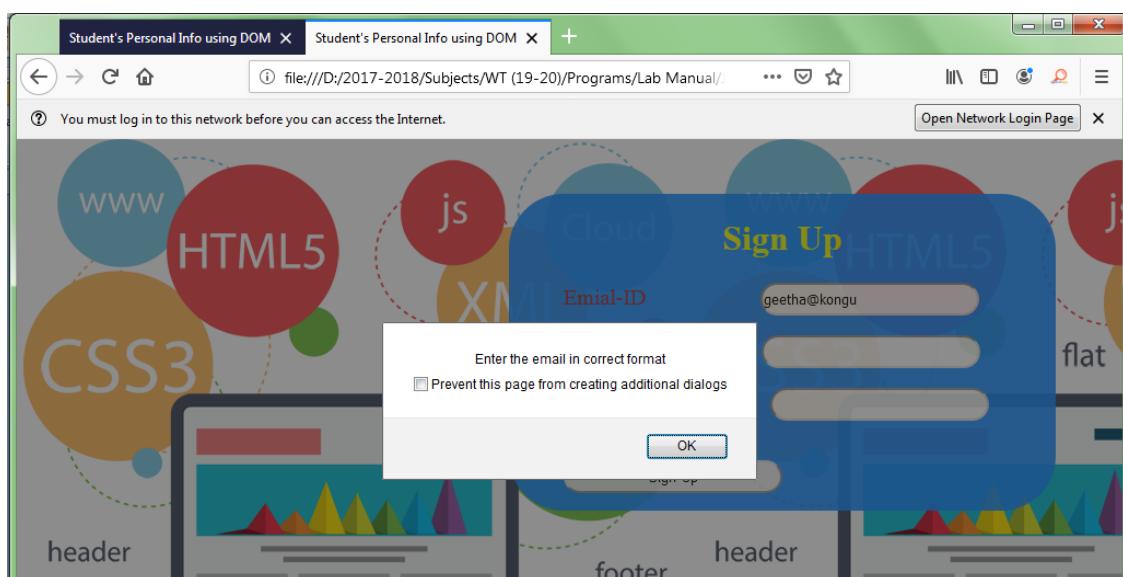
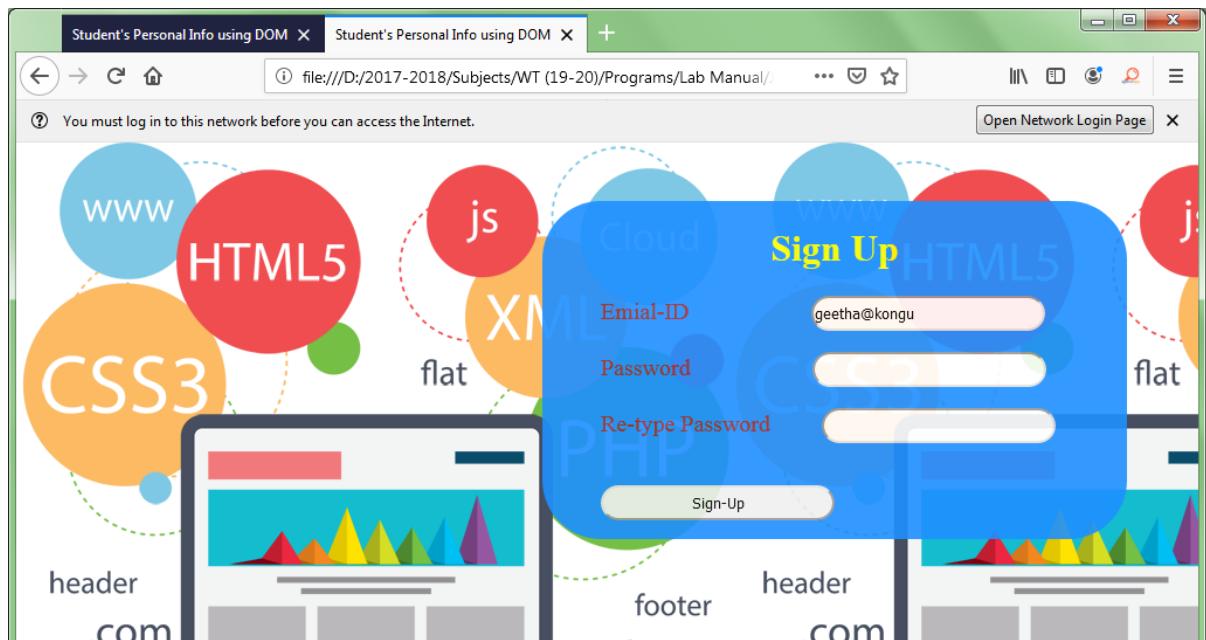
}

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

```

## Output:





### Result:

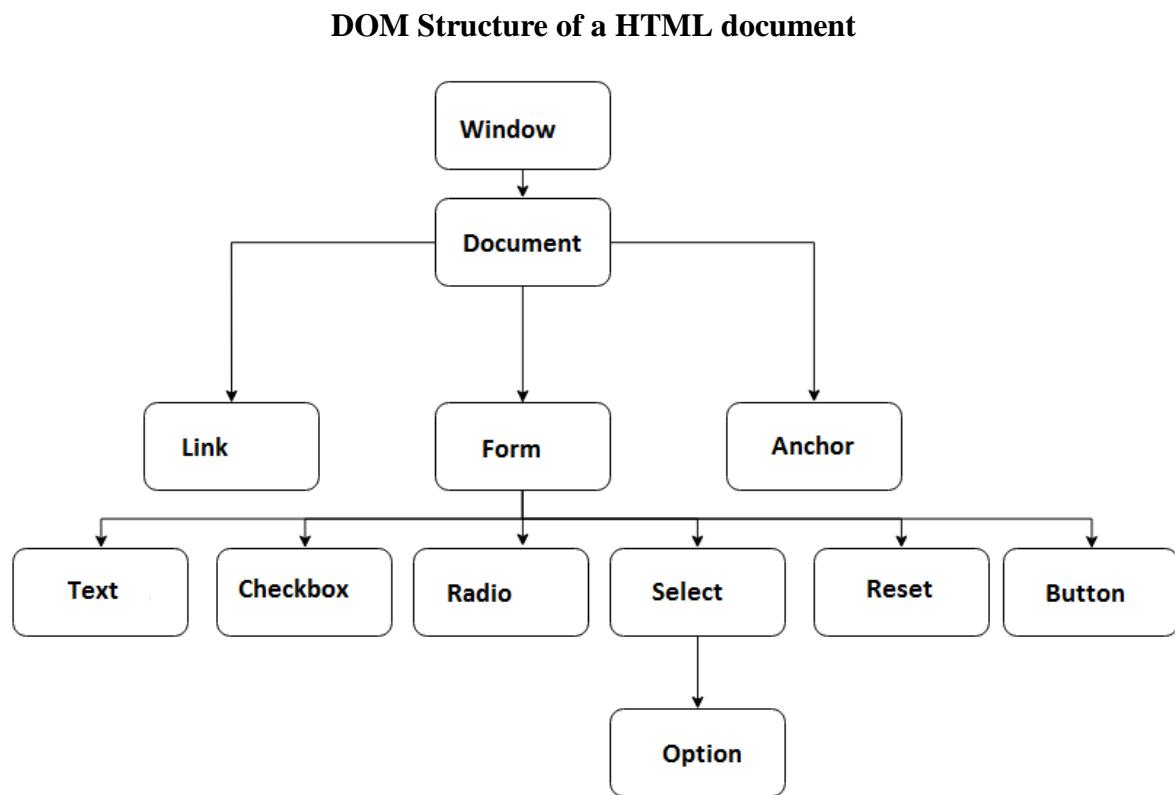
Thus a registration page has been designed and the information in the form has been validated using JavaScript string objects

## Experiment 6:

### DEVELOP DYNAMIC WEB PAGES USING DOM OBJECTS AND COLLECTIONS

**Aim:** To design web pages using JavaScript Objects and Collections

#### Description:



#### Document Object Model (DOM)

The HTML DOM is a standard way of getting, changing, adding, or removing HTML elements. DOM is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a HTML document.

- HTML DOM methods are actions that you can perform on HTML Elements
- HTML DOM properties are values of HTML Elements that you can set or change.
- In DOM, all HTML elements are defined as objects.

#### Refering the HTML Elements

- `document.getElementById(id)` - Refer an element by element id
- `document.getElementsByTagName(name)` - Refer elements by tag name

- `document.getElementsByClassName(name)` - Refer elements by class name
- `document.getElementsByName(name)` - Refer elements by name

### **Changing the Content and Appearance of HTML Elements**

- `element.innerHTML = new html content` → Change the inner HTML of an element
- `element.attribute = new value` (or) `element.setAttribute(attribute, value)`  
→ Change the attribute value of an HTML element
- `element.style.property = new style` → Change the style of an HTML element

### **Create, add and Delete Elements**

- `document.createElement(element)` → Create an HTML element
- `document.createAttribute()` → Creates an attribute node
- `document.createComment()` → Creates a Comment node with the specified text
- `document.createTextNode()` → Creates a Text node
- `document.removeChild(element)` → Remove an HTML element
- `document.appendChild(element)` → Add an HTML element
- `document.replaceChild(new, old)` → Replace an HTML element
- `document.write(text)` → Write into the HTML output stream

### **DOM Collections**

- images
- links
- forms
- anchors

The collection's length property specifies the number of items in the collection.

- `document.links.length` → specifies the number of links
- `document.images.length` → specifies the number of images
- `document.forms.length` → specifies the number of forms
- `document.getElementById("myform").elements.length` → specifies the number of form elements in "myform"

### **Program:**

#### **i) Fee Payment using Date Object**

```
<html>
<head><title>Fee Payment using Date Object</title>
<style>
body{
```

```

background-image:url("../Images/bg.png");
height:100%;
width:100%;
}
#head1{
    text-align:center;
    background-color:black;
    color:white;
    position:relative;
    top:-25;
}
#content{
    width:400px;
    height:auto;
    background-color:DarkOrange ;//rgb(48, 70, 232);
    opacity:.9;
    position:relative;
    top:0;left:450px;
    text-align:center;
    overflow:auto;
}
</style>
</head>
<body>
    <header>
        
        <h1 id="head1">DEPARTMENT OF CSE</h1>
    </header>
    <div id="content">
        <h1>Onlie Fee Payment</h1>
        <form>
            <p style="font-size:15pt;font-weight:bold;">Name &nbsp;&nbsp;&nbsp;
            <input type="text" id="uname" value=" "><br/><br/>
            Roll No.&nbsp;&nbsp;&nbsp;
            <input type="text" id="roll" value=" "><br/><br/>
            Year of Study&nbsp;&nbsp;
            <select id="yr">
                <option>Select</option>
                <option value="I">I</option>
                <option value="II">II</option>
                <option value="III">III</option>
                <option value="IV">IV</option>

```

```

</select><br/><br/>
Department &nbsp;&nbsp;&nbsp;;
<select id="dept">
<option>Select</option>
<option value="civil">CIVIL</option>
<option value="mechanical">MECHANICAL</option>
<option value="automobile">AUTOMOBILE</option>
<option value="ece">ECE</option>
<option value="eie">EIE</option>
<option value="eee">EEE</option>
<option value="cse">CSE</option>
<option value="it">IT</option>
</select><br/><br/>

<input type="button" onclick="PayFee()" value="Pay"/>
</p>
</form>
<h3 style="font-weight:bold;background-color:#350000; color:LimeGreen; width:150px; margin-left:130px;" id="details">Your Details: </h3>
<h3 style="font-weight:bold;" id="status"></h3>
</div>

<script>
var stName,stRoll,stDept,stYear;
var h,st;

function PayFee()
{
    stName=document.getElementById("uname").value;
    stRoll=document.getElementById("roll").value;
    stDept=document.getElementById("dept").value;
    stYear=document.getElementById("yr").value;
    st=document.getElementById("status");
    h=document.getElementById("details");

    var dt2=new Date();
    var current=dt2.getDate();
    var dt1=new Date(2019,8,6);

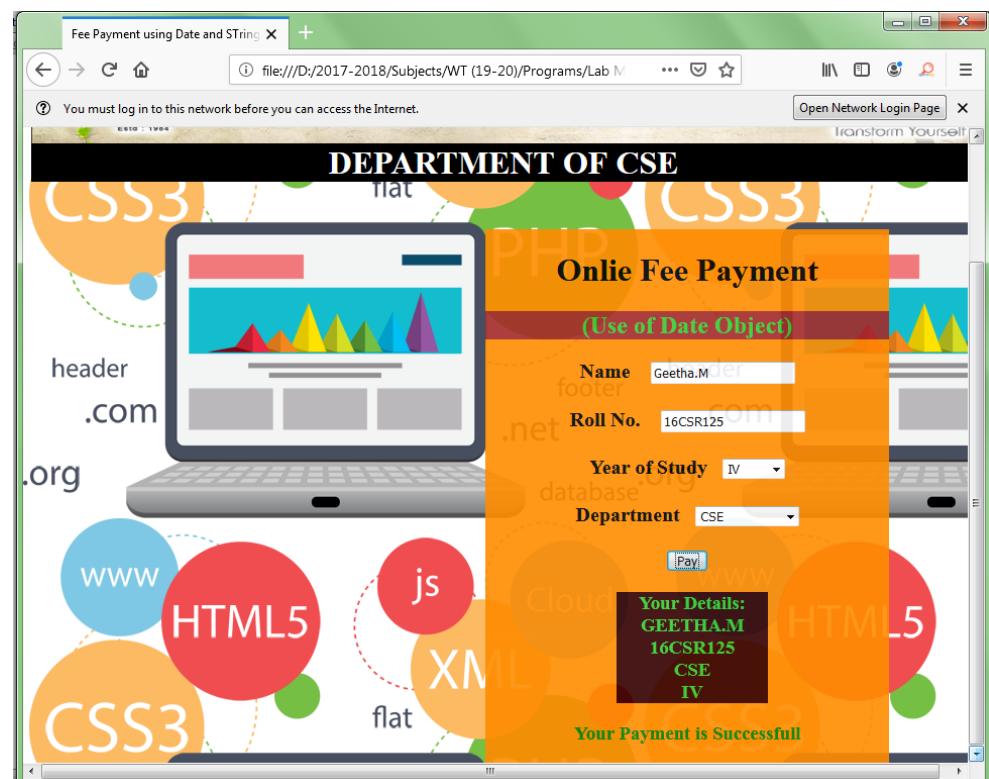
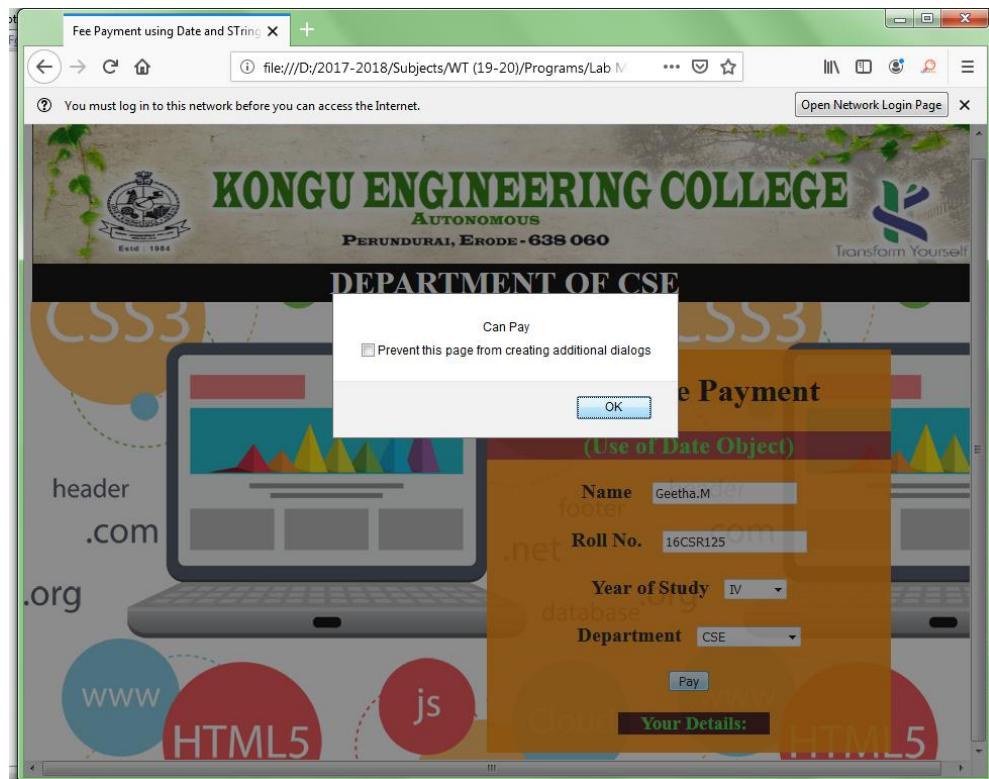
```

```
//Checking the due date
if(currentDate<=dt1.getDate() && currentMonth<=dt1.getMonth())
{
    alert("Can Pay");
    stName=stName.toUpperCase();
    stRoll=stRoll.toUpperCase();
    stDept=stDept.toUpperCase();
    h.innerHTML+="<br/>"+stName+"<br/>"+stRoll+"<br/>"+stDept+"<br/>"+stYear;
    st.style.color="green";
    st.innerHTML="Your Payment is Successfull";
}
else
{
    st.style.color="red";
    st.innerHTML="Can't Pay after due date. Contact Office ";
}
}

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

## Output:







ii) Language Translation: English to PigLatin

```

<html>
<head><title>Language Translation</title>
    <style>
        body{
            background-image:url("../Images/bg.png");
            background-repeat:repeat;
        }
        h2{
            color:pink;
            background-color:green;
            width:300px;
            font-size:20pt;
            text-decoration:underline;
        }
        div{
            background-color:limegreen;
            width:900px;
            height:auto;
        }
    </style>
</head>
<body>
    <h2>English to PigLatin</h2>
    <div>
        <form>
            <p>Enter English Word:</p>
            <input type="text" name="englishWord">
            <p>PigLatin Word:</p>
            <input type="text" name="pigLatinWord">
            <input type="button" value="Translate" onclick="translate()"/>
        </form>
    </div>
</body>
</html>

```

```

        position:fixed;
        top:0;
    }
</style>
</head>
<body>

<div>
<h1 style="text-align:center;color:gold;">Language Translation: English - PigLatin</h1>
<h2>Paragraph in English: </h2>
<p id="sen" style="color:purple;font-size:20pt;font-weight:bold;text-align:justify;background-color:gold;width:800px;">

Kongu Engineering College, one of the foremost multi professional research-led Institutions is
internationally a recognized leader in professional and career-oriented education. It provides an
integral, inter-disciplinary education - a unique intersection between theory and practice,
passion and reason. </p>
<h2>Paragraph in PigLatin : </h2>

<p id="res" style="color:gold;background-color:purple;font-weight:bold;font-size:20pt;text-align:justify;width:800px;"></p>
<form>
    <input type="button" id="bt" value="Translate" style="background-color:brown;color:white;font-size:20pt;width:160px;height:60px;" onclick="Token()"/>

</form>
</div>

<script>
var text=document.getElementById("sen").innerHTML;
var pigLatin=[];
var text1=" ";
function Token()
{
var token=text.split(" ");
var len=token.length;
var s,tlen;
var sub,ans;
ans=document.getElementById("res");
for(var k=0;k<len;k++)
{
    s=token[k].charAt(0);

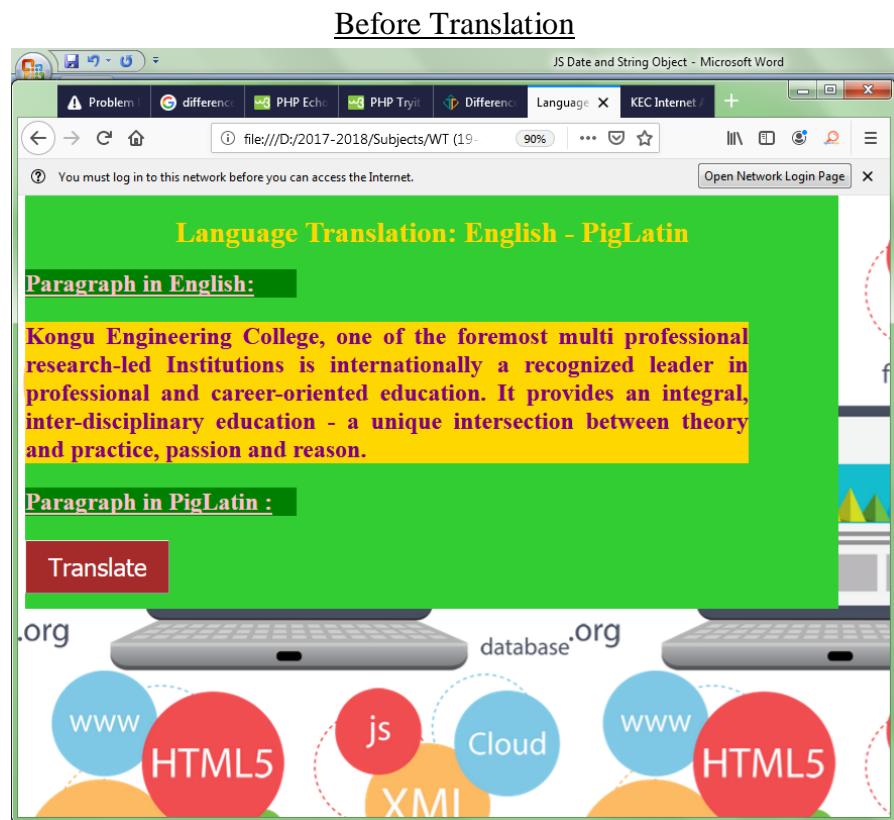
```

```

tlen=token[k].length;
sub=token[k].slice(1,tlen);
pigLatin[k]=sub+s+"ay";
text1+=pigLatin[k]+" ";
}
ans.innerHTML=text1;
}
</script>
</body>
</html>

```

**Output:**



### After Translation



### iii) Simple Animations using Document Object Model

#### a) Image Animation

```
<html>
<head></head>
<body id="doc1" >
<h2 style="color:red;"> Simple Animation using Document Object Model</h2>

<script type="text/javascript">

var img;
var id,x,y;
img=document.getElementById("pic1");
x=img.width;
y=img.height;

function animate()
{
    id = setInterval(enlarge, 10);
}

function enlarge()
{
```

```

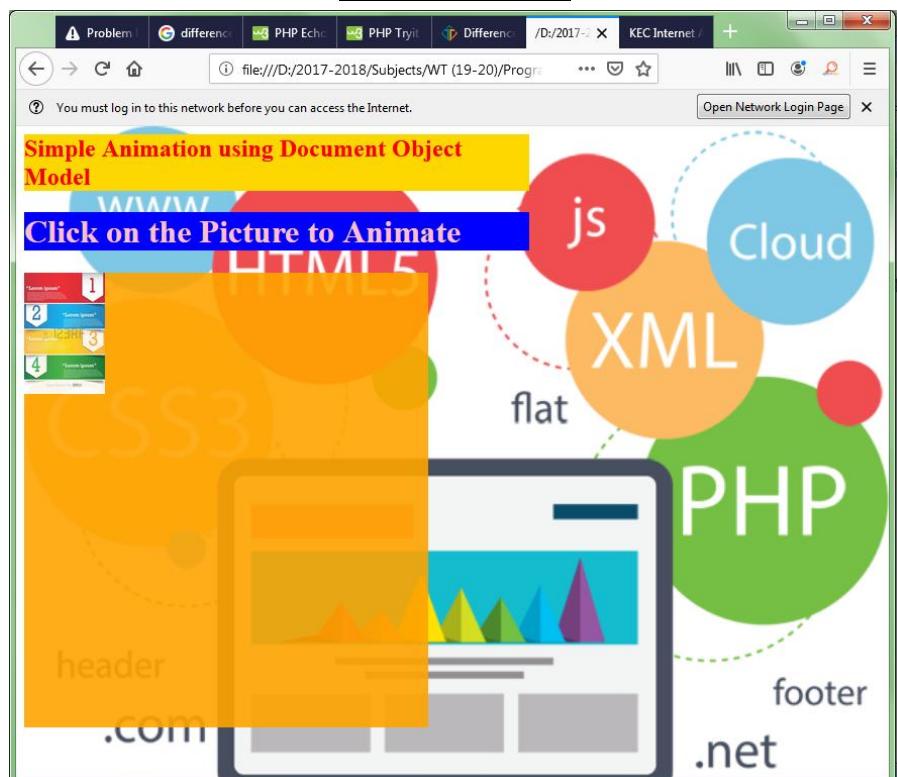
if(y<=375)
{
    x+=1;
    y+=1;
    img.setAttribute("width",x+"px");
    img.setAttribute("height",y+"px");
}
else
{
    clearInterval(id);
}
}

img.addEventListener("click",animate,false);
</script>
</body>
</html>

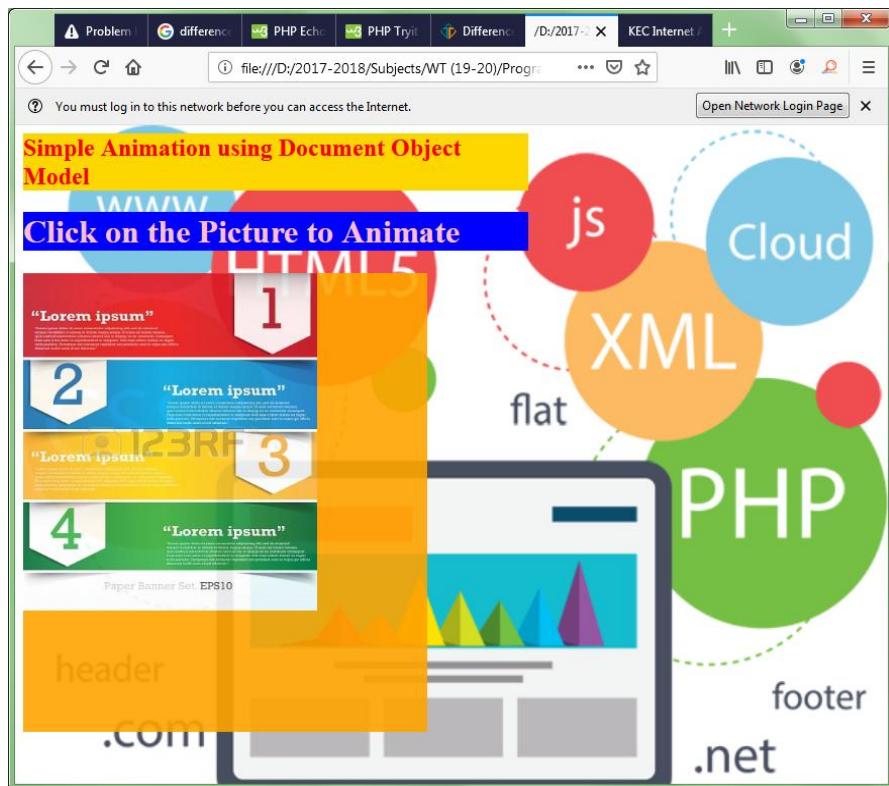
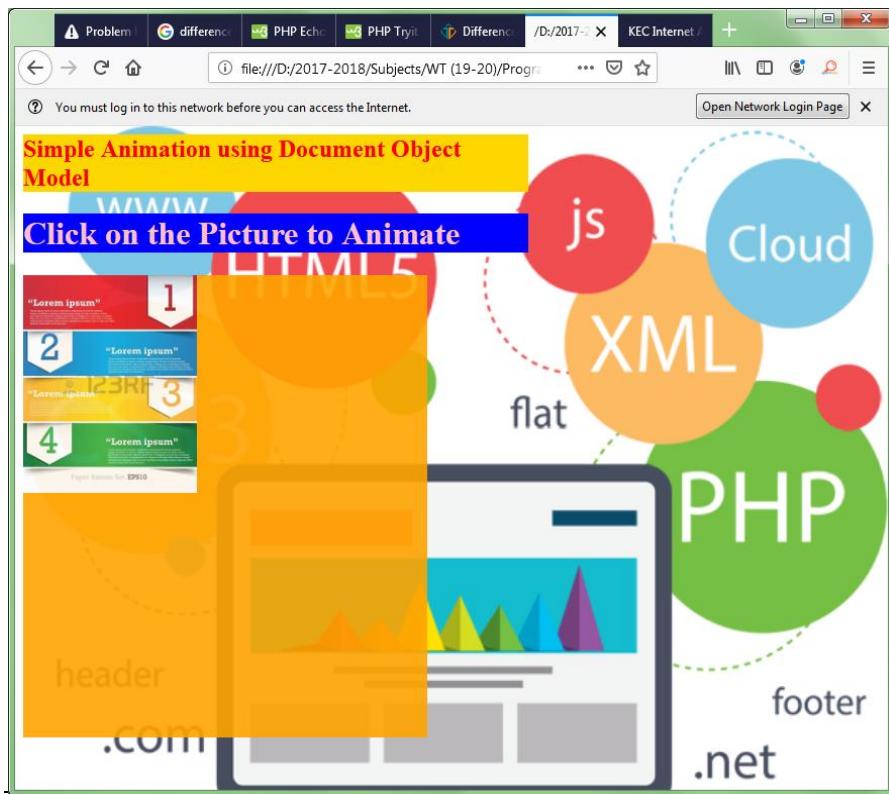
```

### Output:

Before Animation



## During Animation



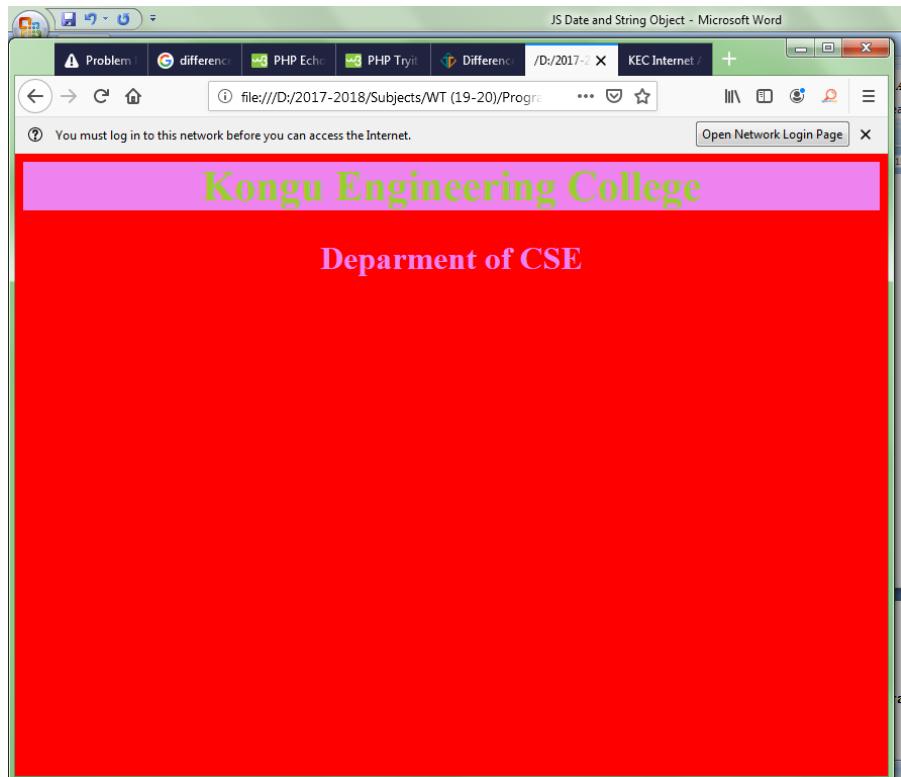
**b) Color Animation**

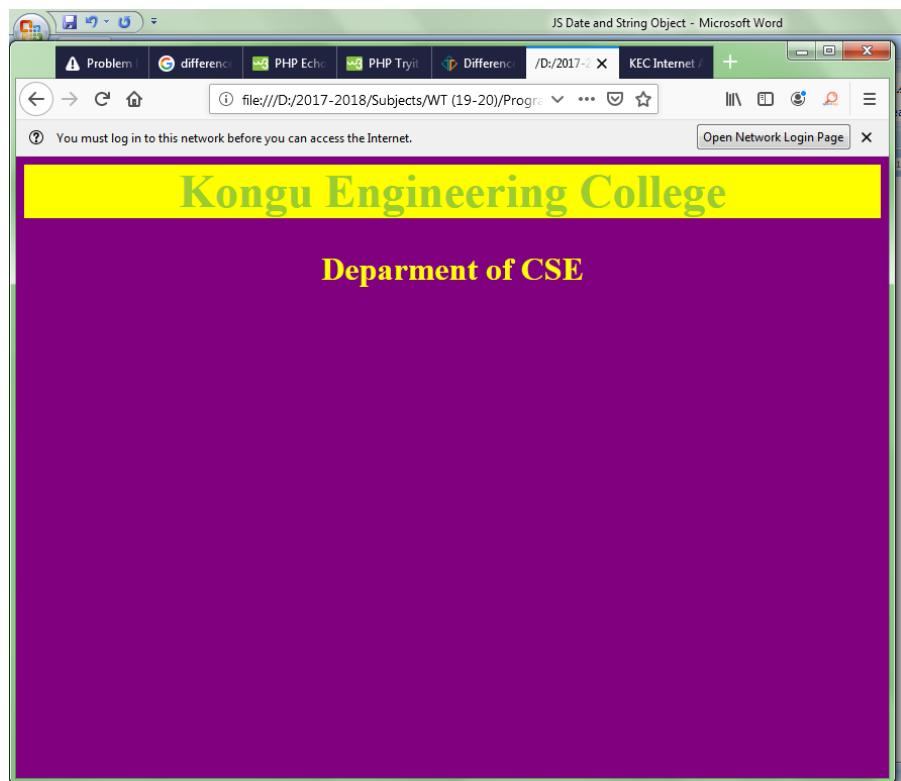
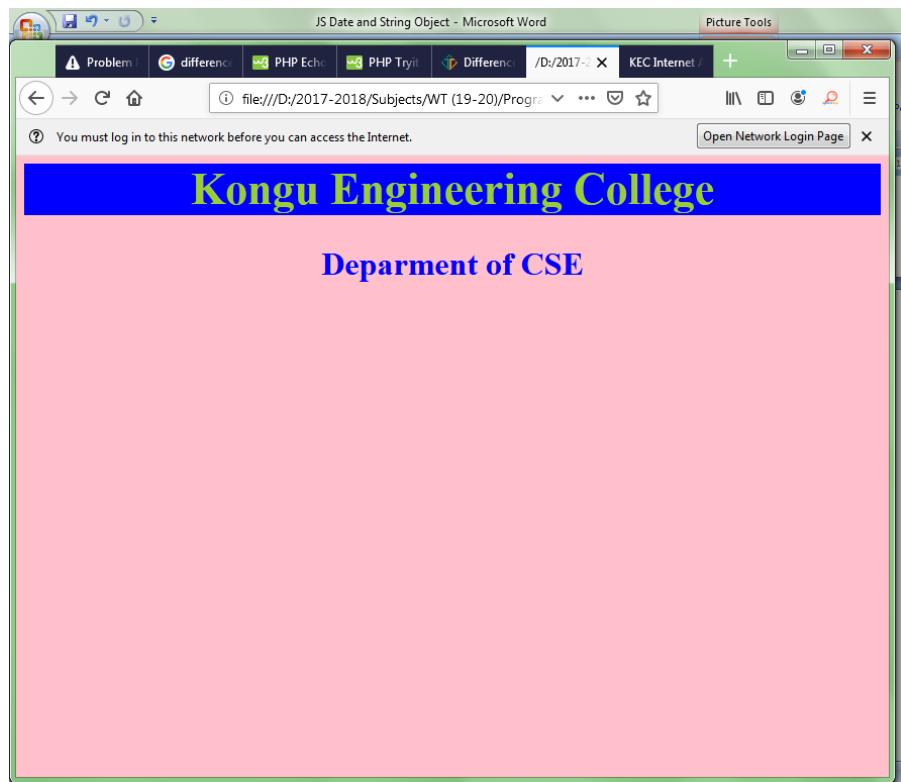
```
<html>
<head></head>
<body id="doc1">
<h1 style="text-align:center;color:green;" id="kec" onclick="change()">
Kongu Engineering College</h1>
<h1 align="center" color="green" id="cse"> Deparment of CSE</h1>

<script type="text/javascript">
var color1=["red","pink","purple","orange","yellow","green","blue","violet"];
var color2=["violet","blue","yellow","brown","orange","lightblue","pink","red"];
var l=color1.length;
var id,i,cl=5;
var bg=document.getElementById("doc1");
var head1=document.getElementById("kec");
var head2=document.getElementById("cse");
var size=40;
function change()
{
i=0;
id=setInterval/animate,1000);
}
function animate()
{
if(i<l)
{
size+=2;
bg.style.backgroundColor=color1[i];
head1.style.backgroundColor=color2[i];
head1.style.fontSize=size+'px';
head2.style.color=color2[i];
i++;
}
else
{
clearInterval(id);
}
}
}
```

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

**Output:**





#### *iv) DOM Collections*

##### **Program:**

```
<html>
<head><title>DOM Collections</title>
<style>
    #mEvents{
        display:flex;
    }
    .back {
        width: 300px;
        height: 260px;
        position: absolute;
        top: 300px;
        left: 0px;
        background-color:green;
    }
    .flipper {
        position: relative;
        width:100%;
    }
    .front {
        width: 300px;
        height: 250px;
        position: fixed;
        top:0px;
        display:inline;
        padding:10px;
        background-color:rgb(191, 255, 0);
    }
    .front img{
        // position:relative;
        width:100%;
        height:200px;
    }
    .back p{
        text-align:justify;
        color:rgb(191, 255, 0);
    }
</style>
<body>
    <div id="mEvents">
        <div class="back"></div>
        <div class="flipper">
            <div class="front">
                <img alt="A green rectangular background element with a white border and a black arrow pointing upwards." data-bbox="0 0 100% 100%"/>
            </div>
            <p>This is a sample text for the back side of the flipper. It is positioned absolutely at the top of the page and has a height of 260px and a width of 300px. The front side is positioned fixed at the top of the page with a height of 250px and a width of 300px. The front side has a white background color and a padding of 10px. The back side has a green background color. The flipper itself has a width of 100% and is positioned relative to its parent element.</p>
        </div>
    </div>
</body>
</html>
```

```

        padding:20px;
    }
    .front h3{
        text-align:center;
    }
    </style>
</head>

<body>
<div id="mEvents" onclick="collect()">

<div class="flipper">
    <div class="front">
        <!-- front content -->
        <h3>Event 1</h3>
        
    </div>
    <div class="back">
        <!-- back content -->
        <p>
            CSS animations are a lot of fun; the beauty of them is that through many
            simple properties, you can create anything from an elegant fade in to a WTF-Pixar-
            would-be-proud effect. One CSS effect somewhere in between is the CSS flip effect,
            whereby there's content on both the front and back of a given container. This tutorial
            will show you how to create that effect in as simple a manner as possible.
        </p>
    </div>
</div>
<div class="flipper">
    <div class="front">
        <!-- front content -->
        <h3>Event 2</h3>
        
    </div>

    <div class="back">
        <!-- back content -->
        <p>

```

Quick note: this is not the first tutorial about this effect, but I've found the others over-complicated. Many other tutorials add additional styles to code samples which then require the reader to decipher which are needed and which aren't. This tutorial avoids that issue, providing you only the necessary styles; you can pretty up each side of the flip any way you'd like.

```

</p>
</div>
</div>

<div class="flipper">
    <div class="front">
        <!-- front content -->
        <h3>Event 3</h3>
        
    </div>
    <div class="back">
        <!-- back content -->
    <p>
```

CSS animations are a lot of fun; the beauty of them is that through many simple properties, you can create anything from an elegant fade in to a WTF-Pixar-would-be-proud effect. One CSS effect somewhere in between is the CSS flip effect, whereby there's content on both the front and back of a given container. This tutorial will show you how to create that effect in as simple a manner as possible.

```

    </p>
    </div>
</div>

<div class="flipper">
    <div class="front">
        <!-- front content -->
        <h3>Event 4</h3>
        
    </div>
    <div class="back">
        <!-- back content -->
        <p>
```

Quick note: this is not the first tutorial about this effect, but I've found the others over-complicated. Many other tutorials add additional styles to code samples which then require the reader to decipher which are needed and which aren't. This tutorial avoids that issue, providing you only the necessary styles; you can pretty up each side of the flip any way you'd like.

```

    </p>
    </div>
</div>
</div>
<!--Flip content url - https://davidwalsh.name/css-flip-->
```

```

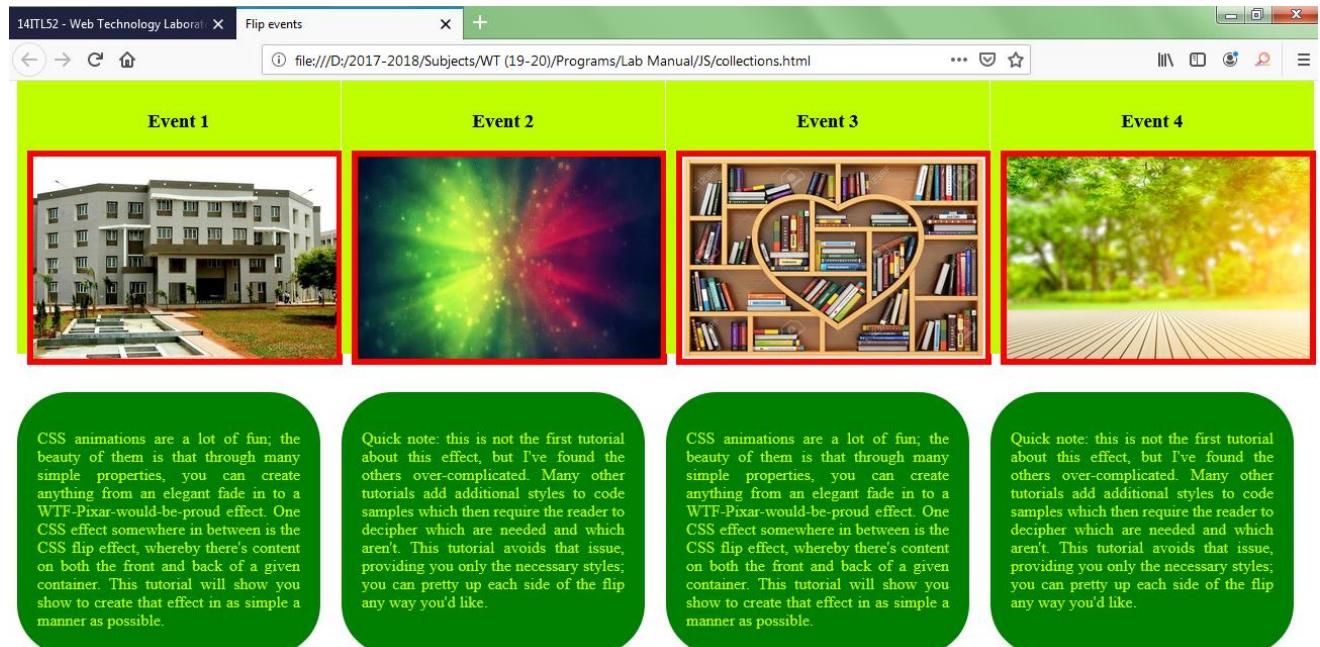
<script>
    function collect()
    {
        var pics=document.images;
        var para=document.getElementsByClassName("back");
        for(var i=0;i<pics.length;i++)
        {
            pics[i].setAttribute("style","border:6px solid red");
        }
        for(var j=0;j<para.length;j++)
        {
            para[j].setAttribute("style","border-radius:50px");
        }
    }
</script>
</body>
</html>

```

## Output:

The screenshot shows a web page titled "Flip events" with four event cards. Event 1 displays a photograph of a modern multi-story building. Event 2 shows a vibrant, glowing abstract background with green and red rays. Event 3 features a wooden bookshelf filled with books, with a large heart shape cut out in the center. Event 4 shows a bright, sunlit path through a lush green forest. Below each card is a dark green box containing descriptive text.

Event 1	Event 2	Event 3	Event 4
CSS animations are a lot of fun; the beauty of them is that through many simple properties, you can create anything from an elegant fade in to a WTF-Pixar-would-be-proud effect. One CSS effect somewhere in between is the CSS flip effect, whereby there's content on both the front and back of a given container. This tutorial will show you how to create that effect in as simple a manner as possible.	Quick note: this is not the first tutorial about this effect, but I've found the others over-complicated. Many other tutorials add additional styles to code samples which then require the reader to decipher which are needed and which aren't. This tutorial avoids that issue, providing you only the necessary styles; you can pretty up each side of the flip any way you'd like.	CSS animations are a lot of fun; the beauty of them is that through many simple properties, you can create anything from an elegant fade in to a WTF-Pixar-would-be-proud effect. One CSS effect somewhere in between is the CSS flip effect, whereby there's content on both the front and back of a given container. This tutorial will show you how to create that effect in as simple a manner as possible.	Quick note: this is not the first tutorial about this effect, but I've found the others over-complicated. Many other tutorials add additional styles to code samples which then require the reader to decipher which are needed and which aren't. This tutorial avoids that issue, providing you only the necessary styles; you can pretty up each side of the flip any way you'd like.



#### v) Demonstration of JavaScript DOM – Dynamic creation and Insertion of Elements

```

<html>
<head>
<title>Student Registration Form</title>
<style>
body{
    background-image:url("../Images/brick wall.jpg");
    background-size:150px;
}
td{
    font-weight:bold;
    color:brown;
}
</style>
</head>
<body>
<div style="background-color:brown;text-align:center;height:140px;position:absolute;top:0;left:0;width:100%;"><h1 style="color:lightyellow;">JavaScript - Document Object Model </h1>
<h2>(Usage of createElement(), appendChild(), and getElementsByTagName()) </h2>
<h1 style="background-color:lightyellow;text-align:center;">STUDENT REGISTRATION FORM</h1>
</div>

```

```

<table align="center" cellpadding = "10" style="background-color:rgb(255,242,176);border-radius:18px;width:800px;position:absolute;top:200px;left:250px;">

<!-- First Name ----->
<tr>
<td>FIRST NAME</td>
<td><input type="text" name="First_Name" maxlength="30"/>
(max 30 characters a-z and A-Z)
</td>
</tr>

<!-- Last Name ----->
<tr>
<td>LAST NAME</td>
<td><input type="text" name="Last_Name" maxlength="30"/>
(max 30 characters a-z and A-Z)
</td>
</tr>

<!-- Date Of Birth ----->
<tr>
<td>DATE OF BIRTH</td>
<td>
<select name="Birthday_day" id="Birthday_Day">
<option value="-1">Day:</option>
<option value="1">1</option>
<option value="2">2</option>
<option value="3">3</option>
<option value="4">4</option>
<option value="5">5</option>
<option value="6">6</option>
<option value="7">7</option>
<option value="8">8</option>
<option value="9">9</option>
<option value="10">10</option>
<option value="11">11</option>
<option value="12">12</option>
<option value="13">13</option>
<option value="14">14</option>
<option value="15">15</option>
<option value="16">16</option>
<option value="17">17</option>
<option value="18">18</option>

```

```

<option value="19">19</option>
<option value="20">20</option>
<option value="21">21</option>
<option value="22">22</option>
<option value="23">23</option>
<option value="24">24</option>
<option value="25">25</option>
<option value="26">26</option>
<option value="27">27</option>
<option value="28">28</option>
<option value="29">29</option>
<option value="30">30</option>
<option value="31">31</option>
</select>

<select id="Birthday_Month" name="Birthday_Month">
<option value="-1">Month:</option>
<option value="January">Jan</option>
<option value="February">Feb</option>
<option value="March">Mar</option>
<option value="April">Apr</option>
<option value="May">May</option>
<option value="June">Jun</option>
<option value="July">Jul</option>
<option value="August">Aug</option>
<option value="September">Sep</option>
<option value="October">Oct</option>
<option value="November">Nov</option>
<option value="December">Dec</option>
</select>

<select name="Birthday_Year" id="Birthday_Year">
<option value="-1">Year:</option>
<option value="2012">2012</option>
<option value="2011">2011</option>
<option value="2010">2010</option>
<option value="2009">2009</option>
<option value="2008">2008</option>
<option value="2007">2007</option>
<option value="2006">2006</option>
<option value="2005">2005</option>
<option value="2004">2004</option>

```

```

<option value="2003">2003</option>
<option value="2002">2002</option>
<option value="2001">2001</option>
<option value="2000">2000</option>
<option value="1999">1999</option>
<option value="1998">1998</option>
<option value="1997">1997</option>
<option value="1996">1996</option>
<option value="1995">1995</option>
<option value="1994">1994</option>
<option value="1993">1993</option>
<option value="1992">1992</option>
<option value="1991">1991</option>
<option value="1990">1990</option>
<option value="1989">1989</option>
<option value="1988">1988</option>
<option value="1987">1987</option>
<option value="1986">1986</option>
<option value="1985">1985</option>
<option value="1984">1984</option>
<option value="1983">1983</option>
<option value="1982">1982</option>
<option value="1981">1981</option>
<option value="1980">1980</option>
</select>
</td>
</tr>

<!-- Email Id -->
<tr>
<td>EMAIL ID</td>
<td><input type="text" name="Email_Id" maxlength="100" /></td>
</tr>

<!-- Mobile Number -->
<tr>
<td>MOBILE NUMBER</td>
<td>
<input type="text" name="Mobile_Number" maxlength="10" />
(10 digit number)
</td>
</tr>

```

```

<!----- Gender ----->
<tr>
<td>GENDER</td>
<td>
Male <input type="radio" name="Gender" value="Male" />
Female <input type="radio" name="Gender" value="Female" />
</td>
</tr>

<!----- Address ----->
<tr>
<td>ADDRESS <br /><br /><br /></td>
<td><textarea name="Address" rows="4" cols="30"></textarea></td>
</tr>

<!----- City ----->
<tr>
<td>CITY</td>
<td><input type="text" name="City" maxlength="30" />
(max 30 characters a-z and A-Z)
</td>
</tr>

<!----- Pin Code ----->
<tr>
<td>PIN CODE</td>
<td><input type="text" name="Pin_Code" maxlength="6" />
(6 digit number)
</td>
</tr>

<!----- State ----->
<tr>
<td>STATE</td>
<td><input type="text" name="State" maxlength="30" />
(max 30 characters a-z and A-Z)
</td>
</tr>

<!----- Country ----->
<tr>
<td>COUNTRY</td>

```

```

<td><input type="text" name="Country" value="India" readonly="readonly" /></td>
</tr>

<!-- Hobbies ----->
<tr>
<td>HOBBIES <br /><br /><br /></td>
<td>
Drawing
<input type="checkbox" name="Hobby" value="Drawing" />
Singing
<input type="checkbox" name="Hobby" value="Singing" />
Dancing
<input type="checkbox" name="Hobby" value="Dancing" />
Sketching
<input type="checkbox" name="Hobby" value="Cooking" />
<br />
Others
<input type="checkbox" name="Hobby" value="Other" onclick="Display(this)"/>
<span id="other"></span>
<!--<input type="text" name="others" maxlength="30" />-->
</td>
</tr>

<!-- Qualification----->
<tr>
<td onclick="getQual()">QUALIFICATION </td>
<td id="edu"></td>
</tr>

<!-- Course ----->
<tr>
<td>COURSES<br />APPLIED FOR</td>
<td>
BCA
<input type="radio" name="Course_BCA" value="BCA">
B.Com
<input type="radio" name="Course_BCom" value="B.Com">
B.Sc
<input type="radio" name="Course_BSc" value="B.Sc">
B.A
<input type="radio" name="Course_BA" value="B.A">
</td>

```

```

</tr>

<!---- Submit and Reset ----->
<tr>
<td colspan="2" align="center">
<input type="submit" value="Submit">
<input type="reset" value="Reset">
</td>
</tr>
</table>
</form>

<script>
function Display(e)
{
var ot=document.getElementById("other");

var t1 = document.createElement("input");
t1.setAttribute("type","textarea");
t1.setAttribute("rows","5");
t1.setAttribute("cols","150");
t1.setAttribute("placeholder","Specify other hobbies");

if(e.checked)
    ot.appendChild(t1);
else
    ot.innerHTML=" ";
}
function getQual()
{
var elt=document.getElementById("edu");
var ten1 = document.createElement("input");
ten1.setAttribute("type","text");
var ten2 = document.createElement("input");
ten2.setAttribute("type","text");
var ten3 = document.createElement("input");
ten3.setAttribute("type","text");

var plus21 = document.createElement("input");
plus21.setAttribute("type","text");
var plus22 = document.createElement("input");
plus22.setAttribute("type","text");

```

```

var plus23 = document.createElement("input");
plus23.setAttribute("type","text");

var ug1 = document.createElement("input");
ug1.setAttribute("type","text");
var ug2 = document.createElement("input");
ug2.setAttribute("type","text");
var ug3 = document.createElement("input");
ug3.setAttribute("type","text");

var tbl = document.createElement("table");
tbl.setAttribute("bgcolor","brown");
var row1 = tbl.insertRow(0);
var row2=tbl.insertRow(1);
var row3=tbl.insertRow(2);
var row4=tbl.insertRow(3);

var cell11 = row1.insertCell(0);
var cell12 = row1.insertCell(1);
var cell13 = row1.insertCell(2);
var cell14 = row1.insertCell(3);
var cell15 = row1.insertCell(4);

var cell21 = row2.insertCell(0);
var cell22 = row2.insertCell(1);
var cell23 = row2.insertCell(2);
var cell24 = row2.insertCell(3);
var cell25 = row2.insertCell(4);

var cell31 = row3.insertCell(0);
var cell32 = row3.insertCell(1);
var cell33 = row3.insertCell(2);
var cell34 = row3.insertCell(3);
var cell35 = row3.insertCell(4);

var cell41 = row4.insertCell(0);
var cell42 = row4.insertCell(1);
var cell43 = row4.insertCell(2);
var cell44 = row4.insertCell(3);
var cell45 = row4.insertCell(4);
var h=<h3 style='color:rgb(255,242,176);text-align:center;'>"
```

```

var ch=<span style='color:rgb(255,242,176);'>

    cell11.innerHTML = h+"S.No.</h3>";
    cell12.innerHTML = h+"Qualification</h3>";
    cell13.innerHTML = h+"Board/University</h3>";
    cell14.innerHTML = h+"Percentage</h3>";
    cell15.innerHTML = h+"Year of Passing</h3>;

    cell21.innerHTML=ch+"1</span>"
    cell22.innerHTML=ch+"Class X</span>"
    cell23.appendChild(ten1);
    cell24.appendChild(ten2);
    cell25.appendChild(ten3);

    cell31.innerHTML=ch+"2</span>"
    cell32.innerHTML=ch+"Class XII</span>"
    cell33.appendChild(plus21);
    cell34.appendChild(plus22);
    cell35.appendChild(plus23);

    cell41.innerHTML=ch+"3</span>"
    cell42.innerHTML=ch+"UG Degree</span>"
    cell43.appendChild(ug1);
    cell44.appendChild(ug2);
    cell45.appendChild(ug3);

    elt.appendChild(tbl);
}

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

```

**Output:**

JS Date and String Object - Microsoft Word

Problem difference PHP Echo PHP Tryit Difference Student Re X KEC Internet / +

file:///D:/2017-2018/Subjects/WT (19- 67% ... Open Network Login Page X

You must log in to this network before you can access the Internet.

### STUDENT REGISTRATION FORM

	FIRST NAME	(max 30 characters a-z and A-Z)	
	LAST NAME	(max 30 characters a-z and A-Z)	
	DATE OF BIRTH	Day: Month: Year:	
	EMAIL ID		
	MOBILE NUMBER	(10 digit number)	
	GENDER	Male <input type="radio"/> Female <input type="radio"/>	
	ADDRESS		
	CITY	(max 30 characters a-z and A-Z)	
	PIN CODE	(6 digit number)	
	STATE	(max 30 characters a-z and A-Z)	
	COUNTRY	India	
	HOBBIES	Drawing <input type="checkbox"/> Singing <input type="checkbox"/> Dancing <input type="checkbox"/> Sketching <input type="checkbox"/> Others <input type="checkbox"/>	
	QUALIFICATION		
	COURSES APPLIED FOR	BCA <input type="radio"/> B.Com <input type="radio"/> B.Sc <input type="radio"/> B.A <input checked="" type="radio"/>	
		<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

JS Date and String Object - Microsoft Word

Problem difference PHP Echo PHP Tryit Difference Student Re KEC Internet + X

file:///D:/2017-2018/Subjects/WT (19- 67% ... Open Network Login Page X

You must log in to this network before you can access the Internet.

### STUDENT REGISTRATION FORM

	FIRST NAME	Srija <small>(max 30 characters a-z and A-Z)</small>
	LAST NAME	Ragaven <small>(max 30 characters a-z and A-Z)</small>
	DATE OF BIRTH	7 Sep 1999
	EMAIL ID	a.cse1999@gmail.com
	MOBILE NUMBER	9554766557 <small>(10 digit number)</small>
	GENDER	Male <input type="radio"/> Female <input checked="" type="radio"/>
	ADDRESS	21/A, Sampath Nagar, Bangalore-560039.
	CITY	Erode <small>(max 30 characters a-z and A-Z)</small>
	PIN CODE	638009 <small>(6 digit number)</small>
	STATE	Tamilnadu <small>(max 30 characters a-z and A-Z)</small>
	COUNTRY	India
	HOBBIES	Drawing <input checked="" type="checkbox"/> Singing <input type="checkbox"/> Dancing <input type="checkbox"/> Sketching <input type="checkbox"/> Others <input type="checkbox"/>
	QUALIFICATION	
	COURSES APPLIED FOR	BCA <input type="radio"/> B.Com <input type="radio"/> B.Sc <input type="radio"/> B.A <input checked="" type="radio"/>
		<input type="button" value="Submit"/> <input type="button" value="Reset"/>

After creating and inserting necessary fields for other hobbies and qualification

JS Date and String Object - Microsoft Word

Problem difference PHP Echo PHP Tryit Difference Student Re KEC Internet + X

file:///D:/2017-2018/Subjects/WT (19- 67% ... Open Network Login Page X

You must log in to this network before you can access the Internet.

### STUDENT REGISTRATION FORM

	FIRST NAME	Srija <small>(max 30 characters a-z and A-Z)</small>																				
	LAST NAME	Ragaven <small>(max 30 characters a-z and A-Z)</small>																				
	DATE OF BIRTH	7 Sep 1999																				
	EMAIL ID	a.cse1999@gmail.com																				
	MOBILE NUMBER	9554766557 <small>(10 digit number)</small>																				
	GENDER	Male <input type="radio"/> Female <input checked="" type="radio"/>																				
	ADDRESS	21/A, Sampath Nagar, Bangalore-560039.																				
	CITY	Erode <small>(max 30 characters a-z and A-Z)</small>																				
	PIN CODE	638009 <small>(6 digit number)</small>																				
	STATE	Tamilnadu <small>(max 30 characters a-z and A-Z)</small>																				
	COUNTRY	India																				
	HOBBIES	Drawing <input checked="" type="checkbox"/> Singing <input type="checkbox"/> Dancing <input type="checkbox"/> Sketching <input type="checkbox"/> Others <input checked="" type="checkbox"/> Specify other hobbies																				
	QUALIFICATION	<table border="1"> <thead> <tr> <th>S.No.</th> <th>Qualification</th> <th>Board/University</th> <th>Percentage</th> <th>Year of Passing</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Class X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Class XII</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>UG Degree</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.No.	Qualification	Board/University	Percentage	Year of Passing	1	Class X				2	Class XII				3	UG Degree			
S.No.	Qualification	Board/University	Percentage	Year of Passing																		
1	Class X																					
2	Class XII																					
3	UG Degree																					
	COURSES APPLIED FOR	BCA <input type="radio"/> B.Com <input type="radio"/> B.Sc <input type="radio"/> B.A <input checked="" type="radio"/>																				
		<input type="button" value="Submit"/> <input type="button" value="Reset"/>																				

**Result:**

Thus simple web pages have been designed and developed by applying JavaScript objects and collections

## Viva Questions:

1. Write a JavaScript function named Words() to create an array of words from a given sentence.  
Pass the sentence as argument to the function and display the words as an unordered list.
2. Write a JavaScript function to round a number to a given decimal places.

**Test Data :**

Input : 12.375,2	Output: 12.38
Input : 12.37499,2	Output:12.37
Input : -10.3079499, 3	Output: -10.308

3. Write a JavaScript function to check whether a variable is numeric or not
4. Create a Pythagorean function in JavaScript.

**Note :** The Pythagorean Theorem tells us that the relationship in every right triangle is :  $c^2 = a^2 + b^2$ , where c is the hypotenuse and a, b are two legs of the triangle.

**Test Data :**

```
console.log(pythagorean_theorem(2, 4));
console.log(pythagorean_theorem(3, 4));
```

**Output :**

4.47213595499958

5

5. Write a JavaScript function to convert a string in abbreviated form.

Ex: Input- Web Technology Output- WT

6. Write a JavaScript function to capitalize the first letter of a string. [Go to the editor](#)

**Test Data :**

```
console.log(capitalize('js string exercises'));
"Js string exercises"
```

7. Write a JavaScript code to get radius and calculate the volume of a sphere and display the same in the provided textbox. Make use of appropriate DOM methods to fetch value from the textbox and display value in the textbox.

**Input radius value and get the volume of a sphere.**

Radius

Volume

**Calculate**

8. Write a JavaScript program to count and display the items of a dropdown list in an alert window.

Sample HTML file :

```
<!DOCTYPE html>
<html><head>
<meta charset=utf-8 />
<style type="text/css">
body { margin: 30px; }
</style>
<title>Count and display items of a dropdown list - w3resource</title>
</head><body><form>
Select your favorite Color :
<select id="mySelect">
<option>Red</option>
<option>Green</option>
<option>Blue</option>
<option>White</option>
</select>
<input type="button" onclick="getOptions()" value="Count and Output all items">
</form></body></html>
```

- 9.** Write a JavaScript function to get the number of days in a month.
- 10.** Write a JavaScript function to test whether a date is a weekend.

## **Experiment 7:**

### **DEVELOP INTERACTIVE WEB PAGES USING EVENT HANDLING IN JAVASCRIPT**

**Aim:** To design web pages to demonstrate DOM and Event-handling in JavaScript

#### **Description:**

JavaScript events - allow scripts to respond to user interactions and modify the page accordingly. Events and event handling help make web applications more dynamic and interactive

##### Registering an Event Handler

- General syntax to attach an event for any HTML element  
`x.addEventListener("click",change,false)`
  - x → JavaScript variable referring the HTML element
  - click → event to be raised by the HTML element
  - change → JavaScript function to be invoked when the element is clicked
  - false → default argument
- Two other event-registration models—the inline model and the traditional model
- Inline model places calls to JavaScript functions directly in HTML code as shown below  
``
  - click → event to be raised by the HTML element
  - change → JavaScript function to be invoked during the event
- Traditional model uses a property of an object to specify an event handler as shown below  
`x.onclick = "change();"`
  - x → JavaScript variable referring the HTML element
  - change() → JavaScript function that is called when the element is clicked
- List of Events that are applied: click, mouseover, mouseout, Form Events - focus, blur
- HTML Elements used to design the web pages:
  - Form elements: `<form>, <select>, <option>, <input>` - type: text, date, radio, checkbox, button
  - Basic HTML tags: `<img>, <h1>, <table>, <tr>, <td>`
- DOM methods: `getElementById()`, `getElementsByName()`

#### **Program**

- i) ***Click, Focus, and Blur Events – Students Personal Information***

`<html>`

```

<head><title>Student's Personal Info using DOM and Event-Handling</title>
<style>
    div{
        width:400px;
        height:auto;
        background-color:rgb(48, 70, 232);
        opacity:.9;
        position:fixed;top:50px;left:450px;
        text-align:left;
        overflow:auto;
    }
    form{
        font-size:12pt;
        font-weight:bold;
        margin-left:50px;
        color:white;
    }
</style>
</head>
<body style="background-image:url('../Images/bg.png');">
<div>
<h1 style="text-align:center;color:yellow;">Personal Details</h1>
<form>
    <label> Name</label>
    <input type="text" id="uname" value=" " onfocus="tip()" onblur="del()"/><br/>
    <span id="tips" style="font-size:8pt;color:brown;"></span><br/>
    <label>Date of Birth</label>
    <input type="date" id="dob" value=" " onblur="calcAge()"/><br/><br/>
    <label>Age</label>
    <input type="text" id="age" value=" "/><br/><br/>
    <label>Year of Study</label>
    <select id="yr">
        <option>Select</option>
        <option value="I">I</option>
        <option value="II">II</option>
        <option value="III">III</option>
        <option value="IV">IV</option>
    </select><br/><br/>
    <label>Community</label>
    <input type="radio" name="com" value="OC"/>OC
    <input type="radio" name="com" value="BC" />BC
    <input type="radio" name="com" value="MBC"/>MBC<br/><br/>

```

```

<label>Hobbies</label><br/>
<input type="checkbox" name="hobs" value="Singing"/><label>Singing</label><br/>
<input type="checkbox" name="hobs" value="Art and Craft" />
<label>Art and Craft</label><br/>
<input type="checkbox" name="hobs" value="Instrumental Music"/>
<label>Instrumental Music</label><br/>
<input type="checkbox" name="hobs" value="Fashion Design"/>
<label>Fashion Design</label><br/>
<input type="checkbox" name="hobs" value="Games"/><label>Games</label><br/>
<input type="checkbox" name="hobs" value="Script Writing"/>
<label>Script Writing</label><br/>
<br/>
<label>Emial-ID</label>
<input type="email" id="mail" value=" " required/><br/><br/>
<label>Mobile No.</label>
<input type="text" id="mobileno" value=" " required/><br/>
<input type="button" value="Register" onclick="Move()"/><br/>
</form>
</div>
<p style="color:yellow;font-size:15pt;position:absolute;right:0px;top:100px;background-color:yellowgreen;width:300px;" id="res">welcome</p>
<script>
```

```

var Name,comm,mydob,myage,para,sk,year,hobbies=" ";
var email,phno,l1,l2;
Name=document.getElementById("uname");
year=document.getElementById("yr");
var t=document.getElementById("tips");
function tip()
{
    t.innerHTML="Enter your name in UpperCase";
}
function del()
{
    t.innerHTML=" ";
}
function calcAge()
{
    var yr,age,s;
    var current=new Date();
    t.innerHTML=" ";
```

```

mydob=document.getElementById("dob").value;
s=mydob.split('-');
alert(s[0]);
myage=document.getElementById("age");
age=current.getFullYear()-parseInt(s[0]);
myage.value=age;
myage.readOnly=true;
year.focus();
}
function Move()
{
email=document.getElementById("mail").value;
pho=document.getElementById("mobilen").value;
para=document.getElementById("res");
comm=document.getElementsByName("com");
sk=document.getElementsByName("hobs");

l1=comm.length;
l2=sk.length;
for(var i=0;i<l1;i++)
{
if(comm[i].checked)
{
    c=comm[i].value;
    break;
}
}
for(var j=0;j<l2;j++)
{
if(sk[j].checked)
{
    hobbies+=sk[j].value+"<br/>";
}

}
para.innerHTML="Your Name: "+Name.value+"<br/>Your are in:  
"+year.value+"<br/>Your Age: "+myage.value+"<br/>You belong to:"+c+"<br/>Your Hobbies:"+hobbies;
para.innerHTML+="  
Email ID: "+email+"<br/>Mobile No.: "+pho;
//para.innerHTML="Registration successfull";
}
</script>
</body>
</html>

```

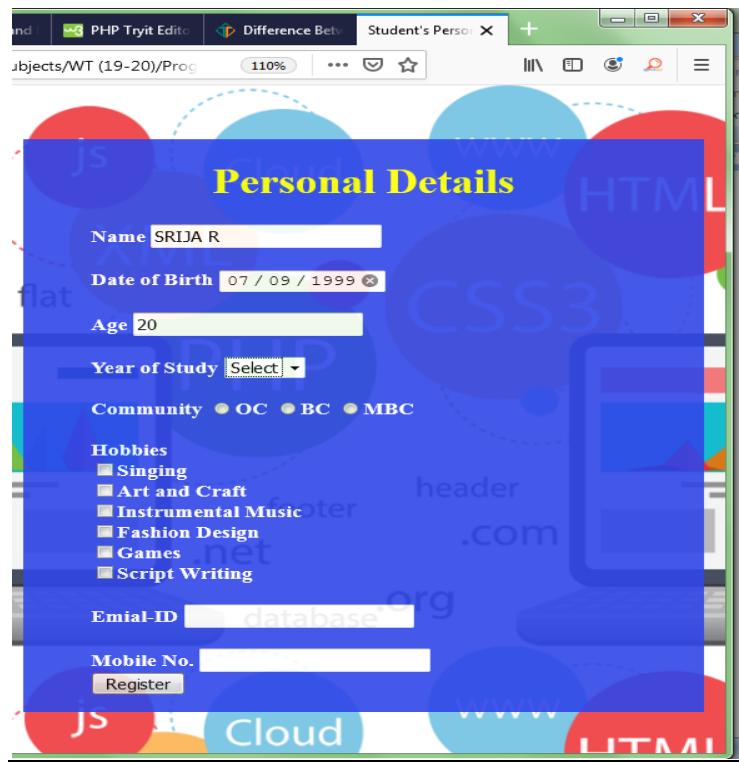
## Output:

The screenshot shows a web browser window with a form titled "Personal Details". The form fields include Name, Date of Birth, Age, Year of Study (dropdown), Community (radio buttons OC, BC, MBC), Hobbies (checkboxes: Singing, Art and Craft, Instrumental Music, Fashion Design, Games, Script Writing), Email-ID, and Mobile No. A "Register" button is at the bottom.

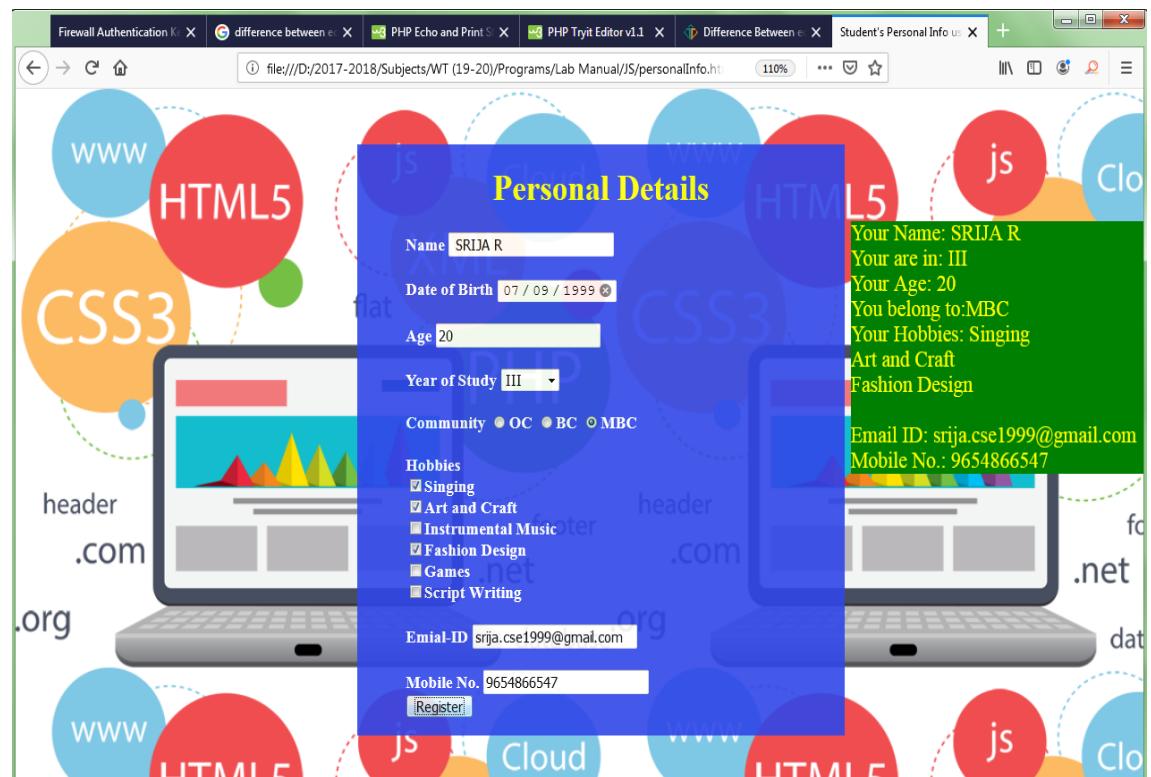
### Focus Event

The screenshot shows the same "Personal Details" form as above, but with a yellow border around the "Name" input field, indicating it is the current focus of the user's interaction.

## Blur Event



## Click Event



*ii) **MouseOver and MouseOut – Changing the Pictures***

```
<html>
<head>
    <title>MouseOver and MouseOut Events</title>
    <style>
        img{
            width:500px;
            height:500px;
        }
        body{
            background-image:url("../Images/bgNew.jpg");
        }
    </style>
</head>

<body id="b">
    <table>
        <tr><td><h1 id="text1">Beautiful Puppies</h1> </td></tr>
        <tr><td></td></tr>
    </table>

    <input type="button" id="myBtn" value="Change Pic"/>
    <div> </div>

    <script>

        var para,b1,img1,text;
        text=document.getElementById("text1");
        b1=document.getElementById("myBtn");
        img1=document.getElementById("pic1");
        img1.addEventListener("mouseover", myFunction2);
        img1.addEventListener("mouseout", myFunction3);

        function myFunction1()
        {
            var pic=document.getElementById("pic1");
            text.innerHTML="Cute Kittens";
            pic.src='../Images/cats.jpg';

        }

    </script>
```

```

function myFunction2()
{
    var pic=document.getElementById("pic1");
    text.innerHTML="Cute Little Angel";
    text.style.fontSize="20px";
    pic.src='..../Images/pic2.jpg';
}

function myFunction3()
{
    var pic=document.getElementById("pic1");
    text.innerHTML="Beautiful Puppies";
    text.style.fontSize="20px";
    pic.src='..../Images/dogs.jpg';
}
b1.addEventListener("click", myFunction1);

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

```

### **Output:**



*iii) Click Event and Arrays to design a Web Page for Slide Show*

```
<html>
<head>
    <title>Slide Show</title>
    <style>
        body{
            background-image:url("../Images/bgNew1.jpg");
            background-size:cover;
        }
        input{
            font-size:18pt;
            color:white;
            background-color:black;
            font-family:cambria;
        }
    </style>
<body id="b">
<table>
    <tr>    <td colspan="2"></td>
    </tr>
    <tr>    <td><input type="button" id="prev" value="<"/></td>
                <td style="text-align:right;"><input type="button" id="next" value=">"/></td>
    </tr>
</table>
<script>
var imgs= ["b1.jpg","b2.jpg","b3.jpg","b4.jpg","b5.jpg","b6.jpg","b7.jpg","b8.jpg","b9.jpg",
           "b10.jpg","b11.jpg","b12.jpg","b13.jpg","b14.jpg","b15.jpg"];
var i=0;
var Next=document.getElementById("next");
var Prev=document.getElementById("prev")
var pic=document.getElementById("pic1");
function myFunction1()
{
    pic.src=../Images/Birds/+imgs[i];
    i++;
    var l=imgs.length-1;
    if(i>l)
        pic.src=../Images/Birds/+imgs[l];
}

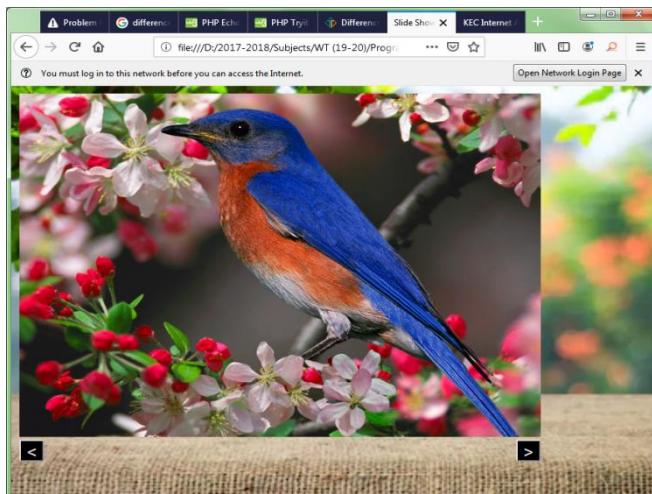
```

```

function myFunction2()
{
    i--;
    pic.src=("../Images/Birds/" + imgs[i]);
    if(i<0)
        pic.src=("../Images/Birds/" + imgs[0]);
}
Next.addEventListener("click", myFunction1, false);
Prev.addEventListener("click", myFunction2, false);
</script>
</body>
</html>

```

### Output:



### Result:

Thus interactive web pages have been developed using JavaScript Events

### **Viva Questions:**

1. You have a server-side script that cannot handle any ampersands (&) in the form data. Write a function that converts all ampersands in a form field to " and " when the field loses focus (blur).
2. Design a web page with a button on it. Write a JavaScript code to display the no. of times the user has clicked the button.
3. Display a list of colors as a dropdown list. Write a JavaScript code to apply the color selected by the user as the background color for the web page. Apply the color once the user selects it from the dropdown list.
4. Predict the output of the following code:

```
<html>
<head>
<title>t1</title>
<script type="text/javascript">
    function addNode() { var newP = document.createElement("p");
        var textNode = document.createTextNode(" This is a new text node");
        newP.appendChild(textNode); document.getElementById("firstP").appendChild(newP); }
</script> </head>
<body> <p id="firstP">firstP</p> </body>
</html>
```

5. Add suitable JavaScript code to the code given below to add a new ‘img’ element to display an image before the paragraph content.

```
<html>
<head>
<title>t1</title>
</head>
<body> <p id="firstP">firstP</p> </body>
</html>
```

6. Write the output of the code given below

```
var a = [1, 2, 3];
a[7]=10;
document.write(a[5]);
```

7. Consider the following HTML code

```
<html>
```

```

<head></head>
<body>
    <h6> Welcome </h6>
</body>
</html>

```

Write suitable JavaScript code to increase the size of the text ‘Welcome’ when the user moves the mouse pointer over that text.

8. Design a simple web form to get name of a student as input. Write a JavaScript code to popup an alert message “Type in Uppercase”, when the input field gets focus.
9. Attach click event to the button in the code given below and write a JavaScript code to modify the style (font, font size, and color) of the paragraph text.

```

<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8 />
<title>JS DOM paragraph style</title>
</head>
<body>
<p id='text'>JavaScript Exercises - w3resource</p>
<div>
<button>Style</button>
</div>
</body>
</html>

```

10. Write a JavaScript function named ‘insert\_Row()’ to add two more rows to the table in the following HTML code.

```

<!DOCTYPE html>
<html><head>
<meta charset=utf-8 />
<title>Insert row in a table - w3resource</title>
</head><body>
<table id="sampleTable" border="1">
<tr><td>Row1 cell1</td>
<td>Row1 cell2</td></tr>
<tr><td>Row2 cell1</td>
<td>Row2 cell2</td></tr>
</table><br>
<input type="button" onclick="insert_Row()" value="Insert row">
</body></html>

```

## **Experiment 8:**

### **DESIGN AND DEVELOP AN ONLINE INTERACTIVE CGPA CALCULATOR**

**Aim:** To develop an online CGPA calculator using HTML and JavaScript

#### **Description:**

<b>Range of percentage of total marks</b>	<b>Letter grade</b>	<b>Grade Point</b>
90 to 100	S	10
80 to 89	A	9
70 to 79	B	8
60 to 69	C	7
55 to 59	D	6
50 to 54	E	5

$$GPA = \frac{\sum [(course \ credits) \times (grade \ points)] \text{ for all courses in the specific semester}}{\sum (course \ credits) \text{ for all courses in the specific semester}}$$

The Cumulative Grade Point Average (CGPA) is calculated from first semester (third semester for lateral entry candidates) to final semester using the formula

$$CGPA = \frac{\sum [(course \ credits) \times (grade \ points)] \text{ for all courses in all the semesters so far}}{\sum (course \ credits) \text{ for all courses in all the semesters so far}}$$

The GPA and CGPA are computed only for the candidates with a pass in all the courses.

The GPA and CGPA indicate the academic performance of a candidate at the end of a semester and at the end of successive semesters respectively.

#### **Program:**

```
<html>
<head><title>CGPA Calculator</title>
<style>
body{
    background-image:url("../Images/bgNew2.jpg");
```

```

        background-size:cover;
    }

td,select{
    font-size:13pt;
    color:purple;
    text-align:center;
}

```

</style>

<script src="../Script/cgpa.js">

</script>

</head>

<body>

<table bgcolor="lightgreen" cellspacing="2" cellpadding="3" width="700px" style="border-radius:20px;position:absolute;top:70px;left:300px;">

<tr>

    <td colspan="5" style="background-color:purple;text-align:center;color:orange;height:50px;padding-top:13px;border-radius:20px;">GPA Calculator</td>

</tr>

<tr style="font-weight:bold;">

    <td>Course</td>

    <td>Credits</td>

    <td>Grade</td>

    <td>Grade Points</td>

    <td>Grade Point X Credit</td>

</tr>

<tr>

    <td>Course 1</td>

    <td>

        <select name="credit">

            <option>-</option>

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

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

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

        </select>

    </td>

    <td>

        <select name="grade">

            <option>-</option>

```

        <option value="S">S</option>
        <option value="A">A</option>
        <option value="B">B</option>
        <option value="C">C</option>
        <option value="D">D</option>
        <option value="E">E</option>
    </select>
</td>
<td name="pts"></td>
<td name="gpa"></td>
</tr>
<tr>
    <td>Course 2</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>
    <td name="pts"></td>
    <td name="gpa"></td>
</tr>
<tr>
    <td>Course 3</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>

```

```

            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>
    <td name="pts"></td>
    <td name="gpa"></td>
</tr>
<tr>
    <td>Course 4</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>
    <td name="pts"></td>
    <td name="gpa"></td>
</tr>
<tr>
```

```

<td>Course 5</td>
<td>
    <select name="credit">
        <option>-</option>
        <option value="1">1</option>
        <option value="2">2</option>
        <option value="3">3</option>
    </select>
</td>
<td>
    <select name="grade">
        <option>-</option>
        <option value="S">S</option>
        <option value="A">A</option>
        <option value="B">B</option>
        <option value="C">C</option>
        <option value="D">D</option>
        <option value="E">E</option>
    </select>
</td>
<td name="pts"></td>
<td name="gpa"></td>
</tr>
<tr>
    <td>Course 6</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>

```

```

        </select>      </td>
<td name="pts"></td>
<td name="gpa"></td>
</tr>
<tr>
    <td>Course 7</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>

    <td>
        <select name="grade">
            <option>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>
    <td name="pts"></td>
    <td name="gpa"></td>
</tr>
<tr>
    <td>Course 8</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option>-</option>

```

```

        <option value="S">S</option>
        <option value="A">A</option>
        <option value="B">B</option>
        <option value="C">C</option>
        <option value="D">D</option>
        <option value="E">E</option>
    </select>
</td>
<td name="pts"></td>
<td name="gpa"></td>
</tr>
<tr>
    <td>Course 9</td>
    <td>
        <select name="credit">
            <option>-</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
        </select>
    </td>
    <td>
        <select name="grade">
            <option selected>-</option>
            <option value="S">S</option>
            <option value="A">A</option>
            <option value="B">B</option>
            <option value="C">C</option>
            <option value="D">D</option>
            <option value="E">E</option>
        </select>
    </td>
    <td name="pts"></td>
    <td name="gpa"></td>
</tr>
<tr>
    <td colspan="5" align="center"><br/><input type="button" value="Calculate"
        onclick="Calc()" style="border-radius:10px;background-color:orange;color:green;font-
        size:15pt;font-family:cambria;font-weight:bold;width:100px;" /></td>
</tr>
<tr>

```

```

<td colspan="5" align="center"><br/><h3 style="color:purple;" id="res">Your
CGPA:</h3><br/></td>
</tr>
</table>
</body>
</html>

```

### cgpa.js

```

var credits=new Array();
var grade=new Array();
var gradePts=new Array();
var gpa=new Array();
var fcgpa,cgpa=0;
var c,g,pts,pVal;
var totalCredits=0;
var result=document.getElementById("res");
function Calc()
{
    c=document.getElementsByName("credit");
    g=document.getElementsByName("grade");
    pts=document.getElementsByName("pts");
    pVal=document.getElementsByName("gpa");

    for(i=0;i<c.length;i++)
    {
        totalCredits+=parseInt(c[i].value);
    }

    for(i=0;i<g.length;i++)
    {
        grade[i]=g[i].value;
    }
    for(i=0;i<g.length;i++)
    {
        switch(g[i].value)
        {
            case 'S':
                gradePts[i]=10;
                break;
            case 'A':

```

```

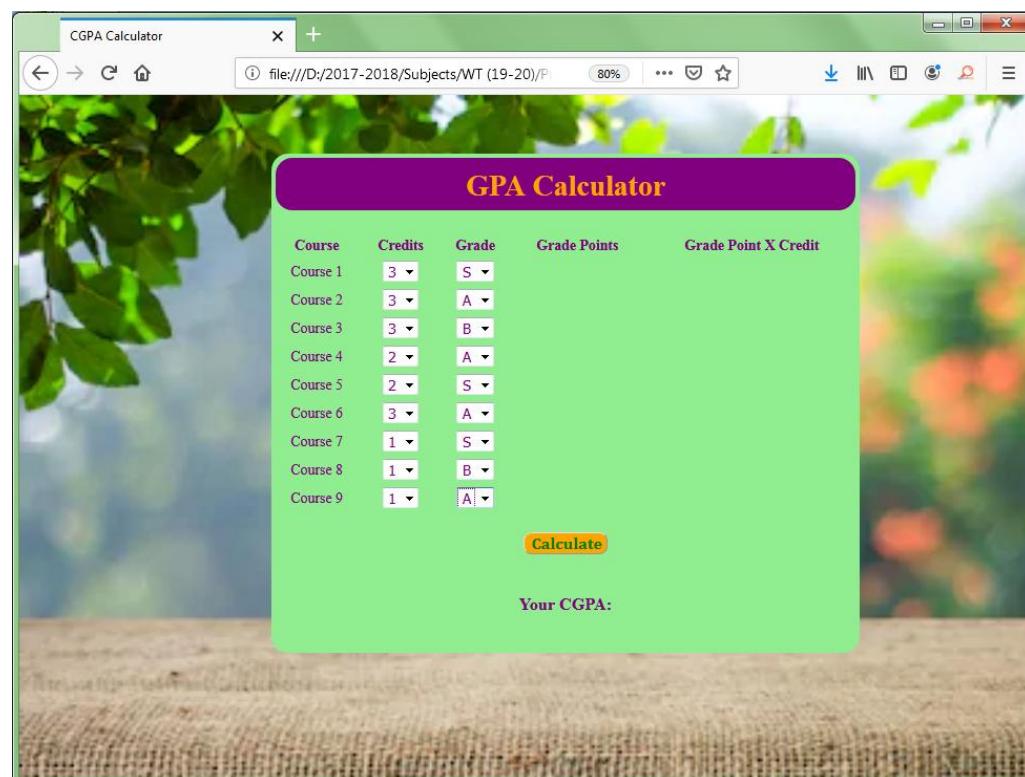
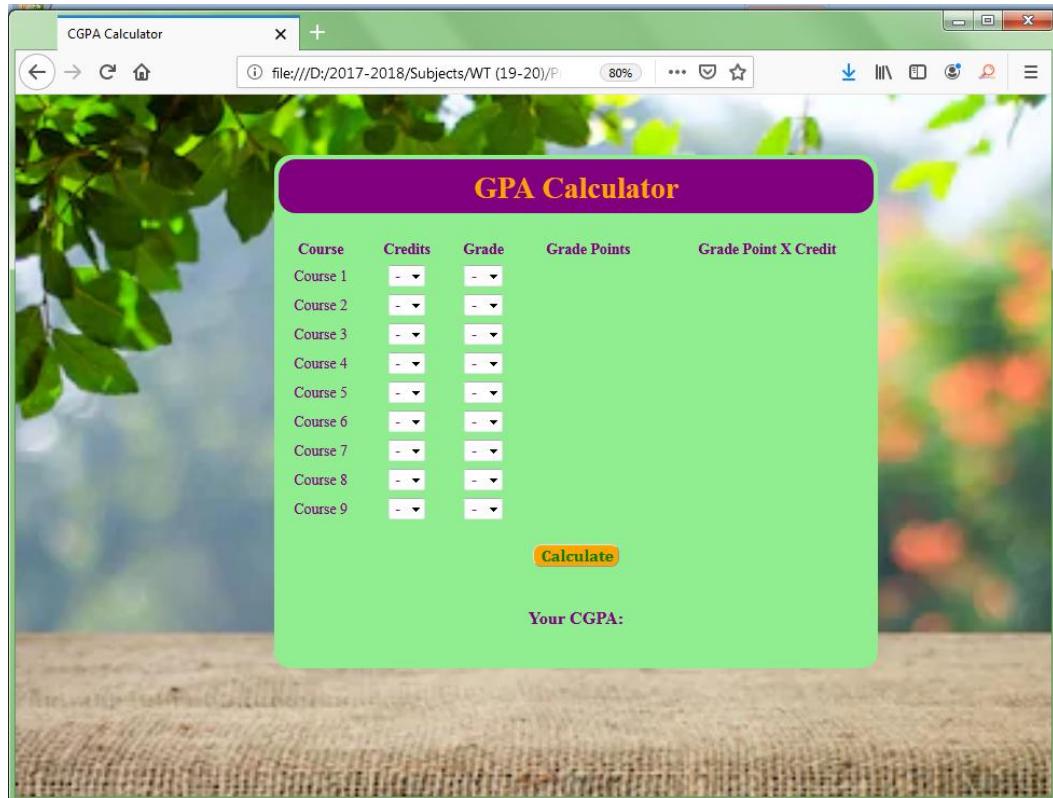
        gradePts[i]=9;
        break;
    case 'B':
        gradePts[i]=8;
        break;
    case 'C':
        gradePts[i]=7;
        break;
    case 'D':
        gradePts[i]=6;
        break;
    case 'E':
        gradePts[i]=5;
        break;
    }
}
for(i=0;i<gradePts.length;i++)
{
    gpa[i]=parseInt(c[i].value)*gradePts[i];
    cgpa+=gpa[i];
    pts[i].innerHTML=gradePts[i];
    pVal[i].innerHTML=gpa[i];
}

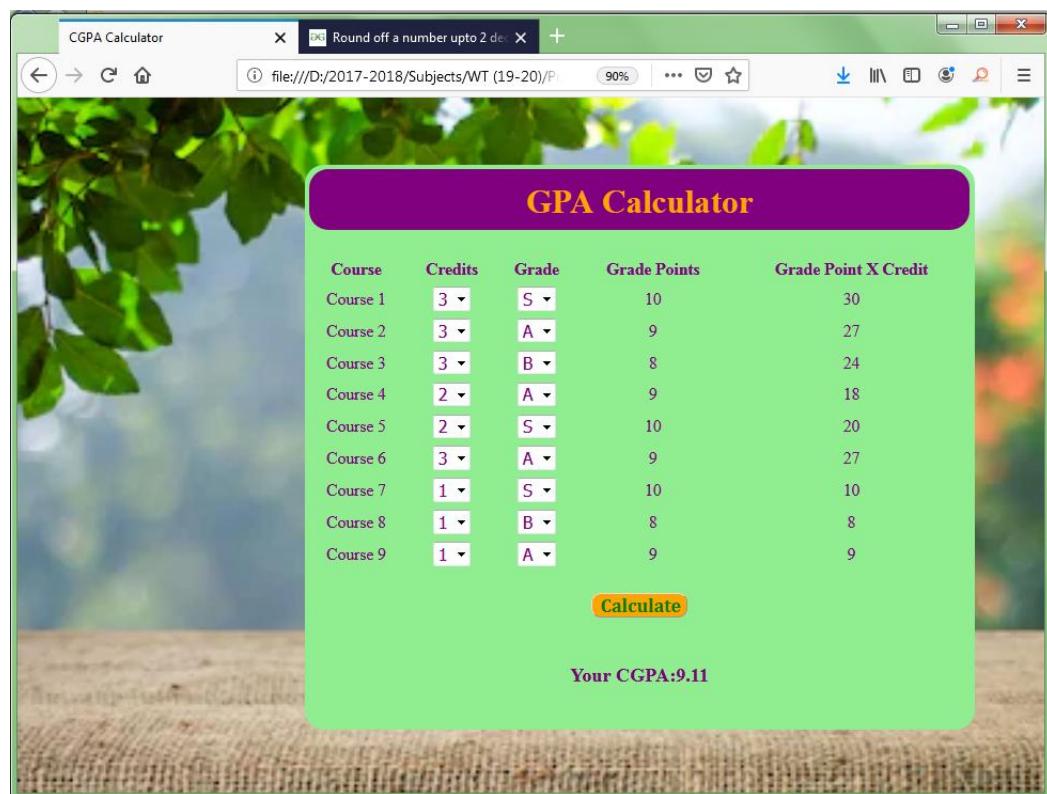
fcgpa=cgpa/totalCredits;

res.innerHTML+=fcgpa.toFixed(2); ;
}

```

## Output:





### Result:

Thus an interactive CGPA calculator has been developed using HTML and JavaScript.

## Viva Questions

1. Write a JavaScript function to convert a binary number to a decimal number.

***Test Data :***

input 51

Output 110011

2. Write a JavaScript function to get the greatest common divisor (gcd) of two integers.
3. Write a JavaScript function to find out if a number is a natural number or not.
4. Write a JavaScript function to calculate the sum of values in an array.
5. Write a JavaScript function to convert a positive number to negative number.
6. Write a JavaScript function to get the highest number from three different numbers.
7. Write a JavaScript function which will return values that are powers of two.
8. Write a JavaScript function to print all prime numbers from 0 to a specified number.
9. Write a JavaScript program to multiply two complex numbers.
10. Write a JavaScript program to add two complex numbers.

## **Experiment 9:**

### **DEVELOP A WEB PAGE TO IMPLEMENT AUTOCOMPLETION OF A TEXT FIELD USING AJAX WITH PHP**

**Aim:** To create a simple application that allows users to search for popular PHP MVC frameworks

#### **Description:**

- AJAX is the acronym for Asynchronous [JavaScript & XML](#).
- It is a technology that reduces the interactions between the server and client.
- It does this by updating only part of a web page rather than the whole page.
- The asynchronous interactions are initiated by JavaScript.
- “if (str.length == 0)” check the length of the string. If it is 0, then the rest of the script is not executed.
- “if (window.XMLHttpRequest)…” Internet Explorer versions 5 and 6 use ActiveXObject for AJAX implementation. Other versions and browsers such as Chrome, FireFox use XMLHttpRequest. This code will ensure that our application works in both IE 5 & 6 and other high versions of IE and browsers.
- “xmlhttp.onreadystatechange=function…” checks if the AJAX interaction is complete and the status is 200, then updates the txtName span with the returned results.

However, if the input field is not empty, do the following:

1. Create an XMLHttpRequest object
2. Define the function to be executed when the server response is ready
3. Send the request off to a PHP file (frameworks.php) on the server
4. Notice that q parameter is added to the url(framework.php?q="+str)
5. And the str variable holds the content of the input field
6. **XMLHttpRequest()** - Request data from server.
7. **Xmlhttp.onreadystatechange**- Defines a function to be called when the readystate property changes.
8. **Xmlhttp.open()** – Specify the type of request
9. **Xmlhttp.send()** - sends the request to the server

#### **Configuration steps:**

1. Install Xampp Web server and start the web server
2. Check whether your home page is opening in browser http://localhost:80
3. Deploy the files necessary for application in htdocs folder
4. Open the application in web browser and perform the operations.

## STEPS:

1. A client event occurs. (the page is loaded, a button is clicked)
2. An XMLHttpRequest object is created. *variable* = `new XMLHttpRequest();`
3. The XMLHttpRequest object is configured.
  - **onreadystatechange** property defines a function to be executed when the readyState changes.
4. The XMLHttpRequest object makes an asynchronous request to the Webserver  
`open(method, url, async, user, psw)`
  - method***: the request type GET or POST
  - url***: the file location
  - async***: true (asynchronous) or false (synchronous)
  - user***: optional user name
  - psw***: optional password
- send() Sends the request to the server Used for GET requests
5. The Webserver returns the result containing XML document.
6. Processes the result.
  - **readyState** property holds the status of the XMLHttpRequest.
  - **status** property and the **statusText** property holds the status of the XMLHttpRequest object.
7. The HTML DOM is updated.

## Program:

### Index.php

```
<html>
  <head>
    <title>PHP MVC Frameworks - Search Engine</title>
    <script type="text/javascript" src="/auto_complete.js"></script>
  </head>
  <body>
    <h2>PHP MVC Frameworks - Search Engine</h2>
    <p><b>Type the first letter of the PHP MVC Framework</b></p>
    <form method="POST" action="index.php">
      <p><input type="text" size="40"
id="txtHint" onkeyup="showName(this.value)"></p>
    </form>
    <p>Matches: <span id="txtName"></span></p>
  </body>
</html>
```

- “onkeyup="showName(this.value)"" executes the JavaScript function showName everytime a key is typed in the textbox. This feature is called auto complete

#### auto\_complete.js

```

function showName(str){
    if (str.length == 0){ //exit function if nothing has been typed in the textbox
        document.getElementById("txtName").innerHTML="";
        return;
    }
    if (window.XMLHttpRequest) {// code for IE7+, Firefox, Chrome, Opera, Safari
        xmlhttp=new XMLHttpRequest();
    }
    else {// code for IE6, IE5
        xmlhttp=new ActiveXObject("Microsoft.XMLHTTP");
    }
    xmlhttp.onreadystatechange=function() {
        if (xmlhttp.readyState == 4 && xmlhttp.status == 200){
            document.getElementById("txtName").innerHTML=xmlhttp.responseText;
        }
    }
    xmlhttp.open("GET","frameworks.php?name="+str,true);
    xmlhttp.send();
}

```

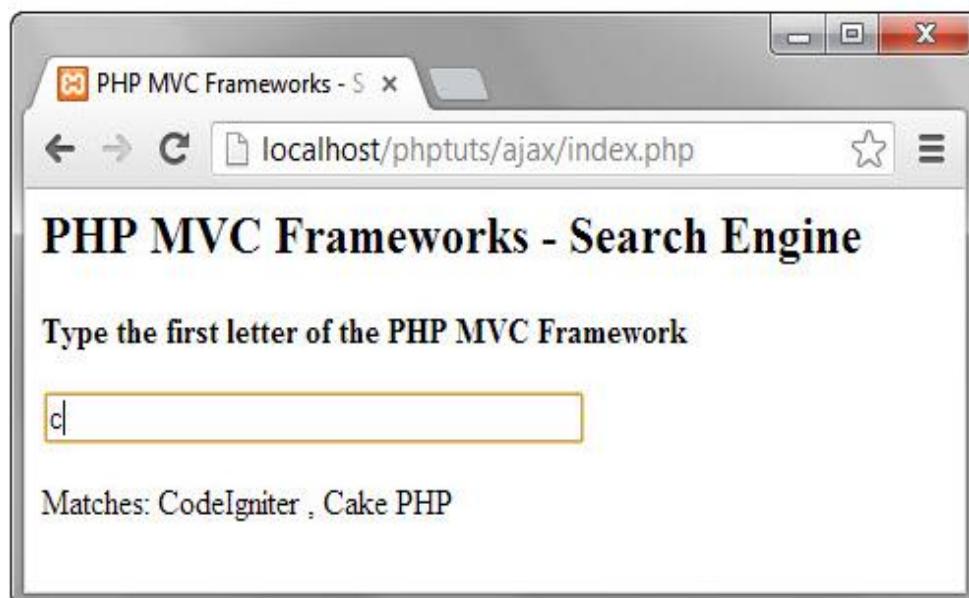
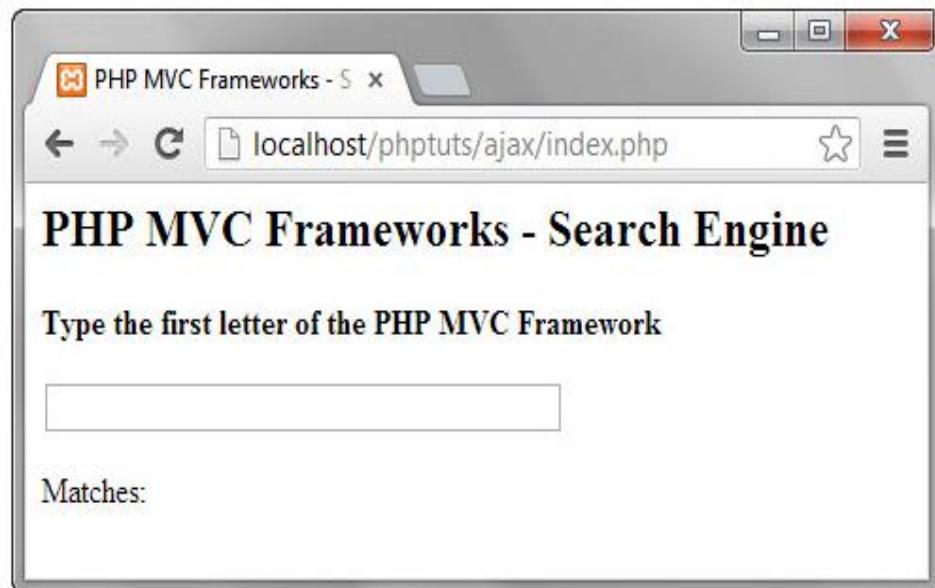
#### frameworks.php

```

<?php
$frameworks = array("CodeIgniter","Zend Framework","Cake PHP","Kohana") ;
$name = $_GET["name"];
if (strlen($name) > 0) {
    $match = "";
    for ($i = 0; $i < count($frameworks); $i++) {
        if (strtolower($name) == strtolower(substr($frameworks[$i], 0, strlen($name)))) {
            if ($match == "") {
                $match = $frameworks[$i];
            } else {
                $match = $match . " , " . $frameworks[$i];
            }
        }
    }
    echo ($match == "") ? 'no match found' : $match;
?>

```

**Output:**



**Result:**

Thus the program to display the matched string using ajax in php was successfully completed and output was verified successfully.

## **Viva Questions**

1. Create a connection with PHP server using AJAX and display a welcome message received from the server.
2. Find the length of the given name using PHP and AJAX without loading page.
3. Reverse the given number using PHP and AJAX.
4. Retrieve city name while using the pincode using AJAX and PHP
5. Create a AJAX program to display the student when user type department name without refreshing the page.
6. Create a AJAX program to search a faculty details based on name/ email/mobile number.
7. Create a AJAX program to dynamically add product details
8. Write a program to check the given email id is already registered or not using AJAX
9. Dynamically load the list of district when user choose the state from the list using PHP and AJAX
10. Retrieve the user detail (name, email, mobile and address) in JSON format from server based on mobile number and load the existing details in form using PHP and AJAX. Also provide the facility to update the email and address.

## **Experiment 10:**

### **DATABASE CONNECTIVITY FOR EMPLOYEE DETAILS USING PHP**

#### **Aim:**

To develop an Web application to maintain the Employee Database using PHP

#### **Description:**

- <style> - Define style information for an HTMLdocument.
- <?php ?>-php start and endtag
- Extract()-Imports variables into the local symbol table from an array
- Die() - Prints a message and exits the currentscript
- Mysql\_connect()-Open a connection to MYSQLserver
- Mysql\_querry() –Execute the given querry and return theresult
- Mysql\_error() -Returns the last error description for the most recent functioncall
- Mysql\_fetch\_row()-Fetches one row from aresult-set
- Mysql\_close()-Terminate the connection to mysqlserver

#### **Program:**

```
<html>
<head>
<title>EMPLOYEE DETAILS</title>
<style type="text/css">body{
    font-family:arial; background-color:cyan;

}
table{
    background-color:pink;

}
td{
    padding-top:2px;
    border-style:inset;
    padding-left:2px;padding-right:2px; border-width:1px;
}
</style>
</head>
<body>
<?php
extract( $_POST );
//query = "SELECT * FROM emp";
$query = "SELECT " . $name . " FROMemp";
```

```

//$/query="INSERT INTO
emp(Emp_id,Emp_name,Dob,Designation,Department,Hire_date,Salary)values('102','Sindhu','1 997-
07-22','Senior manager','Accounts','2013-02-04','30000')";
//$/query="INSERT INTO
emp(Emp_id,Emp_name,Dob,Designation,Department,Hire_date,Salary)values('103','SARATHI
','1997-07-25','Senior manager','Accounts','2015-05-04','35000')";
//$/query="UPDATE emp SET Designation='senior Sales executive' WHERE emp_id='103'";
//$/query="DELETE FROM emp WHERE emp_id='102';

if( !( $database = mysql_connect( "localhost", "student", "student" ) ) ) die( "could not connect to
database </body></html>" );
if( !mysql_select_db( "employee", $database ) )
die( "could not connect to database </body></html>" ); if( !( $result = mysql_query( $query ,
$database ) ) )
{
print( "<p>could not execute query</p>" ); die(mysql_error()."</body></html>" );
}
mysql_close( $database );
?>
<table>
<?php
for ( $counter = 0; $row = mysql_fetch_row( $result ); $counter++ )
{
print( "<tr>" );
foreach ( $row as $key => $value ) print( "<td>$value</td>" );
print( "</tr>" );
}
?>
</table>
<br />
search yield <strong><?php print( "$counter" ) ?> results<br /><br /></strong>
</body>
</html> EMPLOYEE
<html>
<head>
<title> EMPLOYEE FORM </title>
<style type="text/css"> body
{
background-color:pink;
</style>
</head>

```

```

<body>
<h2 ALIGN="CENTER"><b>EMPLOYEE DETAILS </b></h2>
<form method="post" action="employeedb.php">

<p><b>Select a Field to Display:</b>
<input type="text" name="name" />
<input type="submit" value="Send Query" />
</form>
</body>
</html>

```

## Output:



The screenshot shows a Mozilla Firefox browser window with the title "EMPLOYEE DETAILS - Mozilla Firefox". The address bar displays "localhost/nandhu/employeedb.php". The main content area shows a table of employee details with the following data:

ID	Name	Date of Birth	Position	Department	Hire Date	Salary
100	Nandini	1997-02-26	Manager	Accounts	2015-09-01	30000
101	Niranjana	1996-07-27	Sales Executive	Sales	2015-08-01	20000
102	Sindhu	1997-07-22	Senior manager	Accounts	2013-02-04	30000
103	SARATHI	1997-07-25	senior Sales executive	Accounts	2015-05-04	35000
103	SARATHI	1997-07-25	Senior manager	Accounts	2015-05-04	35000
103	SARATHI	1997-07-25	Senior manager	Accounts	2015-05-04	35000

Below the table, a message reads "search yield 6 results".

## Result:

Thus the development of employee database using php was successfully completed and output was verified.

## **Viva Questions**

1. Establish a connection with MySQL database server display connection success message and create a database using PHP
2. Write a PHP program to create and delete a table into a existing MySQL database
3. Alter a table column (Add/ remove /update) and display the table description using PHP program
4. Write a PHP and MySQL program collect the data from user form and insert into the table display appropriate success or failure message.
5. Write a PHP program to retrieve information from a table
6. Write a PHP program to update a email address of an student using his roll number in student table.
7. Delete a customer information based on customer id using PHP
8. Write a PHP program to count the number of records in a table.
9. Select the student records based on department from student table using PHP program
10. Write a PHP program to search a book based on given title

**Experiment 11:****USER SIGNIN FORM USING SESSION TRACKING****Aim:**

To perform registration of user of new user and signin using session tracking

**Description:**

- A session is started with the session\_start()function.
- Session variables are set with the PHP global variable:\$\_SESSION.

**STEPS:**

1. Start the session using the function session\_start()
2. Set session variable \$\_SESSION["var\_name"] = value;
3. Use isset () function to check whether a variable is set or not.
4. unset session session\_unset() or destroy all session variables session\_destroy()
5. unset() function destroys a given session variable

**Program:**

Index.php

```
<?p
hp
sess
ion
_sta
rt();
if(isset($_POST["LOGIN"]))
{$_SESSION['name']=$_POST['user'];
$_SESSION['password']=$_POST['pass'];
$_SESSION['repassword']=$_POS
T['word']; header("location:
login.php");
}
?>
<?php
if(isset($_POST[
'LOGIN']))
{
    $user = $_POST['user'];
    $pass = $_POST['pass'];
    $word = $_POST['word'];
}
```

```

if($user == $_POST['user'] && $pass == $_POST['pass'] && $word ==
$_POST['word'])
{
    $_SESSION['name']=$user;
    echo '<script type="text/javascript">
        window.open("login.php","_self");</script>';
}
else
{
    echo "invalid UserName or Password";
}
}

?>
<html>
<head>
<style> h1{
color:blue;
align=center; }

</style>

<script type='text/javascript'>
function validate(field, query)
{
    xmlhttp = new
    XMLHttpRequest();
    xmlhttp.onreadystatechange =
    function()
    {
        if(xmlhttp.readyState == 4 && xmlhttp.status==200)
        {
            document.getElementById(field).innerHTML = xmlhttp.responseText;
            document.getElementById(field).innerHTML = "Validating..";
        }
        else{
            document.getElementById(field).innerHTML = "Unknown Error
Occurred. <a href='index.php'>Reload</a> the page.";
        }
    }
    xmlhttp.open("GET","check.php?field="+field+"&query="+query,
    true); xmlhttp.send();
}
</script>

```

```

</head>

<body>
<form action="login.php" method='post'>

<h1><b>REGISTRATION FORM</b></h1>
<table>
<tr>
<td>Username</td>
<td><input type='text' name='user' onchange="validate('u',this.value)"></td>
<td><div id='u'></div></td>
</tr>
<tr>
<td>Password</td>
<td><input type='password' name='pass' onblur="validate('p',this.value)"></td>
<td><div id='p'></div></td></tr>
<tr>
<td>ReType-Password</td>
<td><input type='password' name='word' onblur="validate('r',this.value)"></td>
<td><div id='r'></div></td></tr>
<tr>
    <td>Gender</td>
    <td><input type='radio' name='gender' value='male' onblur="validate('q',this.value)">Male</td><br>
    <td><input type='radio' name='gender' value='female' onblur="validate('q',this.value)">Female</td>
    <td><div id='q'></div></td></tr>
<td> E-mail</td>
<td><input type="email" pattern="[a-z0-9._%+-]+@[a-z0-9.-]+\.[a-z]{2,3}$$" placeholder="Enter your mail id" required ></td>
</tr>
<tr>
<td> Phone number </td>
<td><input type=tel pattern="[0-9]{10}" placeholder="Enter your phone number" required ></td>
</tr>
<tr>
<td> Address</td>
<td><input type="text" placeholder="Enter your address" required ></td>
</tr>
</table>
<input type='submit' value='CREATE NEW ACCOUNT' >

```

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

Check.php

```
<?php
$query = $_GET['query'];
$field=
$_GET['fiel
d'];
if($field ==
"u")
{
$username = array("niru", "sacros");

if(in_array($query, $username))
echo "<font color=red>Username already
exists</font>"; else
echo "<font color=green>Username is valid</font>";
}
else if($field == "p")
{
if(strlen($query) < 6)
echo "<font color=red>Password too
short</font>"; else
echo "<font color=green>password is valid</font>";
}
else if($field == "m")
{
if(!preg_match("/([\w\.-]+\@[\w\.-]+\.[\w\.-]+)/",$query))
echo "<font color=red>invalid
email</font>"; else
echo "<font color=green>valid</font>";
}
else if($field == "n")
{
if (!preg_match("/^b(?:https|ftp):\/\/www\.)[-a-z0-
9+&@\#\%\?=~_!,:;]*[-a-z0- 9+&@\#\%\?=~_]/i", $query))
echo "<font color=red>invalid
website</font>"; else
echo "<font color=green>valid</font>";
}
?>
```

Login.php

```
<?php
    session_start();
?>

<?php
if(isset($_POST['LOGIN']))
{
    $user=$_POST['user'];
    $pass=$_POST['pass'];

    if($user == $_POST['user'] && $pass == $_POST['pass'])
    {
        $_SESSION['name']=$user;

        echo '<script type="text/javascript">window.open("profile.php","_self");
        </script>';
    }
    else
    {
        echo "invalid";
    }
}
?>
<html>
<head>
</head>
<body>
<h1>LOGIN FORM</h1>
<form method="POST">
<b>Name:</b><br><input type=text name="user" required /><br>
<b>Password:</b><br><input type=password name="pass" required /><br>
<b>RePassword:</b><br><input type=password name="word" required /><br>
<button type="submit" name="LOGIN">Submit</button>
</form>
</body>
</html>
```

Logout.php

```
<?php session_start();
print_r($_SESSION);
if(isset($_SESSION['name']))
```

```

{
unset($_SESSION['name']);
}
echo '<h1>You have been successfully logout</h1>';
?>
<html>
<head>
<h1><?php echo $name;?></h1>
<h3><a href="login.php">Click here to go back..</a></h3>
</html>

```

Profile.php

```

<?php
session_start();
if(!isset($_SESSIO
N['name']))
{
    header("location: index.php");
}
$name=$_SESSION['name'];
?>
<html>
<head>
<title>Welcome <?php echo $name;?></title>
</head>
<h1>Hi.....<?php echo $name;?></h1>

<h3><a href="logout.php">Click Here to log out</a></h3>
</html>

```

## **Output:**

The screenshot shows a Mozilla Firefox browser window with the title bar "Activities Firefox" and the status bar "Sat 15:59". The address bar displays "localhost/NANDHU/index.php". The main content area shows a registration form titled "REGISTRATION FORM". The form fields and their values are:

Username	Nandhini	Username is valid
Password	*****	password is valid
ReType-Password	*****	
Gender	<input type="radio"/> Male	<input checked="" type="radio"/> Female
E-mail	nandhinil2697@gmail.com	
Phone number	8882648729	
Addressee	Tiruppur	

A "CREATE NEW ACCOUNT" button is at the bottom left of the form.

## **Result:**

Thus the program to perform registration form validation login logout process using session tracking concept was successfully completed and output was verified.

### **Viva Questions:**

1. Why do we use session in PHP?
2. Write a PHP code to initiate a session in PHP?
3. Write a PHP code to access session variables in PHP?
4. Write a PHP code to check if session variable is already set or not in PHP?
5. How will you unset a single session variable?
6. Write a PHP script to destroy all session's variable?
7. When do sessions end?
8. What is the default session time in PHP?
9. Write a PHP script to maintain the number of page views to the web site
10. How are sessions better than cookies?

## **Experiment 12:**

### **DEVELOP AN ONLINE RESERVATION SYSTEM USING JAVASCRIPT, CSS, AJAX, PHP, AND MYSQL WITH SESSION TRACKING**

#### **Aim:**

To design and display online reservation system using javascript,css,ajax,php,mysql with session tracking.

#### **Description:**

- **`$_SERVER["PHP_SELF"]`** - The `$_SERVER["PHP_SELF"]` is a super globalvariable that returns the filename of the currently executing script.
- **Open a Connection to the MySQLServer**
- `mysqli_connect(host,username,password,dbname);`
- **Close aConnection**
- `mysqli_close($con);`

#### **STEPS:**

1. Establish connection to MySql Server with username and password of server
2. Select the necessary database from the database server
3. Frame the necessary queries (insert(),select(),update(),delete()) as a sting
4. Execute the query using `mysqli_query()`
5. Select and retrieve and display the records using `mysqli_fetch_assoc()`
6. Close the connection `Mysqli_close()`

#### **Program:**

##### **LOGIN:**

```
<html>
<body>
<form action="login.php"
method="post"> User name:
<input type="text" name="name">
Password:
<input type="text" name="pw">
<br>
<input type="submit" value="submit">
```

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

INSERT:

```
<html>
<body>
<form method="post"
action="insert.php"><br> rollno:
<input type="text"
name="rollno"><br> name:
<input
type="text" name="name"><br>
m1:
<input
type="text" name="m1"><br>
m2:
<input
type="text" name="m2"><br>
m3:
<input type="text" name="m3"><br>m4:
<input
type="text" name="m4"><br>
m5:
<input
type="text" name="m5"><br>
m6:
<input type="text" name="m6"><br>
<input type="submit" value="submit">
</form>
</body>
</html>
```

INDEX:

```
<html>
<head>
<style >
body
{background-
```

```

color:"yellow";} table
{
margin:2em;
border-color:"black";
}
</style>
<script type='text/javascript'> function
validate(field, query)
{
xmlhttp = new XMLHttpRequest();

xmlhttp.onreadystatechange = function()
{
if (xmlhttp.readyState!=4 && xmlhttp.status==200)
{
document.getElementById(field).innerHTML = "Validating..";
}
else if (xmlhttp.readyState==4 && xmlhttp.status==200)
{
document.getElementById(field).innerHTML = xmlhttp.responseText;
}
else
{
document.getElementById(field).innerHTML ="Unknown Error Occurred.
<a href='index.php'>Reload</a> thepage. ";
}
}
xmlhttp.open("GET","check.php?field="+field+"&query="+query, false);
xmlhttp.send();
}
</script>
</head>
<body bgcolor="grey">
<h2 font-color="red"><marquee><u><i>REGISTRATION FORM</i></u></marquee></h2>
<form action="submitted.html" method='post' font color="white" >
<table>
<tr>
<td>Username</td>
<td><input type='text' name='user' onchange="validate('u',this.value)"></td>
<td><div id='u'></div></td>
</tr>

```

```

<tr>
    <td>Password</td>
    <td><input type='password' name='pass' onblur="validate('p',this.value)"></td>
    <td><div id='p'></div></td>
</tr>

<tr>
    <td>phone number</td>
    <td>
        <input type='text' name='phone' onblur="validate('ph',this.value)">
        <div id='ph'></div>
    </td>
</tr>

<tr>
    <td>gender</td>
    <td><input type='radio' name='gender' onblur="validate('male',this.value)">
        <div id='male'></div>
    <td><input type='radio' name='gender' onblur="validate('female',this.value)">
        <div id='female'></div>
    </td>
</tr>

<tr>
    <td>qualification</td>
    <td><input type='text' name='q' onblur="validate('q',this.value)">
        <div id='q'></div>
    </td>
</tr>

<tr>
    <td>university</td>
    <td><input type='text' name='un' onblur="validate('un',this.value)">
        <div id='un'></div>
    </td>
<br><p>//enter the country name as 'India'</p>
</tr>

<tr>
    <td>country</td>
    <td><input type='text' name='c' onblur="validate('c',this.value)">
        <div id='c'></div>
    </td>
</tr>

</table>
<input type='submit' value='Submit'>
</form>
</body>
</html>

```

### FETCH:

```

<?php
function grade($var)
{
    if($var>=90)
    {
        $g="S";
    }
}

```

```

}

if($var<=89 && $var>=80){
$g="A";
}
if($var<=79 && $var>=70){
$g="B";
}
if($var<=69 && $var>=60){
$g="C";
}
if($var<=59 && $var>=55){
$g="D";
}
if($var<=54 && $var>=50){
$g="E";
}
if($var<50){
$g="RA";
}
return $g;
}

$con
=mysql_connect("localhost","student","student"
); if(!$con)
{
die('could not connect : '.mysql_error());
}
mysql_select_db("db1",$con);
$r=$_POST['rollno'];
$result=mysql_query("SELECT * FROM mark where rollno='$r'");

while($row = mysql_fetch_array($result))
{
echo '<table border=1px>
<tr>STUDENT MARK DETAILS</tr>
<tr><td>ROLL</td><td colspan=2>'.$row['rollno'].'</td></tr>
<tr><td>NAME</td><td colspan=2>'.$row['name'].'</td></tr>
<tr><td>Mark1</td><td>'.$row['m1'].'</td><td>.grade($row['m1']).</td></tr>
<tr><td>Mark1</td><td>'.$row['m2'].'</td><td>.grade($row['m2']).</td></tr>
<tr><td>Mark2</td><td>'.$row['m3'].'</td><td>.grade($row['m3']).</td></tr>
<tr><td>Mark4</td><td>'.$row['m4'].'</td><td>.grade($row['m4']).</td></tr>
<tr><td>Mark5</td><td>'.$row['m5'].'</td><td>.grade($row['m5']).</td></tr>
<tr><td>Mark6</td><td>'.$row['m6'].'</td><td>.grade($row['m6']).</td></tr>
</table>';

}
mysql_close($con);
?>
```

UPDATE:

```
<html>
<?php
session_start();$hi=$_SESSION['login'];
echo $hi;
?>
<body>
<form method="post" action="update.php">
Roll no:
<input type="text" name="name"><br>
m1:
<input type="text" name="m1"><br>
m2:
<input type="text" name="m2"><br>
m3:
<input type="text" name="m3"><br>
<input type="submit" value="submit">
</form>
</body>
</html>
```

DELETE:

```
<?php
$v1=$_POST['rollno'];
$v2=$_POST['name'];
$v3=$_POST['m1'];
$v4=$_POST['m2'];
$v5=$_POST['m3'];
$v6=$_POST['m4'];
$v7=$_POST['m5'];
$v8=$_POST['m6'];
$con=mysql_connect("localhost","student","student");
mysql_select_db("mark",$con);
$query="DELETE FROM mark WHERE rollno='$v1';";
mysql_query($query,$con);
echo "delete successfully";
mysql_close($con);
?>
```

```

<html>
<body>
    session_start();
    <form action="fetch.php" method="post"> ROLL NO:
        <input type="text" name="rollno">
        <input type="submit" value="submit">
    </form>
</body>
</html>

```

### **SESSION:**

```

<?
    session_start();

$server = "localhost";
$username = "Santhosh";
$password = "Santhosh";
$db_name = "stud_db";

$db = mysql_connect($server,$username,$password) or die("Connection to database
                                              failed, perhaps the service is down !!");
mysql_select_db($db_name) or die("Database name not available !!");

$login = mysql_query("select * from users where (username = '" . $_POST['username'] .
                      "') and (password = '" . md5($_POST['password']) . "')",$db);
$rowcount = mysql_num_rows($login); if ($rowcount == 1)
{
    $_SESSION['username'] = $_POST['username'];
    header("Location: securedpage.php");
}

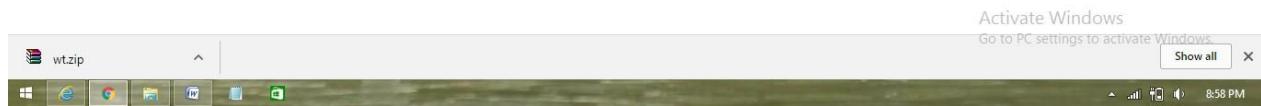
else
{
    header("Location: loginpage.php");
}
?>

```

PAGE:

```
<?php
session
_start();
;
$temp=$_SESSION['log
in'];
echo
"WELCOME<br>".$te
mp;
echo "<a
href=insert.html>INSERT</a><br>";
echo "<a
href=update.html>UPDATE</a><br>";
echo "<a
href=delete.html>DELETE</a><br>";
echo "<a
href=result.html>SELECT</a><br>";
echo "<a
href=logout.php>LOGOUT</a><br>";
?>
```

## **Output:**



## **Result:**

Thus the implementation of online reservation system using javascript, css, ajax, php, mysql with session tracking was implemented and output was verified

## **Viva Questions**

1. Design necessary db and tables for implementing online store management system
2. Design a catalogue page to display the products details dynamically based on the category ,sub category using css and java script
3. Design form to read the product details of a store and validate using JavaScript and insert to the database
4. Write a PHP script to create session for user and track the products ordered by the user
5. Write a PHP script to destroy the particular user details when user logout of the web site
6. Create PHP script to display the student when user type department name without refreshing the page using Ajax.
7. Create a PHP script to search a product details based on price and offers using Ajax
8. Create a AJAX program to dynamically delete/update product details
9. Write a program to check the given phone number is already registered or not using AJAX
10. Write a PHP script to dynamically load the list of products when user choose the category from the list using PHP and AJAX