ALAGAPPA UNIVERSITY

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(A State University Established by the Government of Tamil Nadu)

KARAIKUDI – 630 003

DIRECTORATE OF DISTANCE EDUCATION

M.Sc. [Computer Science]

III - Semester

341 34

WEB TECHNOLOGY LAB

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SYLLABI **PAGE NUMBER**

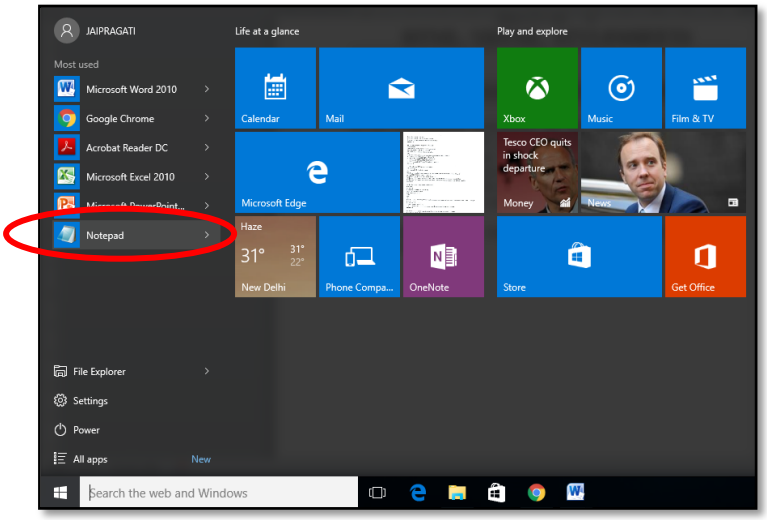
LAB – WEB TECHNOLOGY

BLOCK – 1
HTML, XHTML, STYLESHEETS

INTRODUCTION

In any programming environment the first program while learning the language is 'Hello world' program. This program is used to check the programming environment. It will give an idea to the user about the program editor, how to save theweb page and how to open the web page in the browser. It is one of the easiest codes used ever, but still we have to run this source code for better understanding the programming environment.

1. For creating any HTML source code, we need to open the text editor for writing the code.
2. Notepad is the most commonly used editor for creating HTML source code. Select the ***Notepad*** option from the ***Start*** Menu.

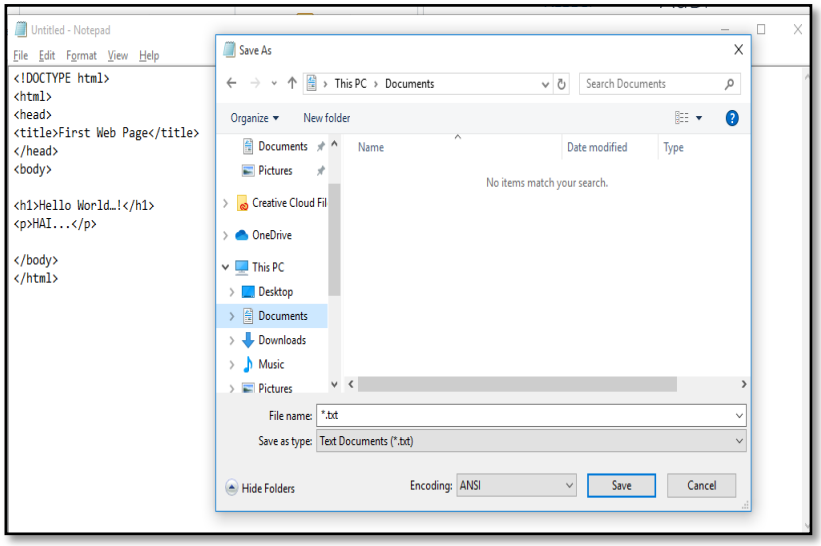


3. In the opened notepad type the following code.

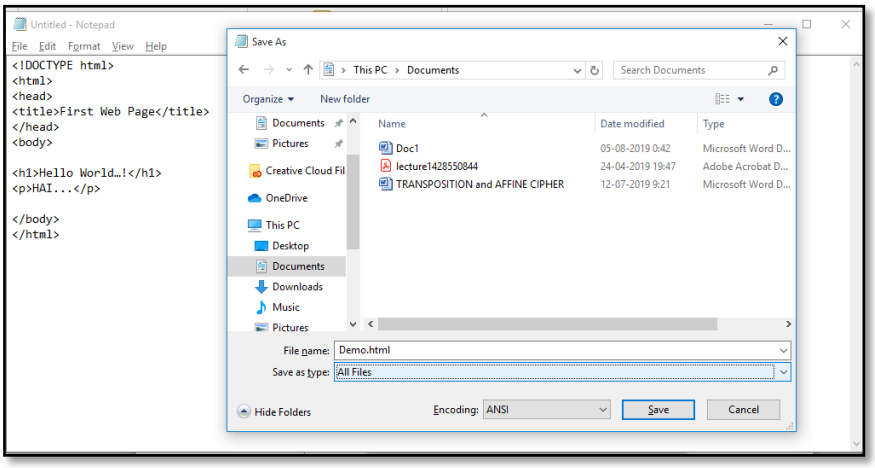
```
<!DOCTYPE html>
<html>
<head>
<title>First Web Page</title>
</head>
<body>
<h1>Hello World...!</h1>
<p>HAI...</p>
</body>
</html>
```

4. Save the file by click the Save option from the file menu

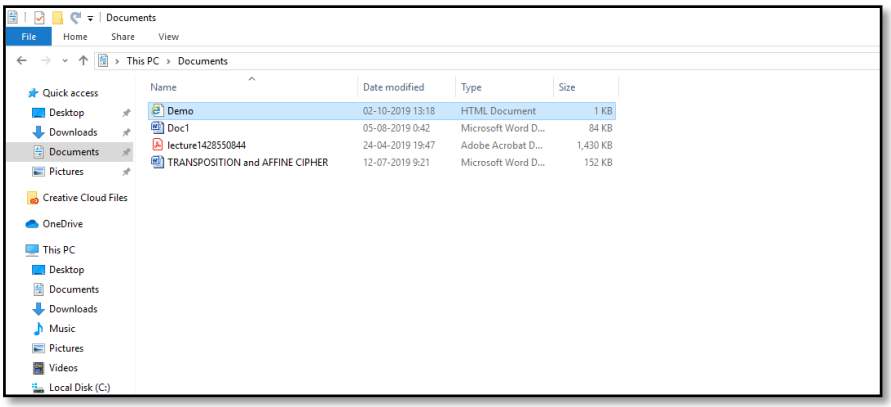
The Save dialogue box will appear as show below:



5. Choose the directory, give appropriate file name with extension ***.html*** and change the ***Save as type***to '***All files***'



6. The created web page will be saved in the selected location

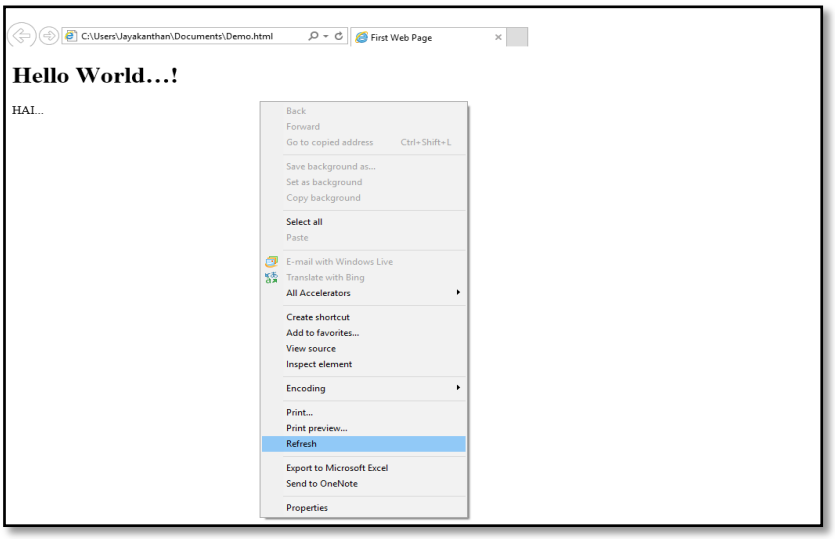


7. To view the web page created, ***double click*** the file name. The web page will be opened in the default browser. The commonly used browsers are Internet explorer, Chrome, Opera, NetScape.

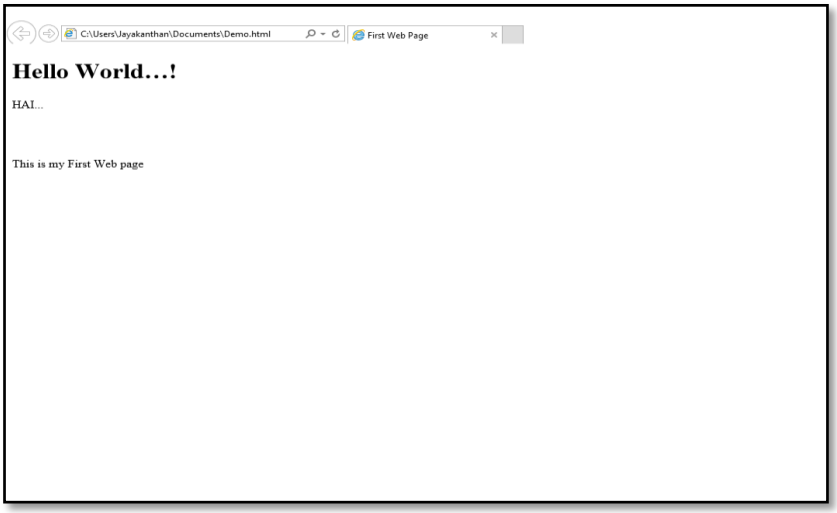
8. The output of the first web page is shown below

9. In case if the user needs to modify the HTML source, the source can be changed using the editor. To view the updated web page we need to press ***Refresh*** or ***F5*** key in the browser.

```
<!DOCTYPE html>
<html>
<head>
<title>First Web Page</title>
</head>
<body>
<h1>Hello World...!</h1>
<p>HAI...</p>
<br><br>
<p>This is my First Web Page </p>
</body>
</html>
```



10. The contents of the web page will be refreshed to reflect the changes in the source.



1 PROGRAMS USING BASIC HTML, TEXT AND HYPERLINKS

NOTES

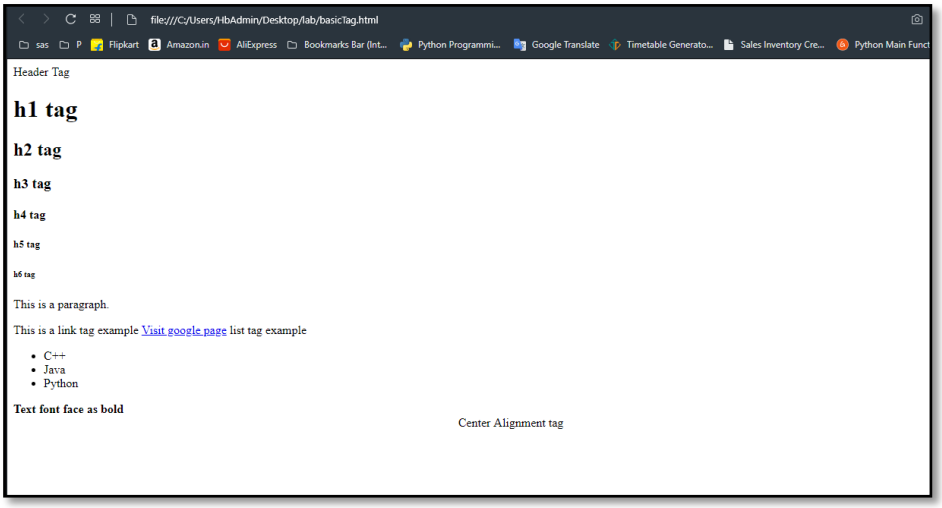
1. Create a web page using basic HTML tags

This following web page will demonstrate the working of Header Tags, Paragraph tag, Anchor tag, List tag and Alignment tag.

- The code is typed using an editor such as Notepad.
- The file is saved as basictags.html.

```
<html>

<head>
<title>Html basic tags</title>
</head>

<body>

Header Tag
<h1>h1 tag</h1>
<h2>h2 tag</h2>
<h3>h3 tag</h3>
<h4>h4 tag</h4>
<h5>h5 tag</h5>
<h6>h6 tag </h6>

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

This is a link tag example

<a href="https://www.google.com/html/">
Visit google page
</a>

list tagexample

<ul>
<li>C++</li>
<li>Java</li>
<li>Python</li>
</ul>

<b> Text font face as bold </b>
<center>Center Alignment tag</center>

</body>
</html>
```

Output

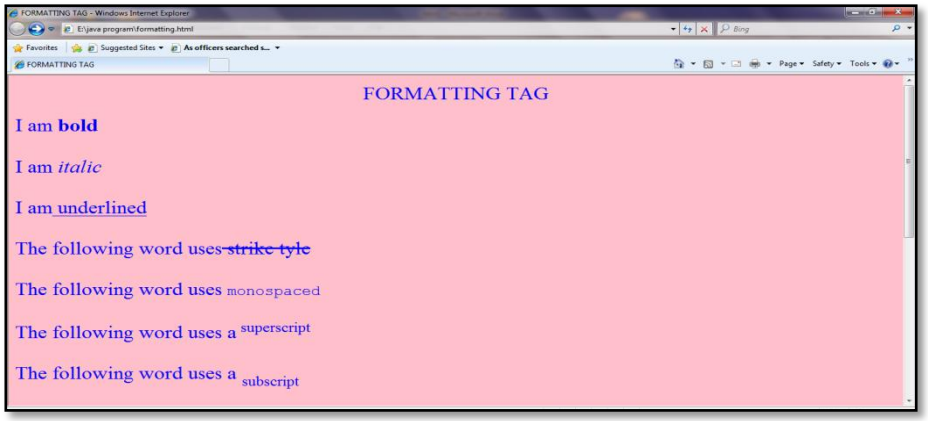


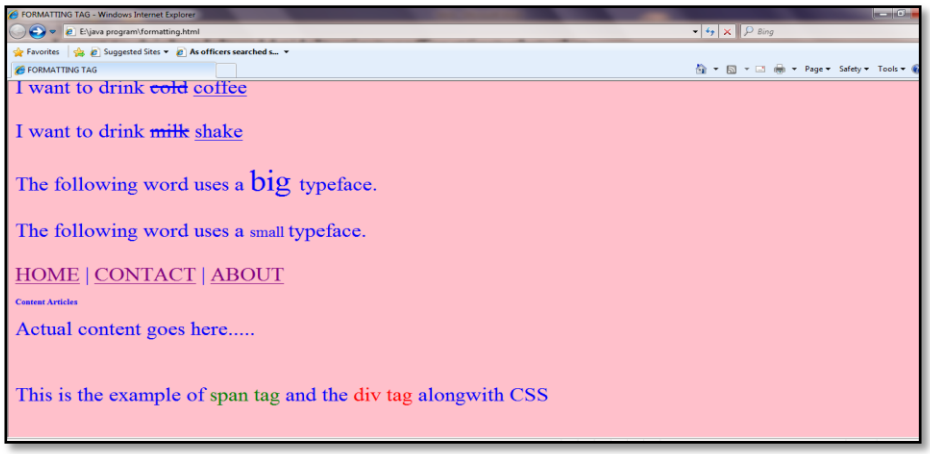
2. Create a web page using different formatting tags in HTML

```
<html>
<head>
<title>FORMATTING  TAG</title>

<body bgcolor="pink">
<font color="blue" size="6" face="Times New Roman">
<center>FORMATTING  TAG</center>

<p>I  am<b> bold </b><br><br>
<p>I  am <i> italic </i><br><br>
<p>I  am<u> underlined </u><br><br>

<p>The following word uses
<strike> strike tyle</strike><br><br>
<p>

The following word uses
<tt> monospaced</tt>
<br><br>

<p>The following word uses a<sup>
superscript</sup><br><br>
<p>The following word uses a
<sub>subscript</sub><br><br>

<p>I want to drink <del>cold</del>
<ins> coffee </ins><br><br>
<p>I want to drink <del>milk</del>
<ins> shake </ins><br><br>

<p>The following word uses a <big> big </big>
typeface.<br><br>
```

```
<p>The following word uses a <small> small </small>
typeface.<br><br>

<div id="menu" align="middle" >
<a href="/index.htm">HOME</a>
<a href="/about/contact_us.htm">CONTACT</a> |
<a href="/about/index.htm">ABOUT</a>
</div>

<div id="content" align="left" bgcolor="white">
<h5>Content Articles</h5>
<p>Actual content goes here.....
</div><br><br>

<p>This is the example of
<span style="color:green">span tag</span>
and the
<span style="color:red">div tag</span>
alongwith CSS<br><br></p>
</font>
</body>
</head>
</html>
```

Output



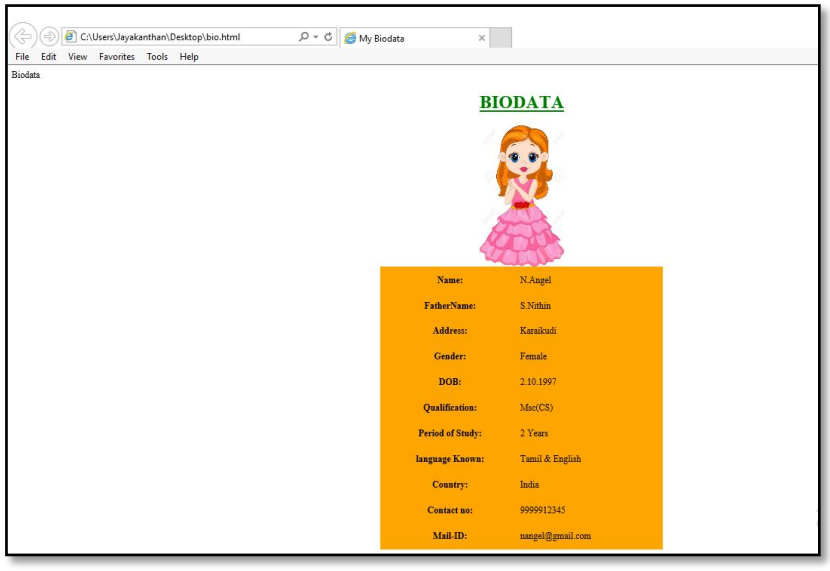


3. Create a web page to display a Biodata using Tables

```
<html>
<head>Biodata
<title>My Biodata</title></head>

<body>
<center>
<h1><strong>
<font color="green">
<u>BIODATA</u>
</font>
</strong>
</h1>

<img src="download.jpg" width=150 height=250></img>

<table boder="3" bgcolor="orange" width=500 height=500
color="green">

<tr>
<th>Name:</th>
<td>N.Angel</td>
</tr>

<tr>
<th>FatherName:</th>
<td>S.Nithin</td>
</tr>

<tr>
<th>Address:</th>
<td>Karaikudi</td>
</tr>

<tr>
<th>Gender:</th>

<td>Female</td>
</tr>

<tr>
<th>DOB:</th>
<td>2.10.1997</td>
</tr>

<tr>
<th>Qualification:</th>
<td>Msc(cs)</td>
</tr>
```

```
<tr>
<th>Period of Study:</th>
<td>2 Years</td>
</tr>

<tr>
<th>language Known:</th>
<td>Tamil&English</td>
</tr>

<tr><
th>Country:</th>
<td>India</td>
</tr>

<tr>
<th>Contact no:</th>
<td>9999912345</td>
</tr>

<tr>
<th>Mail-ID:</th>
<td>nangel@gmail.com</td>
</tr>

</table>
</center>

</body>
</html>
```

Output



4. Create a web page consisting of Dictionary using Phrases

This following web page will demonstrate the working of Frames tag, Anchor tag and Bgcolor tag.

frames.html

```
<html>
<body>
<h1 style="color:blue;">WELCOME</h1>
<center>
<h1><u>
<font color="blue">
Dictionary using phrase</font>
</u></h1>
</center>

<ul type="circle">
<li>
<h2>
<a href="phrase1.html" target="ss">
once in a blue moon</a>
</h2>

<br><br>
<h2>
<a href="phrase2.html" target="ss">
Friend at court</a>
</h2>

<br><br>
<h2>
<a href="phrase3.html" target="ss">
Fit as a fiddle</a>
</h2>
<br><br>
<h2>
<a href="phrase4.html" target="ss">
underhand</a>
</h2>
<br><br>

<h2>
<a href="phrase5.html" target="ss">
a white elephant</a>
</h2>
<br><br>
</li>

</body>
</html>
```

phrase1.html

```
<html>
<body bgcolor="red">
<b>
<h1>
Answer:Rarely
</h1>
</b>
</body>
</html>
```

phrase2.html

```
<html>
<body bgcolor="pink">
<b>
<h1>
Answer:Influential person to help
</h1>
</b>
</body>
</html>
```

phrase3.html

```
<html>
<body bgcolor="green">
<b><h1>
Answer:In a perfect condition
</h1></b>
</body>
</html>
```

phrase4.html

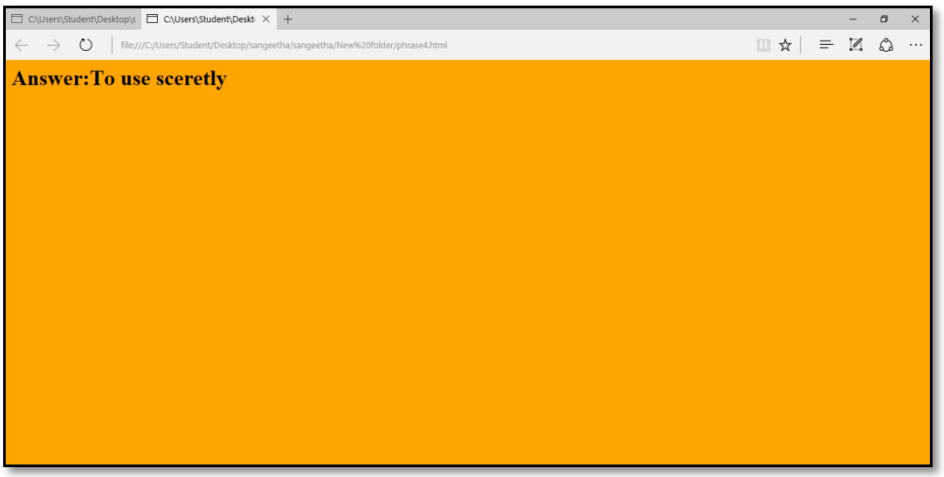
```
<html>
<body bgcolor="orange">
<b><h1>
Answer:To use secretly
</h1></b>
</body>
</html>
```

phrase5.html

```
<html>
<body bgcolor="blue">
<b><h1>
```

```
Answer:something two costly
</h1></b>
</body>
</html>
```

Output



5. Create a web page for a Book shop using HTML

frame.html

```
<html>
<head>
<frameset cols="45%,55%">
<frame name="col1" src="bs.html">
<frameset rows="80%,20%">
<frame name="row1" src="books.html">
<frame name="row2" src="submit.html">
</frameset>
</frameset>
</head>
</html>
```

bs.html:

```
<html>
<head>
<title>BOOK SHOP</title>
<body  bgcolor="saddlebrown">
<center>
<font face="algerian" color="white">
<h1> BOOK SHOP</h1></font>
<hr><hr>
<hr>

<img src="C:\Desktop\bookshop\background.jpeg"
height=500    width=500>
</center>

<hr><hr>
</body>
</head>
</html>
```

books.html

```
<html>
<head>
<body bgcolor="mediumseagreen">
<font face="algerian" size="4px">
Computer Related Books</font><hr>

<form action="blank.html">

<input type="checkbox" value="on">
<img src="C:\Desktop\bookshop\cmp1.jpg" height=200
width=200>
<b>PRICE:600/-

<input type="checkbox" value="on">
<img src="C:\Desktop\bookshop\cmp2.jpg" height=200
width=200>
PRICE:260/-
<hr>

<input type="checkbox" value="on">
<img src="C:\Desktop\bookshop\cmp3.jpg" height=200
width=200>
PRICE:1200/-

<input type="checkbox" value="on">
<img src="C:\Desktop\bookshop\cmp4.png" height=200
width=200>
```

```
PRICE:501/-
</b>
<hr>
</form>

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

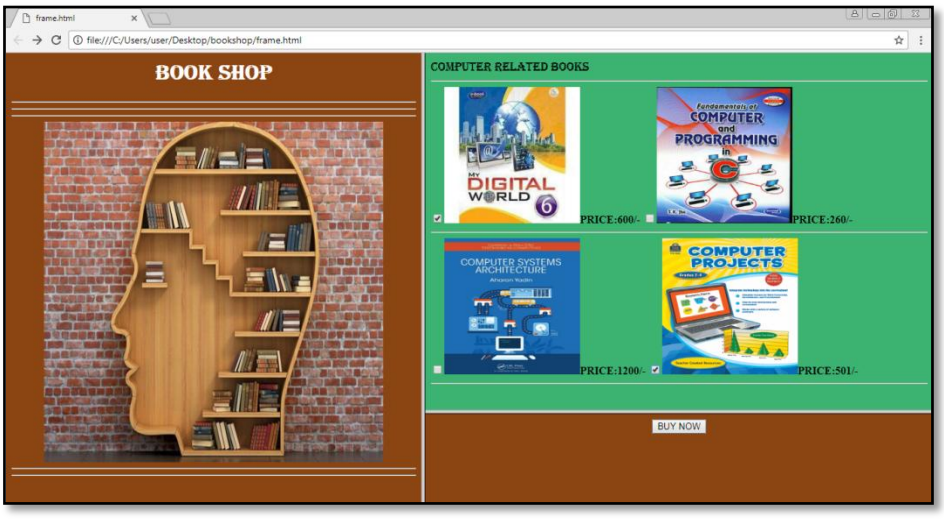
submit.html

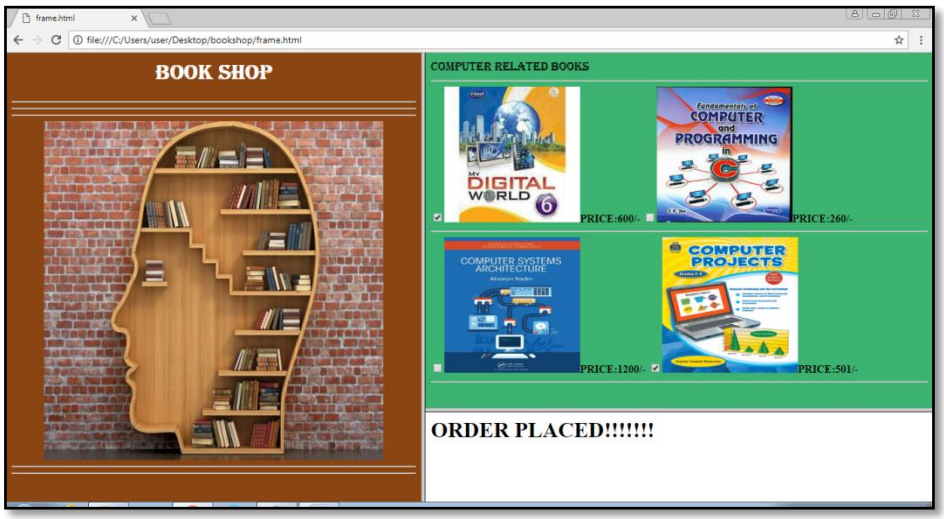
```
<html>
<head>
<body bgcolor="saddlebrown">
<form action="order.html">
<center>
<input type="submit" value="BUY NOW" ><center>
</form>
</body>
</head>
</html>
```

order.html

```
<html>
<head>
<body>
<h1>ORDER PLACED!!!!!!!</h1>
</body>
</head>
</html>
```

Output



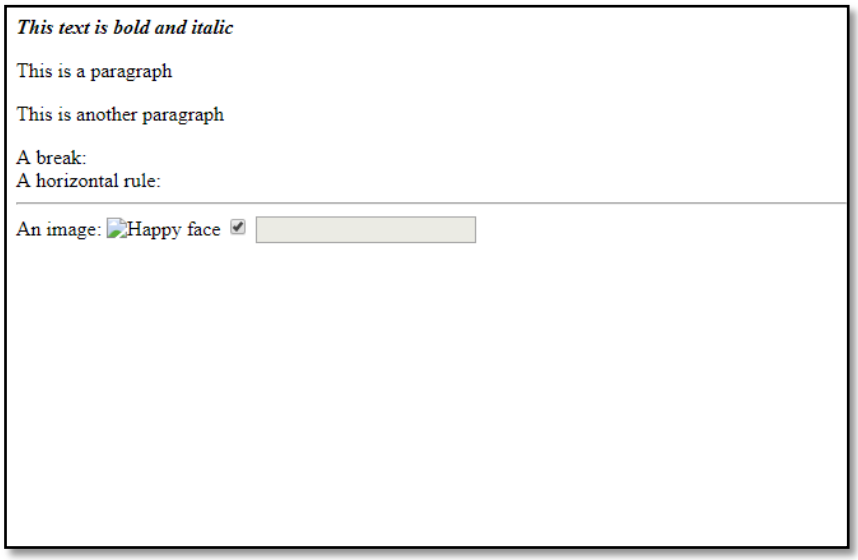


6. Create a simple web page consisting XHTML

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

<head>
<title>Title of document</title>
</head>

<! Elements must be properly nested>

<body>
<b>
<i>
This text is bold and italic
</i>
</b>

<! Elements must always be closed>

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

<! Empty Elements must also be closed>

A break: <br />
A horizontal rule: <hr />
An image: <img src="happy.gif" alt="Happy face" />

<! XHTML Elements must be in lower case>
<! XHTML Attribute Names must be in lower case>
<! XHTML Attribute values must be quoted>
```

```
<input type="checkbox" name="vehicle" value="car"
checked="checked" />

<input type="text" name="lastname"
disabled="disabled" />

</body>

</html>
```

Output

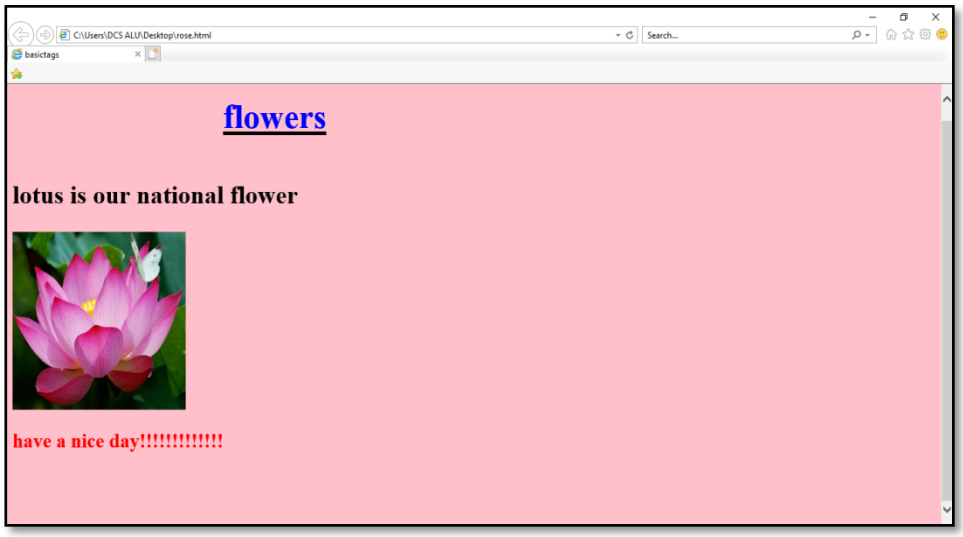


2 PROGRAMS USING MULTIMEDIA OBJECTS HTML

7. Create a simple web page consisting of Multimedia object - Image

```
<html>
<head>
<title>basictags</title>
</head>

<body bgcolor="pink">
<font color="black">
<font size="5">

<marquee><h1><u><b>
<font color="blue">flowers</b></u></h1>
</marquee>

<h2>lotus is our national flower</h2>
<img src="C:\Desktop\lotusflower.jpg" width="250"
height="250">
<h3>
<font color="red">have a nice day!!!!!!!!!!!!!</h3>
</body>
</html>
```

Output



8. Create a simple web page consisting of Multimedia object - Audio

```
<html>
<body>
<audio controls>
<source src="horse.ogg" type="audio/ogg">
<source src="horse.mp3" type="audio/mpeg">
</audio>
</body>
</html>
```

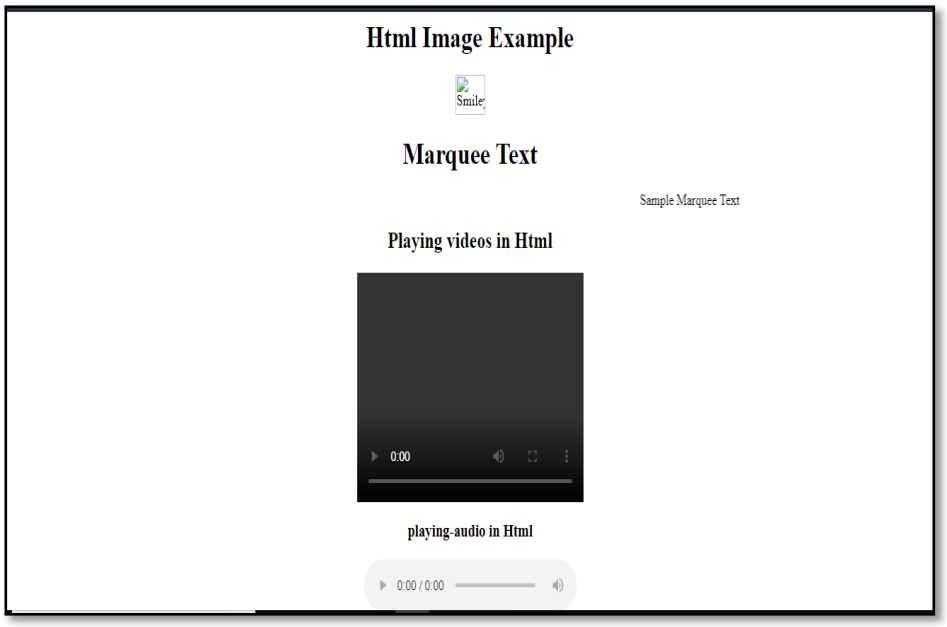
Output

9. Create a web page with Multimedia objects

```
<html>
<head>
</head>
<body>
<center>
<h1>Html Image Example</h1>
<img src="tenor.gif" alt="Smiley" width="42"
height="42">
<h1>Marquee Text</h1>
<marquee scrollamount="10" direction="left"
behavior="scroll">
Sample Marquee Text </marquee>

<h2>Playing videos in Html</h2>

<video width="320" height="240" controls>
<source src="SampleVideo.mp4" type="video/mp4">
<source src="movie.ogg" type="video/ogg">
Your browser does not support the video tag.
</video>

<h3>playing-audio in Html</h3>

<audio controls>
<source src="rain.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>
```

```
</center>
</body>

<html>
```

Output



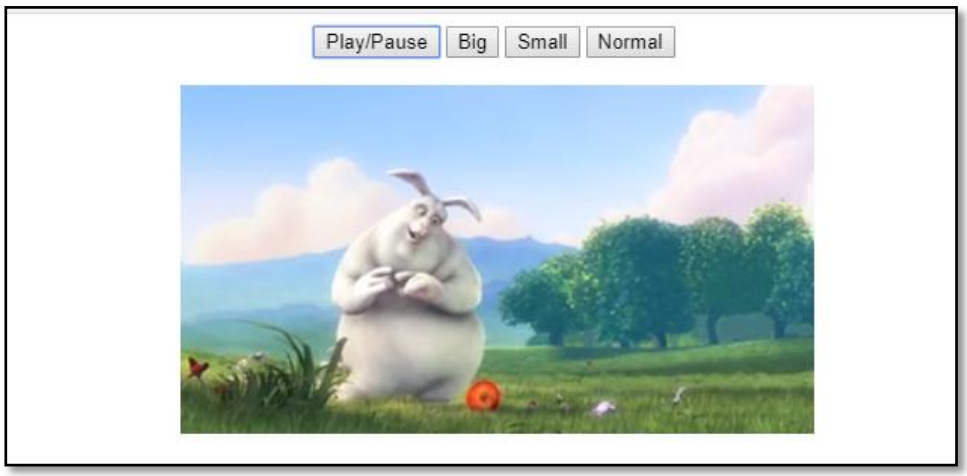
Note:

- *Alt attribute in image tag is used to display alternate message if the image is not loaded properly.*
- *Marquee tag is not supported by all types of Browsers*

10. **Create a web page with Video objects**

```
<!DOCTYPE html>
<html>
<body>

<div style="text-align:center">
<button onclick="playPause()">Play/Pause</button>
<button onclick="makeBig()">Big</button>
<button onclick="makeSmall()">Small</button>
<button onclick="makeNormal()">Normal</button>
<br><br>

<video id="video1" width="420">
<source src="mov_bbb.mp4" type="video/mp4">
<source src="mov_bbb.ogg" type="video/ogg">
    Your browser does not support HTML5 video.
</video>

</div>

<script>

var myVideo = document.getElementById("video1");

function playPause()
{
  if (myVideo.paused)
    myVideo.play();
  else
    myVideo.pause();
}

function makeBig()
{
    myVideo.width = 560;
}

function makeSmall() {
    myVideo.width = 320;
}

function makeNormal()
{
    myVideo.width = 420;
}
</script>

</body>
</html>
```

Output



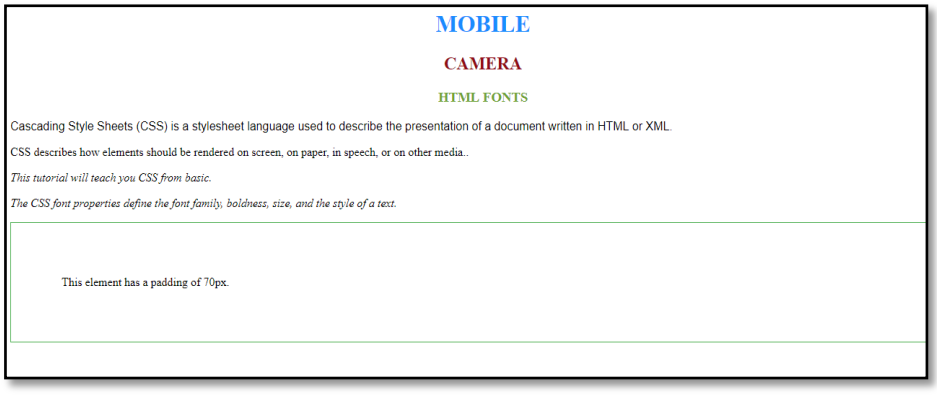
3 PROGRAMS USING STYLE SHEETS

11. Create a web page using Internal Style Sheet

```
<html>
<head>
<style>
div
{
  padding: 70px;
  border: 1px solid #4CAF50;
}

h1
{
  text-align: center;
  text-transform: uppercase;
  color:  #1a8cff;
}

h2
{
  text-align: center;
  text-transform: uppercase;
  color: #910d14;
}

h3
{
  text-align: center;
  text-transform: uppercase;
  color: #70a336;
}
}
p.serif
{
  font-family: "Times New Roman", Times, serif;
}

p.sansserif
{
  font-family: Arial, Helvetica, sans-serif;
}

p.italic
{
  font-style: italic;
}

p.oblique
```

```
{
  font-style: oblique;
}
</style>
</head>

<body>
<h1 style="background-color:Mobile;" >Mobile</h1>
<h2 style="background-color:Camera;">Camera</h2>
<h3>html fonts </h3>

<p class="sansserif">
Cascading Style Sheets (CSS) is a stylesheet language
used to describe the presentation of a document
written in HTML or XML.
</p>

<p class="serif">
CSS describes how elements should be rendered on
screen, on paper, in speech, or on other media..
</p>

<p class="italic">
This tutorial will teach you CSS from basic.
</P>

<p class="oblique">
The CSS font properties define the font family,
boldness, size, and the style of a text.
</p>

<div>
This element has a padding of 70px.
</div>

</body>
</html>
```

Output



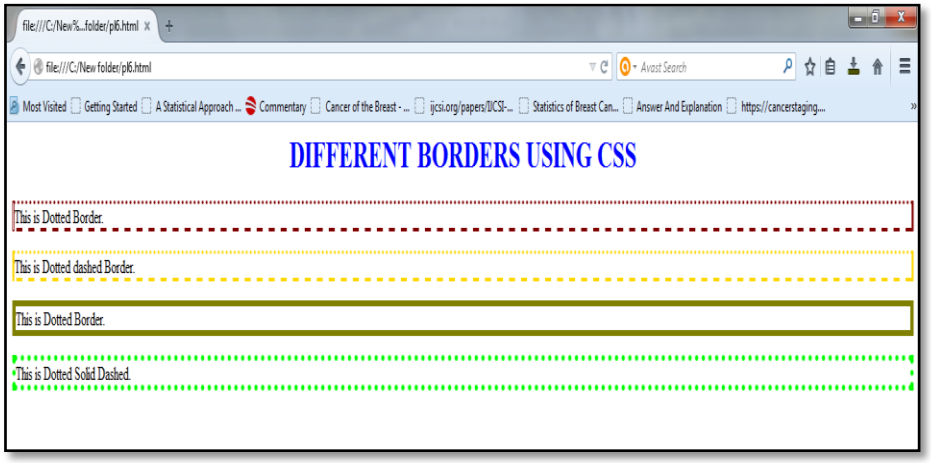
NOTES

12. Create a web page using Style Sheet to display different border options for Paragraph Tag

```
<html>
<head>

<style>

p.one
{
    border-style: dotted solid dashed double;
    border-color:maroon;
}

p.two
{
    border-style: dotted solid dashed;
 border-color:gold;
}

p.three
{
    border-style: solid;
    border-width:5px;
 border-color:olive;
}

p.four
{
    border-style: dotted;
    border-width:thick;
    border-color: lime;
}
h1
{
color:blue;
text-align:center;
}

</style></head>

<body>
<h1>DIFFERENT BORDERS USING CSS</h1>

<p class="one">This is Dotted Border.</p>
<p class="two">This is Dotted dashed Border.</p>
<p class="three">This is Dotted Border.</p>
<p class="four">This is Dotted Solid Dashed.</p>
```

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

Output



13. Create a web page using different types of Style Sheets

index.html

```
<html>
<frameset rows="70,*">
<frame src="title.html" name="f1">
<frameset cols="35%,*">
<frame src="link.html" name="f2">
<frame name="f3">
</frameset>
</frameset>
</html>
```

title.html

```
<html>
<head><title>index</title>
</head>
<body bgcolor="magenta">
<center>
<h1>J2EE AND CASCADING STYLES</h1>
</center>
</body>
</html>
```

link.html

```
<html>
<head><title> linking...</title>
```

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

<center>
<h2>DO U WANT TO KNOW..</h2>
<br>
<br>

<a href="j2ee.html" target="f3">J2EE</a><br>

<a href="style.html" target="f3">STYLES</a><br>

<br><br>
click the appropriate option..<br><br>

<marquee>
choose ur lovely platforms....
</marquee>
</body>
</html>
```

j2ee.html

```
<html>
<head>

<title> working with style sheets </title>

<style type="text/css">

h1
{
font-family:monotype corsiva
}
h2
{
background-color:green;
background-repeat:repeat-x
}

p
{
font-size:12pt;
font-weight:bold;
color:#23238e;
border-style:groove
}

ul
{
```

```
list-style-type:lower-roman
}

</style>
</head>

<body bgcolor="pink">
<center>
<h1>WELCOME TO J2EE WORLD</h1>
<h2>
Here, you will be able to create interactive server
side programs....</h2>
<br>

<p>
J2EE provides many platforms to create server side
programming applications... each application provides
many features... some of the platforms are as
follows....
</p>

<ul>
<li>SERVLETS</li>
<li>JMS</li>
<li>RMI</li>
<li>CORBA</li>
</ul>

<br><br><br>

<h1>
<marquee behaviour="right">
Thanks for visiting....
</marquee>
</h1>
</body>
</html>
```

style.html

```
<html>
<head>
<title>external style sheets</title>

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

</head>

<body bgcolor="tee">
<center>
```

```
<h2>STYLE INFORMATION</h2>
</center>

<p>
style sheets are powerful mechanism for adding styles
to web documents.HTML elements on a web page can then
be bound to the style sheet.The advantage of a style
sheet includes the ability to make global changes to
all documents from a single location.
</p>

<br>style attributes are....<br>

<ul type="1" color="red">
<li>font attributes</li>
<li>text attributes</li>
<li>color and background attributes</li>
<li>margin attributes</li>
</ul>

</body>
</html>
```

external.css

```
p
{
font size:12pt;
font-weight:bold
}

body
{
margin-top=10%
}
h2
{
backgroung-image:url(redrose.jpg)
}
```

Output


J2EE AND CASCADING STYLES
DO U WANT TO KNOW..
J2EE
STYLES
click the appropriate option..
choose ur lovely platforms
WELCOME TO J2EE WORLD
Here, you will be able to create interactive server side programs....
J2EE provides many platforms to create server side programming applications... each application provides many features... some of the platforms are as follows....
i. SERVLETS
ii. JMS
iii. RMI
iv. CORBA

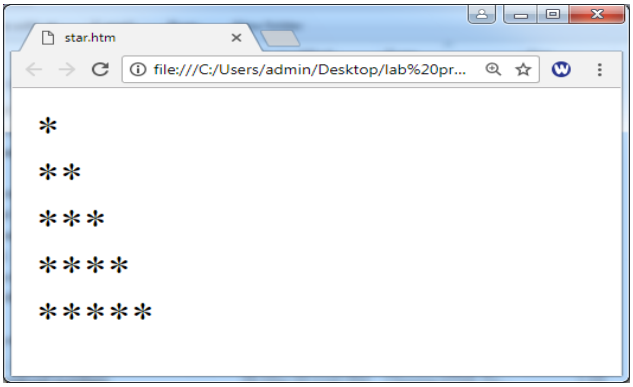
BLOCK – II
CLIENT SIDE PROGRAMS

4 PROGRAMS USING JAVASCRIPT, DYNAMIC HTML, OPERATORS, ARRAYS, COOKIES

14. Write a simple JavaScript to display Star Pyramid

```
<html>
<body>

<script language="javascript">
var p,q;

for(p=1;p<=5;p++)
{

for(q=1;q<=p;q++)
{
document.write("*");
}

document.writeln(" ");
document.writeln("<br>");

}

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

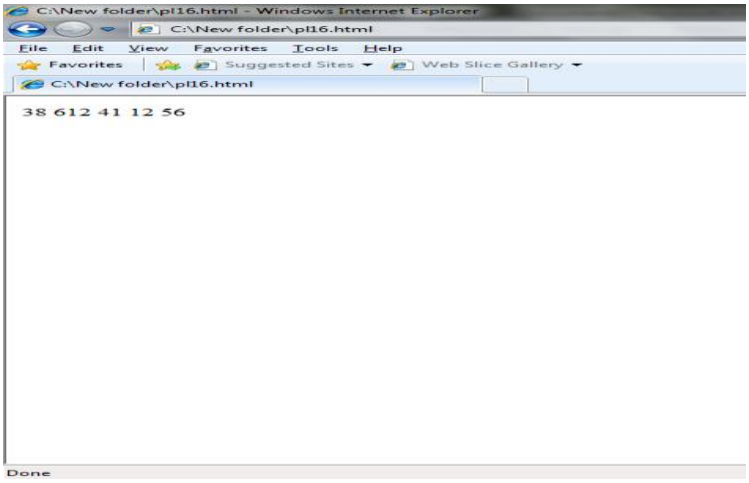
Output



15. Create a JavaScript to Reverse an Array by getting inputs using Prompt Function

```
<html>
<body>

<script language="javascript">

var a=new Array(5);

for(i=0;i<5;i++)
 a[i]=prompt("enter a number");

a=a.reverse();

for(i=0;i<5;i++)
 document.writeln(a[i]);

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

Output

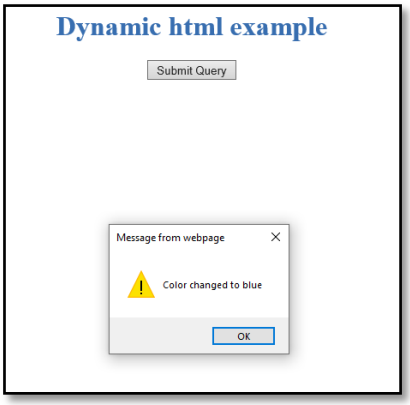


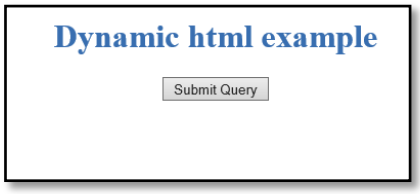
16. Create an Alert for a Web Page using Dynamic HTML

```
<html>
<head>
<title>Create an alert for Dynamic html</title>
</head>

<body>
<center>
<h1 id="example">
Dynamic html example
</h1>

<input type="Submit" onclick="Click()" />
```

```
<script style="">

function Click()
{
document.getElementById("example").style.color =
"#386eb0";
window.alert("Color changed to blue");
}

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

Output



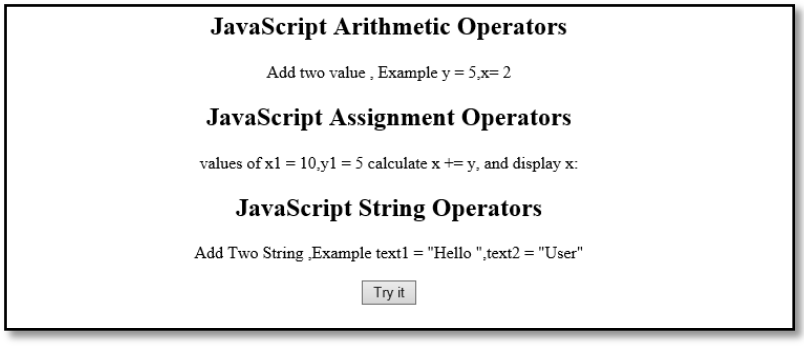


17. Write a JavaScript to handle different operators

```
<html>
<body>
<center>

<h2>JavaScript Arithmetic Operators</h2>
```

```
<P> Add two value, Example y = 5,x= 2</p>
<p id="demo"></p>

<h2>JavaScript Assignment Operators</h2>
<p>  values of x1 = 10,y1 = 5 calculate x += y, and
display  x:</p>

<p id="demo1"></p>
<h2>JavaScript String Operators</h2>
<p> Add Two String,Example text1 = "Hello ",text2 =
"User" </P>

<p id="demo2"></p>
<button onclick="myFunction()">Try it</button>
</center>
<script>

function myFunction()
{
 var y = 5;
 var x = y + 2;
 document.getElementById("demo").innerHTML = x;

 var x1 = 10;
 var y1 = 5;
 x1 += y1;
 document.getElementById("demo1").innerHTML = x1;

 var text1 = "Hello ";
 var text2 = "User";
 var text3 = text1 + text2;
 document.getElementById("demo2").innerHTML = text3;
}

</script>

</body>
</html>
```

Output

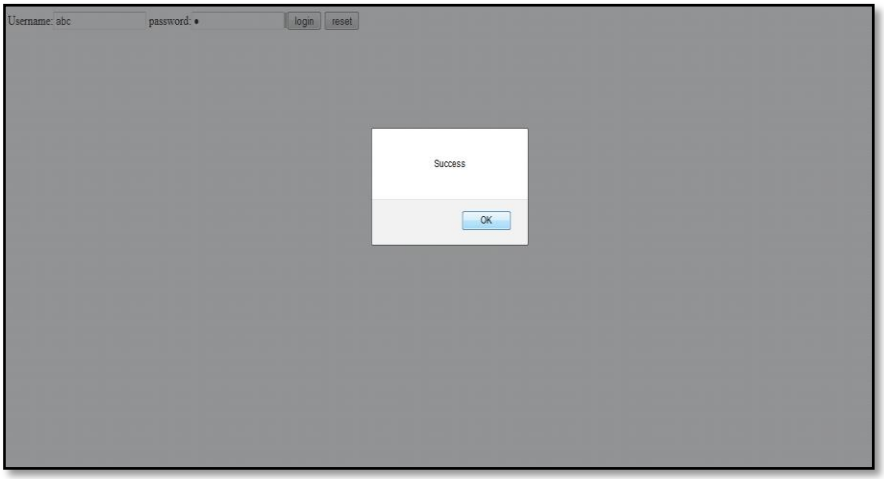


18. Write a JavaScript to validate username and password using Arrays

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

function check()
{
var uarray=["xyz","abc"];
var parray=[1,2];
var user=fm.f1.value;
var pass=fm.f2.value;
var i,count,valid;
count=uarray.length;

for(i=0;i<count;i++)
{

if(user==uarray[i] && pass==parray[i])
{
valid=1;
break;
}

}

if(valid==1)
alert("Success");
else
alert("Failed");

}
</script>

<form name="fm">
```

```
Username:<input type="text" name="f1">

password:<input type="password" name="f2">

<input type="button" value="login" onClick="check()">

<input type="reset" value="reset">

</form>

</body>
</html>
```

Output

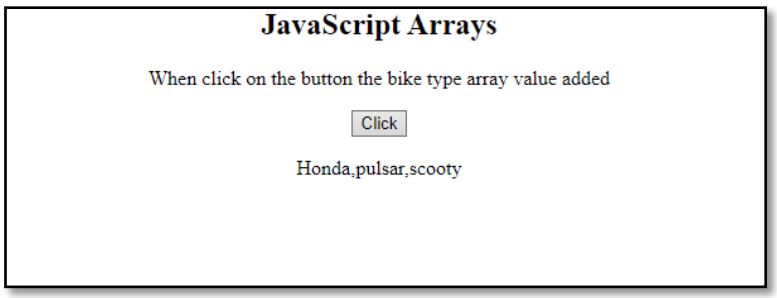


19. Write a JavaScript to display the elements of an Array

```
<html>
<head>
<script>

function getbikeTypes()
{
var Bike=["Honda","pulsar","scooty"];
document.getElementById("demo").innerHTML = Bike;
}

</script>

</head>
<title>Arrays</title>

<body>
```

```
<center>

<h2>JavaScript Arrays</h2>
<p>
When click on the button the bike type array value
added
</p>

<input type="button" name="Add" value="Click"
onclick="getbikeTypes()" />
<p id="demo" />

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

Output

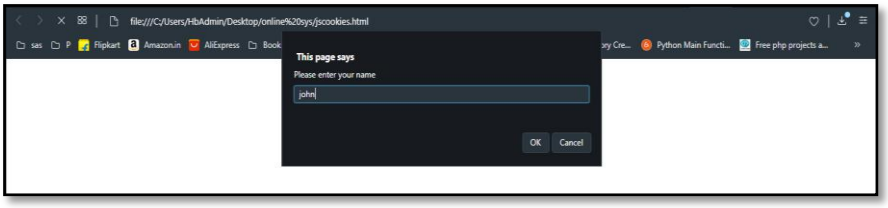


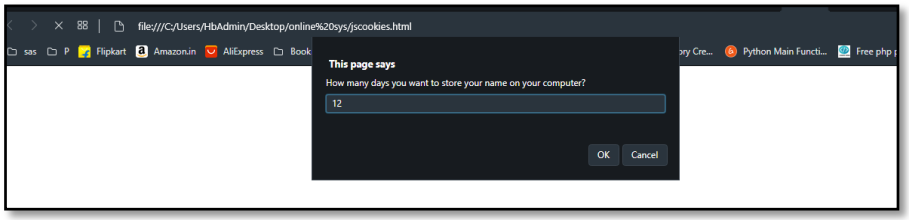
20. Write a JavaScript to process Cookies

```
<html><head>
<title>Cookie!!!</title>
<script type="text/javascript">

function
createCookie(cookieName,cookieValue,daysToExpire)
{
var date = new Date();
date.setTime(date.getTime()+(daysToExpire*24*60*60*100
0));
document.cookie = cookieName + "=" + cookieValue + ";
expires=" + date.toGMTString();
}

function accessCookie(cookieName)
{
var name = cookieName + "=";
var allCookieArray = document.cookie.split(';');
for(var i=0; i<allCookieArray.length; i++)
```

```
{
var temp = allCookieArray[i].trim();
if (temp.indexOf(name)==0)
return temp.substring(name.length,temp.length);
}
return "";
}

function checkCookie()
{
var user = accessCookie("testCookie");
if (user!="")
alert("Welcome Back " + user + "!!!");
else

{
user = prompt("Please enter your name");
num = prompt("How many days you want to store your
name on your computer?");
if (user!="" && user!=null)
{
createCookie("testCookie", user, num);
}
}
}
</script>

</head>
<body onload="checkCookie()" />
</html>
```

Output





5 PROGRAMS USING JAVASCRIPT DATA VALIDATION, MESSAGES AND CONFIRMATIONS

21. Write a JavaScript to validate a Form

```
<html>
<head>
<script>

function validateForm()
{
var x = document.forms["myForm"]["fname"].value;
var y =x.trim().length;

if (y>1)
{

if (x == "" &&  x!=null && x!=" ")
{
alert("Name must be filled out");
return ;
}

Else

{
alert("Enter the name value as :"+x);
document.forms["myForm"]["fname"].value="";
return;
}

}

else

{
alert("space not allowed");
}

}
</script>
</head>

<body>
<center>

<form name="myForm">
```

```
<h1>Java Script Text Box Validation Empty Or Not</h1>
<h2>Name text box cannot be Empty</h2>

Name: <input type="text" name="fname">
<br><br><br>

<input type="button" name="validation" value="Submit"
onclick="validateForm();">

</form>
</center>

</body>
</html>
```

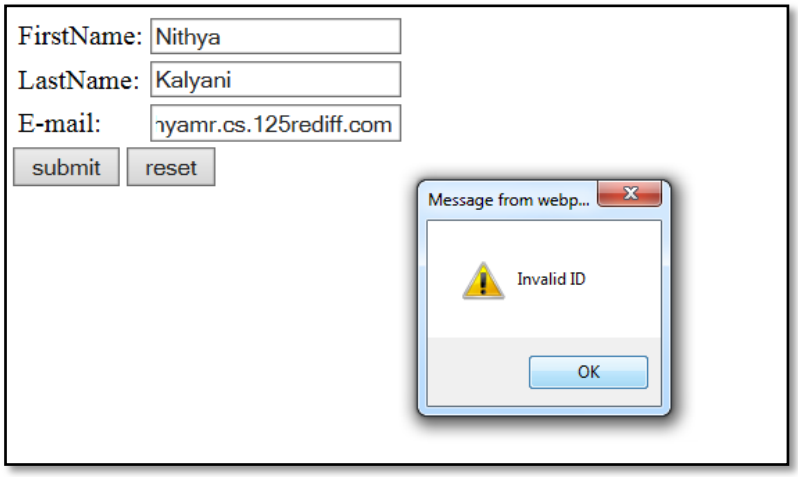
Output

22. Write a JavaScript to validate Email id

```
<html>
<body>
<Form name="idcheck">
<table>
<tr>
<td>FirstName:</td>
<td><input type="text" name="fnm"></td>
</tr>
<tr>
<td>LastName:</td>
<td><input type="text" name="lnm"></td>
</tr>

<tr>
<td>E-mail:</td>
<td><input type="text" name="eid"></td>
</tr>
</table>
```

```
<input type="button" value="submit"
onClick="emailvalid()">

<input type="Reset" value="reset">
</Form>

<Script type="text/javascript">

function emailvalid()
{
 var first,last,id;
 first=idcheck.fnm.value;
 last=idcheck.lnm.value;
 id=idcheck.eid.value;
 var idreg=new RegExp(/^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-
]+\.[a-zA-Z]{2,4}$/);
 var finalid=idreg.exec(id);
 if(first=="")
 {
       alert("Please Enter your FirstName");
       first.focus();
 }
 else if(last=="")
 {
       alert("Please Enter your Last Name");
       last.focus();
 }
 else if(!finalid)
 {
       alert("Invalid ID");
       id.focus();
 }
 else
       alert("Thank You");
}

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

Output



23. Write a JavaScript to perform data validation for signup form

```
<Html>
<Head>

<style>
sup,p{color: red;}
</style>
</Head>

<Body>
<p><sup>*</sup>Indicate the fields are mandatory</p>

<Form name="signup">
<hr>

<table >

<tr>
<td><sup>*</sup>User Name:</td>
<td><Input type="text" name="t1"></td>
<td><p>(Contains only 0-9,a-z,underscore)</p></td>
</tr>

<tr>
<td><sup>*</sup>Password:</td>
<td><Input type="password" name="t2"></td>
<td><p>(Password is greater than 5
characters)</p></td>
</tr>

<tr>
<td><sup>*</sup>Re-type Password:</td>
<td><Input type="password" name="t3"></td>
```

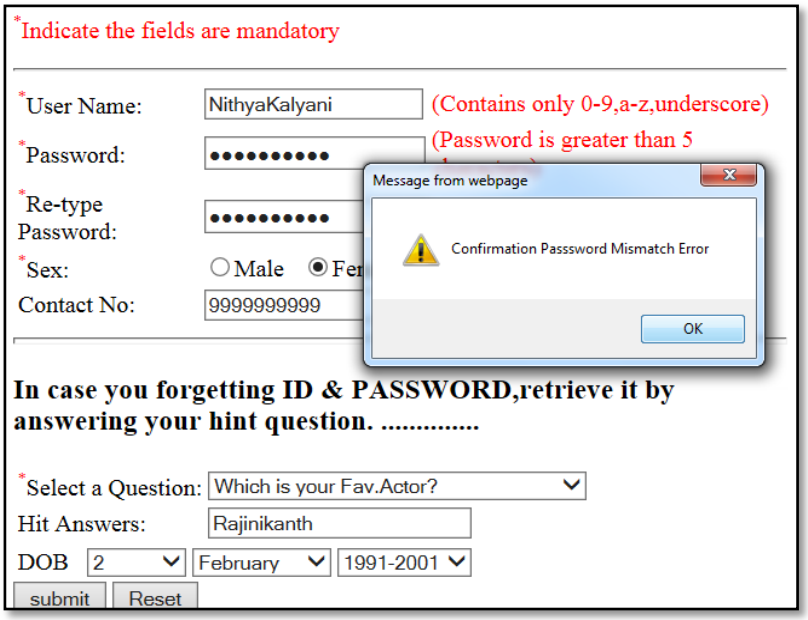
```
</tr>

<tr>
<td><sup>*</sup>Sex:</td>
<td><input type="radio" name="s" id="Male">Male  
<input type="radio" name="s"id="Female">Female</td>
</tr>

<tr>
<td>Contact No:</td>
<td><Input type="text" name="t4"></td>
</tr>

</table>

<hr size="3">
<h3>In case you forgetting ID & PASSWORD,retrieve it
by  answering your hintquestion. ..............</h3>

<table >

<tr>
<td><sup>*</sup>Select a Question:</td>
<td><select name="q">
<option value="select">--------Select---------
<option value="1">Which is your National Bird?
<option value="2">Which is your Fav.Actor?
<option value="3">What is your Childhood Friend
Name?</td>
</tr>

<tr>
<td>Hit Answers:</td>
<td><input type="text" size="25" name="qa"></td>
</tr>

</table>

<table>

<tr>
<td>DOB</td>
<td></td><td></td>

<td><select name="Day">
<option value="" selected>--DAY-
<option value="1">1
<option value="2">2
<option value="3">3
</select>
</td>
```

```
<td><select name="Month">
<option value="" selected>--MONTH--
<option value="JAN">January
<option value="FEB">February
<option value="MAR">March
</select>
</td>

<td><select name="Year">
<option value="" selected>--YEAR--
<option value="JAN">1980-1990
<option value="FEB">1991-2001
<option value="MAR">2005
</select>
</td>

</tr>
</table>

<input type="button" value="submit"
onClick="signupvalid()">
<input type="reset"value="Reset">
</form>

<script type="text/javascript">

function signupvalid()
{
var user,pass,retypepass;
user=signup.t1.value;
pass=signup.t2.value;
retypepass=signup.t3.value;
var userreg=new RegExp("^[a-zA-z][a-zA-Z0-9_\]*$");
var ruser=userreg.exec(user);

if(user=="")
{
alert("Please Enter Your Username");
user.focus();
}

else if(!ruser)
{
alert("Invalid Username");
user.focus();
}

else if(pass=="")
{
alert("Please Enter your Password");
```

```
pass.focus();
}
else if(pass.length<5)
{
alert("Password Should be greater than 5 characters");
pass.focus();
}

else if(retypepass=="")
{
alert("Please Enter your Confirmation Password");
retypepass.focus();
}

else if(retypepass!=pass)
{
alert("Confirmation Passsword Mismatch Error");
retypepass.focus();
}

else if((signup.s[0].checked == false ) && (
signup.s[1].checked == false ) )
{
alert ( "Please choose your Gender: Male or Female" );
}

else if(signup.q.value=="" || signup.qa.value=="")
{
alert("Fillup Security Purpose Fields");
signup.q.focus();
}

else if(signup.Day.value=="")
{
alert("Select Day of DOB field");
signup.Day.focus();
}

else if(signup.Month.value=="")
{
alert("Select Month of DOB field");
signup.Month.focus();
}

else if(signup.Year.value=="")
{
alert("Select Year of DOB field");
signup.Year.focus();
}

else
```

```
alert("Submit");
}
</script>
</body>
</html>
```

Output

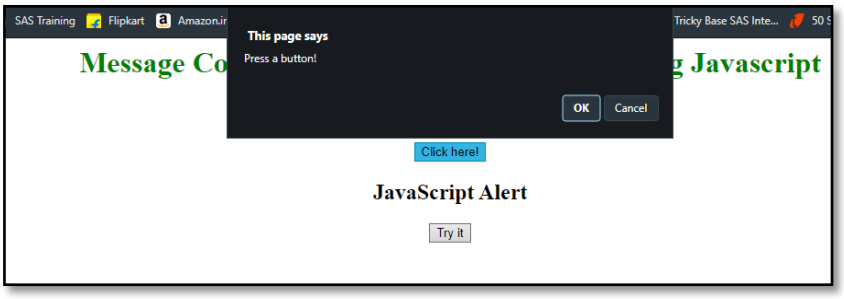


24. Write a JavaScript to display Confirmation messages

```
<html>
<head>
<title>Window confirm() Method</title>
</head>

<body style="text-align: center;">

<h1 style="color: green;">
Message Confirmation Common Example
Using Javascript
</h1>

<h2>
Window confirm() Method</h2>
<button onclick="Messageconfirm()">
Click here!</button>

<p id="g">
</p>
<script>
```

```
function Messageconfirm()
{
var doc;
var result = confirm("Press a button!");
if (result == true)
{
doc = "OK was pressed.";
}
else
{
doc = "Cancel was pressed.";
}
document.getElementById("g").innerHTML = doc;
}

function myFunction()
{
alert("I am an alert box!");
}
</script>

<h2>JavaScript Alert</h2>
<button onclick="myFunction()">
Try it</button>

</body>
</html>
```

Output



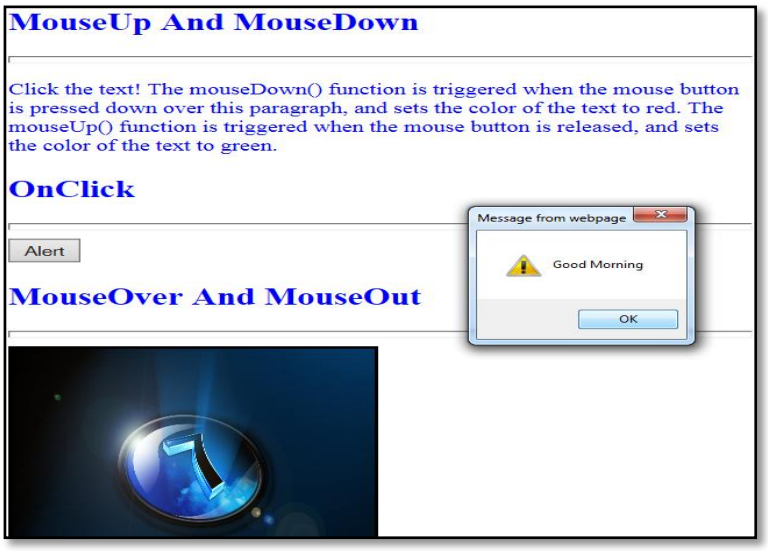
25. Write a JavaScript to handle Mouse Events

```
<Html>

<Body text="blue">

<form name="mouse">
<h2>MouseUp And MouseDown</h2>
<hr size="5px">
```

```
<p id="myP" onmousedown="mouseDown()"
onmouseup="mouseUp()">

Click the text! The mouseDown() function is triggered
when the mouse button is pressed down over this
paragraph, and sets the color of the text to red. The
mouseUp() function is triggered when the mouse button
is released, and sets the color of the text to green.
</p>

<h2>OnClick</h2>
<hr size="5px">

<Input type="button"  onclick="msg()" value="Alert">
<h2>MouseOver And MouseOut</h2>

<hr size="5px">

<img src="Win-Seven.jpg" border="2px" width="250px"
height="250px" onMouseOver="MouseRollover(this)"
onMouseOut="MouseOut(this)" />

</form>

<script language="javascript">

function mouseDown()
{
    document.getElementById("myP").style.color =
"red";
}

function msg()
{
alert("Good Morning");
}

function mouseUp()
{
            document.getElementById("myP").style.color
= "green";
}

function MouseRollover(MyImage)
{
              MyImage.src = "sf511-s03in_3.jpg";
}
function MouseOut(MyImage)
{
              MyImage.src = "Win-Seven.jpg";
```

```
}

</script>

<body>
</html>
```

Output



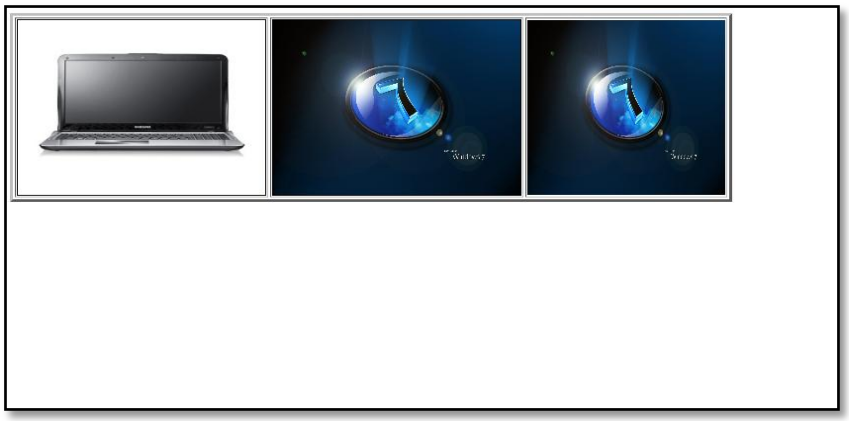
6 PROGRAMS USING ROLLOVER BUTTONS, WRITING TO DIFFERENT FRAME, MOVING IMAGES

26. Write a JavaScript to create Rollover Buttons

```
<html>
<head>

<script type="text/javascript">

function bigImg(x)
{
x.style.height="400px";
x.style.width="450px";
}

function normalImg(x)
{
x.style.height="200px";
x.style.width="250px";
}

function MouseRollover(MyImage)
{
            MyImage.src = "sf511-s03in_3.jpg";
}

function MouseOut(MyImage)
{
            MyImage.src = "Win-Seven.jpg";
}

</script>
</head>

<body>

<table border="3">

<tr>
<td>
<img  border="1" src="sf511-s03in_3.jpg"
width="200px" height="200px"
onmouseover="bigImg(this)"
onmouseout="normalImg(this)"></td>
```

```
<td><img  border="1" src="Win-Seven.jpg"
width="200px" height="200px"
onmouseover="bigImg(this)"
onmouseout="normalImg(this)"></td>

<td><img src="Win-Seven.jpg" boarder="0px"
width="200px" height="200px"
onMouseOver="MouseRollover(this)"
onMouseOut="MouseOut(this)" /></td>

</body>
</html>
```

Output



27. Create a web page with moving images

```
<!DOCTYPE html>
<html>
<body>

<h2>Animated Images</h2>
<p>The GIF standard allows moving images.</p>
```

```
<img src="programming.gif" alt="Computer man"
style="width:48px;height:48px;">

</body>
</html>
```

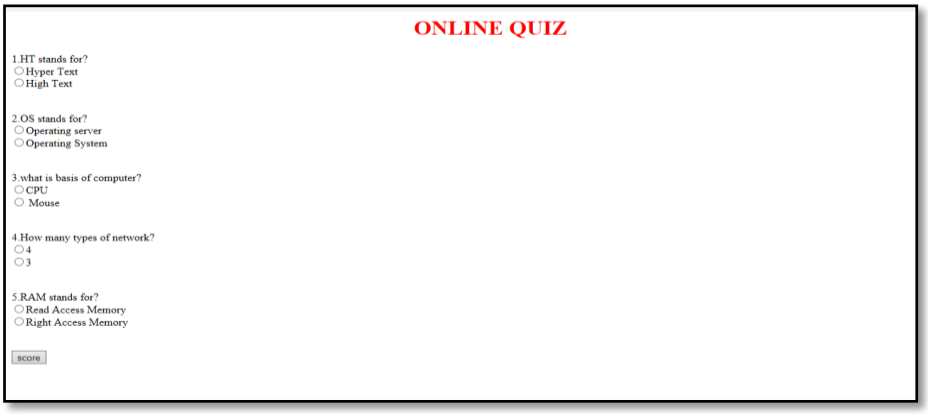
Output

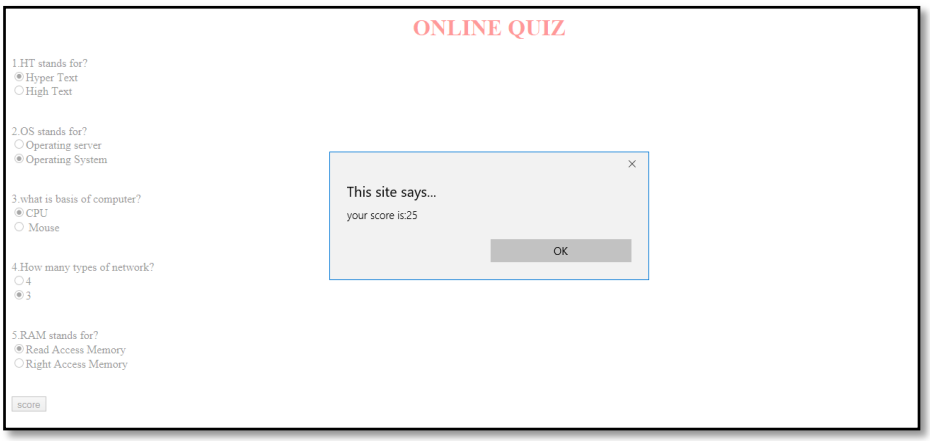
28. Write a JavaScript to find the score of Simple Online Quiz

```
<html>
<head>
<script language="javascript">

function f()
{

var score=0;

if(f1.ht[0].checked)
score=score+5;

if(f1.os[1].checked)
score=score+5;

if(f1.cp[0].checked)
score=score+5;

if(f1.ty[1].checked)
score=score+5;

if(f1.ra[0].checked)
score=score+5;

alert("your score is:"+score);

}
</script>
```

```
</head>
<body>

<form id="f1" action="">
<h1><center><font color="red">
ONLINE QUIZ</font></center></h1>

1.HT stands for?<br>

<input type="radio" name="ht" value="Hyper Text">Hyper
Text<br>

<input type="radio" name="ht" value="High Text">High
Text<br><br><br>

2.OS stands for?<br>

<input type="radio" name="os" value="Operating
server">Operating server<br>

<input type="radio" name="os" value="operating
System">Operating System<br><br><br>

3.what is basis of computer?<br>

<input type="radio" name="cp" value="cpu">CPU<br>

<input type="radio" name="cp" value="mouse">
Mouse<br><br><br>

4.How many types of network?<br>

<input type="radio" name="ty" value="4">4<br>

<input type="radio" name="ty" value="3">3<br><br><br>

5.RAM stands for?<br>

<input type="radio" name="ra" value="read access
memory">Read Access Memory <br>

<input type="radio" name="ra" value="right access
memory">Right Access Memory<br><br><br>

<input type="button" value="score" onclick="f()">
<br>

</form>

</body>
</html>
```

Output





29. Create a web site for an University using Frames

main frame.html

```
<html>
<frameset cols="20%,40%,40%">
<frame src="frame1.html" name="frame1">
<frame src="frame2.html" name="frame2">
<frame src="frame3.html" name="frame3">
</frameset>
<html>
```

frame1.html

```
<html>
<body bgcolor="tan">
<br><br><br>
<a href="frame4.html"  target="frame3">HOME</a><br>
<a href="frame5.html "
target="frame3">DEPARTMENTS</a><br>
```

```
<a href="frame6.html"  target="frame3">AFFILIATED
COLLEGES</a><br>
<a href="frame7.html"  target="frame3">RESULTS</a>
</body>
</html>
```

frame2.html

```
<html>
<body >
<br><br>
<center><h1>ALAGAPPA UNIVERSITY</h1></center>

<img src="C:\clg.jpg" width="500"  height="300">

<p><font size="3">Alagappa University is a public
university located in Karaikudi, Tamil Nadu, India was
founded by Alagappa Chettiar. Alagappa University was
brought into existence by a special Act of the state
government in May 1985.Alagappa University Accredited
with 'A+' Grade by NAAC. It is the first university in
Tamil Nadu to get A+ grading from NAAC.</font>

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

frame3.html

```
<html>
<body>
<center>
<img src="C:\prospectus1.jpg" width="500" height="700"
>
</center>
</body>
</html>
```

frame4.html

```
<html>
<body bgcolor="skyblue">
<br>
<center>
<h1>ABOUT UNIVERSITY</h1><br>
```

```
<p>Alagappa University Accredited with 'A+' Grade by
National Assessment and Accreditation Council (NAAC)
is located at Karaikudi in Tamil Nadu is accessible
from Madurai and Tiruchirappalli Airports within two
hours. The 440 acre green and lush campus houses all
the academic activities. This University has emerged
from the galaxy of institutions initially founded by
the great philanthropist and educationist Dr. RM.
Alagappa Chettiar. Alagappa University was brought
into existence by a Special Act of the Government of
Tamil Nadu in May 1985 with the objective of fostering
research, development and dissemination of knowledge
in various branches of learning. Alagappa University
is recognized by the University Grants Commission
(UGC) of India.
</p>

</center>

</body>
</html>
```

frame5.html

```
<html>
<body bgcolor="pink">
<br><br><center>
<h1>LIST OF DEPARTMENTS</h1>
</center>

<ol>
<li>Department of Tamil</li>
<li>Centre for Tamil Culture</li>
<li>Department of English and Foreign  Languages </li>
<li>Department of Fine Arts</li>
<li>Department of Women's Studies </li>
<li>Centre for Women's Studies </li>
<li>Department of Social Work </li>
<li>Department of Economics and Rural Development</li>
<li>Department of History </li>
<li>Department of Library and Information Science</li>
<li>Department of Computer Science</li>
<li>Department of Computer Application</li>
<li>Department of Computational Logistics</li>
</ol>

</body>
</html>
```

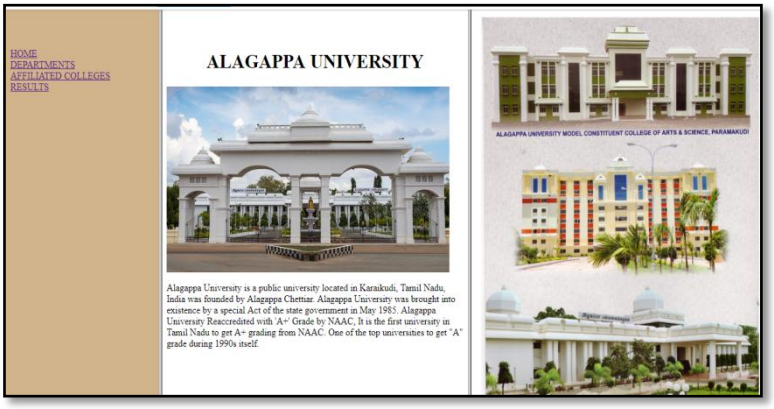
frame6.html

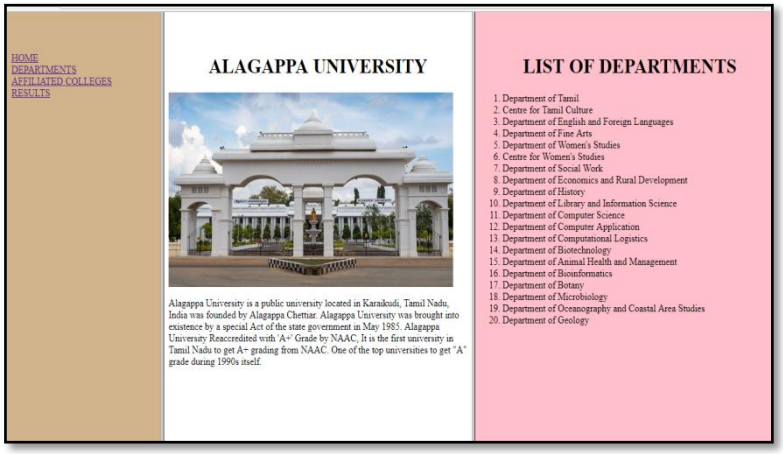
```
<html>
<body><center>
<h1>LIST OF COLLEGES</h1>
</center>

<ul>
<li>Alagappa Government Arts College, Karaikudi – 630
003</li>

<li>Govt. Arts College for Women, Sivaganga – 630
561</li>

<li>Raja Doraisingam Govt. Arts College, Sivaganga –
630 560</li>

<li>VS Sivalingam  Government Arts College,
Poolankurichi –  630413</li>

<li>Govt. Arts College, Paramakudi – 623707</li>

<li>Govt. Arts College for Women, Ramanathapuram – 623
501</li>

<li>Sethupathi Govt. Arts College, Ramanathapuram –
623 502</li>

<li>Pasumpon Thiru Muthuramalinga Thevar Memorial
College, Kamuthi – 623 604</li>

<li>Govt. Arts and Science College, Thiruvadanai – 623
407</li>

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

frame7.html

```
<html>
<body bgcolor="black">
<br>
<br><br>
<center>

<h1><font color="white">NOT YET PUBLISHED</font></h1>

</body>
</html>
```

Output



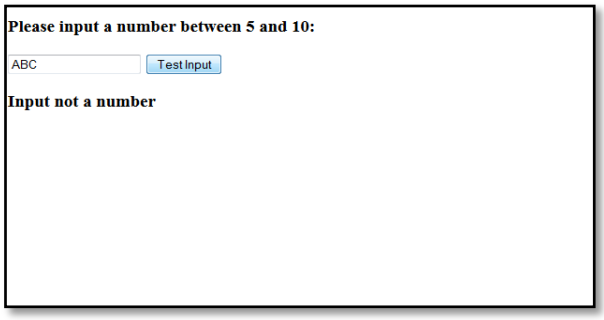


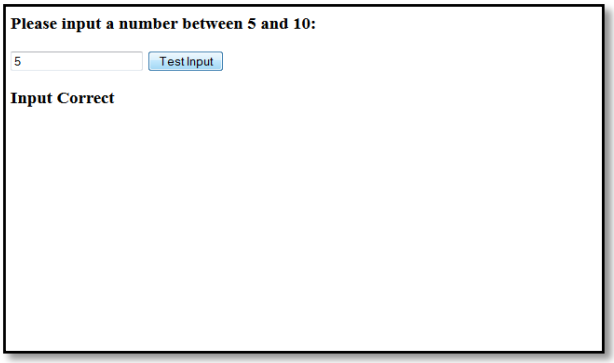
30. Write a JavaScript to implement the concept of exception handling

```
<html>
<body>
<h3>
<p>Please input a number between 5 and 10:</p>

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

<input type="button" onclick="myFunction()"
value="TestInput"></button>

<p id="message"></p>

<script>

function myFunction()
{
    var message, x;
    message = document.getElementById("message");
```

```
    message.innerHTML = "";
    x = document.getElementById("demo").value;

try
{
     if(x == "")
        throw "is Empty";
      else  if(isNaN(x))
        throw "not a number";
       else  if(x > 10)
         throw "too high";
       else if(x < 5)
         throw "too low";
       else
         throw "Correct";
}
catch(err)
{
    message.innerHTML = "Input " + err;
}
}

</script>

</h3>

</body>
</html>
```

Output





BLOCK – III
BROWSERS AND DOMS

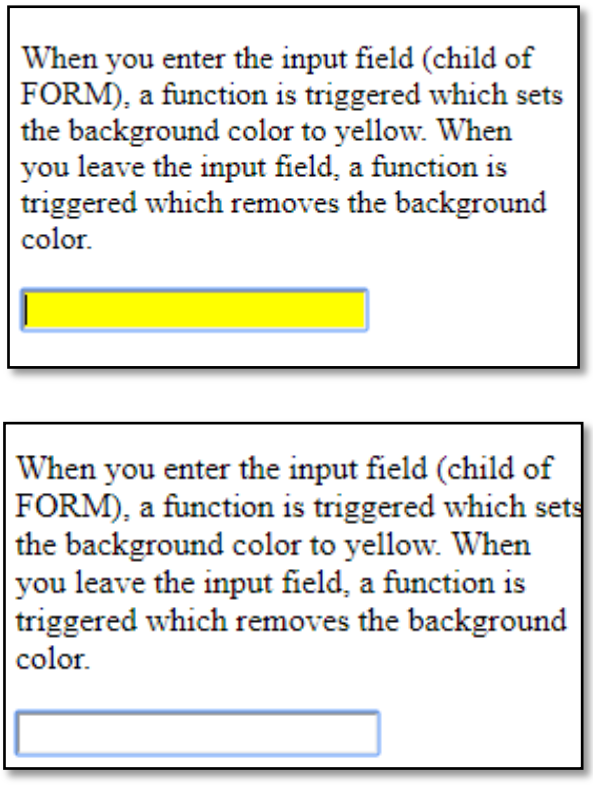
7 PROGRAMS USING INTRINSIC EVENT HANDLING, DOCUMENT TREE

31. Write a script to implement intrinsic event handling

```
<html>
<body>

<p>
When you enter the input field, a function is
triggered which sets the background color to yellow.
When you leave the input field, a function is
triggered which removes the background color.
</p>

<form id="myForm">
<input type="text" id="myInput">
</form>

<script>

var x = document.getElementById("myForm");
x.addEventListener("focus", myFocusFunction, true);
x.addEventListener("blur", myBlurFunction, true);

function myFocusFunction()
{
document.getElementById("myInput").style.backgroundCol
or = "yellow";
}

function myBlurFunction()
{
document.getElementById("myInput").style.backgroundCol
or = "";
}

</script>

</body>
```

```
</html>
```

Output

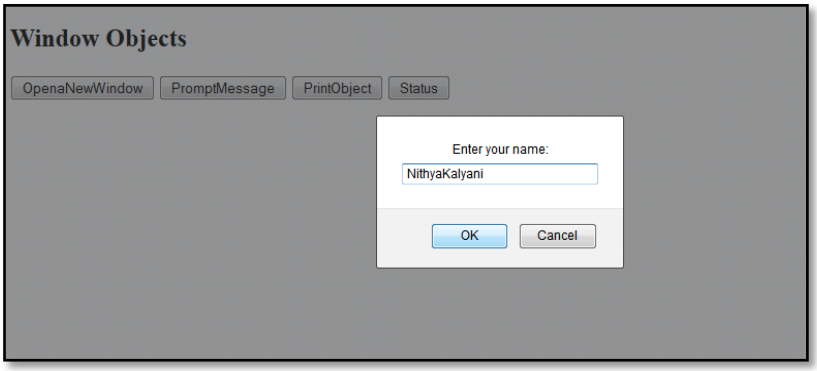


32. Write a script to implement Window object event handling

```
<html>
<body>
<form>
<h2>Window Objects</H2>

<input type="button" value="OpenaNewWindow"
onclick="nitopen()">

<input type="button" value="PromptMessage"
onclick="nitprompt()">

<input type="button" value="PrintObject"
onclick="nitprint()">

<input type="button" value="Status"
onclick="nitstatus()">

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

function nitopen()
```

```
{
 window.open("formvalid.html");
}
function showMessage()
{
   alert("It has been 4 seconds since this page
loaded.")
}

function nitprompt()
{
 var input=prompt("Enter your name:");
 document.write("<p style=font-size:45px;font-
family:times;>"+"YourName
    is:"+input.fontcolor("red")+"</p>");
  document.body.style.backgroundColor='pink';
}

function nitprint()
{
 window.print();
}

function nitstatus()
{
 window.status = "Some text in the status bar!!";
}

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

Output



33. Create student details using XML

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/css" href="student.css" ?>

<class>

<student>
  <Regno>1001</Regno>
  <Sname>S.Arthi</Sname>
  <DOB>15.4.1993</DOB>
  <Gender>Female</Gender>
  <Address>No4,xyz</Address>
</student>

<student>
  <Regno>1002</Regno>
  <Sname>P.Bhuvaneshwari</Sname>
  <DOB>12.1.1992</DOB>
  <Gender>Female</Gender>
  <Address>ABCDE,17</Address>
</student>

<student>
  <Regno>1003</Regno>
  <Sname>C.Chitra</Sname>
  <DOB>11.2.1993</DOB>
  <Gender>Female</Gender>
  <Address>Pqrst,90/6</Address>
</student>

<student>
  <Regno>1004</Regno>
  <Sname>R.Dhivya</Sname>
  <DOB>15.4.1993</DOB>
  <Gender>Female</Gender>
  <Address>No4,xyz</Address>
</student>

<student>
  <Regno>1005</Regno>
  <Sname>S.Meenakshi</Sname>
```

```
 <DOB>12.5.1993</DOB>
 <Gender>Female</Gender>
 <Address>No4,xyz</Address>
</student>

</class>
```

Output

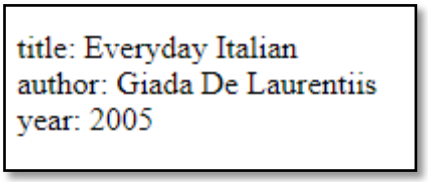
```
1001 S.Arthi 15.4.1993 Female No4,xyz
1002 P.Bhuvaneshwari 12.1.1992 Female ABCDE,17
1003 C.Chitra 11.2.1993 Female Pqrst,90/6
1004 R.Dhivya 15.4.1993 Female No4,xyz
1005 S.Meenakshi 12.5.1993 Female No4,xyz
```

34. Write a script to implement the concept of Document Tree

```
<html>
<body>

<p id="demo"></p>

<script>

var x, i, xmlDoc;
var txt = "";
var text = "<book>" +
"<title>Everyday Italian</title>" +
"<author>Giada De Laurentiis</author>" +
"<year>2005</year>" +
"</book>";

parser = new DOMParser();

xmlDoc = parser.parseFromString(text,"text/xml");

// documentElement always represents the root node

x = xmlDoc.documentElement.childNodes;

for (i = 0; i < x.length ;i++)
{
  txt += x[i].nodeName + ": " +
x[i].childNodes[0].nodeValue + "<br>";
}
```

```
document.getElementById("demo").innerHTML = txt;

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

Output



8 PROGRAMS USING WEB DATA, XML

35. Create Book details using XML

```
<?xml version="1.0"?>
<book>
 <bno>1001201</bno>
 <bnm>C</bnm>
 <author>Balagurusamy</author>
 <edition>IIIrd</edition>
 <price>Rs: 300/-</price>
 <pdate>12.05.2010</pdate>
</book>

<book>
 <bno>1001202</bno>
 <bnm>C#</bnm>
 <author>Krishnamoorthy</author>
 <edition>IIIrd</edition>
 <price>Rs: 500/-</price>
 <pdate>12.05.2011</pdate>
</book>

<book>
 <bno>1001203</bno>
 <bnm>Cryptography&NetworkSecurity</bnm>
 <author>AbdulKahalt</author>
 <edition>IInd</edition>
 <price>Rs: 400/-</price>
 <pdate>12.05.2009</pdate>
</book>

<book>
 <bno>1001204</bno>
 <bnm>C++</bnm>
 <author>Balagurusamy</author>
 <edition>IIIrd</edition>
 <price>Rs: 250/-</price>
 <pdate>12.05.2008</pdate>
</book>
<book>
 <bno>1001201</bno>
 <bnm>C++</bnm>
 <author>Balagurusamy</author>
 <edition>VIth</edition>
 <price>Rs: 450/-</price>
 <pdate>12.05.2008</pdate>
</book>
```

Output

```
1001201 C Balagurusamy IIIrd Rs: 300/- 12.05.2010
1001202 C# Krishnamoorthy IIIrd Rs: 500/- 12.05.2011
1001203 Cryptography&NetworkSecurity AbdulKahalt IInd Rs: 400/- 12.05.2009
1001204 C++ Balagurusamy IIIrd Rs: 250/- 12.05.2008
1001201 C++ Balagurusamy VIth Rs: 450/- 12.05.2008
```

36. Create details of a Book store using XML

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

<book category="cooking">
<title lang="en">Everyday Italian</title>
<author>Giada De Laurentiis</author>
<year>2005</year>
<price>30.00</price>
</book>
<book category="children">
<title lang="en">Harry Potter</title>
<author>J K. Rowling</author>
<year>2005</year>
<price>29.99</price>
</book>

<book category="web">
<title lang="en">XQuery Kick Start</title>
<author>James McGovern</author>
<author>Per Bothner</author>
<author>Kurt Cagle</author>
<author>James Linn</author>
<author>Vaidyanathan Nagarajan</author>
<year>2003</year>
<price>49.99</price>
</book>

<book category="web" cover="paperback">
<title lang="en">Learning XML</title>
<author>Erik T. Ray</author>
<year>2003</year>
<price>39.95</price>
```

```
</book>

</bookstore>
```

Output

Giada De Laurentiis 2005 30.00 J K. Rowling 2005 29.99 James McGovern Per Bothner Kurt Cagle James Linn Vaidyanathan Nagarajan 2003 49.99 Erik T. Ray 2003 39.95

37. Create Students details using XML and DTD

Student.xml

```
<?xml version="1.0">

<!DOCTYPE student SYSTEM  "student.dtd">

<student>
<rno>  01</rno>
<name>  Dhivya.S</name>
<m1>  80</m1>
<m2> 80</m2>
<total>160</total>
</student><br>

<student>
<rno>02</rno>
<name>Nithyakalyani.M.R</name>
<m1> 80</m1>
<m2> 80</m2>
<total>160</total>
</student><br>


<student>
<rno>03</rno>
<name>Saranya.R</name>
<m1> 80</m1>
<m2> 80</m2>
<total>160</total>
</student><br>

<student>
```

```
<rno>04</rno>
<name>AAfrin.M.A</name>
<m1> 80</m1>
<m2> 80</m2>
<total>160</total>
</student><br>

<student>
<rno>05</rno>
<name>Primila.M</name>
<m1> 80</m1>
<m2> 80</m2>
<total>160</total>
</student>
```

student.dtd

```
<?xml version="1.0">

<!ELEMENT student(rno,name,m1,m2,total)>
<!ELEMENT rno(#PCDATA)>
<!ELEMENT name(#PCDATA)>
<!ELEMENT m1(#PCDATA)>
<!ELEMENT m2(#PCDATA)>
<!ELEMENT total(#PCDATA)>
```

Output

```
01 Dhivya.S 80 80 160
02 Nithyakalyani.M.R 80 80 160
03 Saranya.R 80 80 160
04 AAfrin.M.A 80 80 160
05 Primila.M 80 80 160
```

38. Create Students details using XML and DTD

Employee.xml

```
<?xml version="1.0">

<!DOCTYPE employee SYSTEM  "empdtd.dtd">
```

```
<employee>
<eno>  01</eno>
<name>  Dhivya.S</name>
<salary>  8000</salary>
<hra> 80</hra>
<da>60</da>
<pf>20</pf>
<total>8160</total>
</employee><br>

<employee>
<eno>  02</eno>
<name> Nithyakalyani.M.R</name>
<salary>  8000</salary>
<hra> 80</hra>
<da>60</da>
<pf>10</pf>
<total>8150</total>
</employee><br>

<employee>
<eno>  03</eno>
<name>  Saranya.R</name>
<salary>  8000</salary>
<hra> 80</hra>
<da>60</da>
<pf>20</pf>
<total>8160</total>
</employee><br>

<employee>
<eno>  04</eno>
<name> Aafrin.M.A</name>
<salary>  8000</salary>
<hra> 80</hra>
<da>60</da>
<pf>10</pf>
<total>8150</total>
</employee><br>


<employee>
<eno>  05</eno>
<name>  Pramila.M</name>
<salary>  8000</salary>
<hra> 80</hra>
<da>60</da>
<pf>20</pf>
<total>8160</total>
</employee>
```

empdtd.dtd

```
<?xml version="1.0">

<!ELEMENT employee(eno,name,salary,hra,da,pf,total)>
<!ELEMENT eno(#PCDATA)>
<!ELEMENT name(#PCDATA)>
<!ELEMENT salary(#PCDATA)>
<!ELEMENT hra(#PCDATA)>
<!ELEMENT da(#PCDATA)>
<!ELEMENT pf(#PCDATA)>
<!ELEMENT total(#PCDATA)>
```

Output:

```
01 Dhivya.S 8000 80 60 20 8160
02 Nithyakalyani.M.R 8000 80 60 10 8150
03 Saranya.R 8000 80 60 20 8160
04 Aafrin.M.A 8000 80 60 10 8150
05 Pramila.M 8000 80 60 20 8160
```

9 PROGRAMS USING JAVA SCRIPT AND XML, XSL, XSLT

39. Creating a Breakfast Menu using XML

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

<food>
<name>Belgian Waffles</name>
<price>$5.95</price>
<description>Two of our famous Belgian Waffles with
plenty of real maple syrup</description>
<calories>650</calories>
</food>

<food>
<name>Strawberry Belgian Waffles</name>
<price>$7.95</price>
<description>Light Belgian waffles covered with
strawberries and whipped cream</description>
<calories>900</calories>
</food>

<food>
<name>Berry-Berry Belgian Waffles</name>
<price>$8.95</price>
<description>Light Belgian waffles covered with an
assortment of fresh berries and whipped
cream</description>
<calories>900</calories>
</food>

<food>
<name>French Toast</name>
<price>$4.50</price>
<description>Thick slices made from our homemade
sourdough bread</description>
<calories>600</calories>
</food>

<food>
<name>Homestyle Breakfast</name>
<price>$6.95</price>
<description>Two eggs, bacon or sausage, toast, and
our ever-popular hash browns</description>
<calories>950</calories>
</food>
```

```
</breakfast_menu>
```

Output before applying XSLT

Belgian Waffles $5.95 Two of our famous Belgian Waffles with plenty of real maple syrup 650 Strawberry Belgian Waffles $7.95 Light Belgian waffles covered with strawberries and whipped cream 900 Berry-Berry Belgian Waffles $8.95 Light Belgian waffles covered with an assortment of fresh berries and whipped cream 900 French Toast $4.50 Thick slices made from our homemade sourdough bread 600 Homestyle Breakfast $6.95 Two eggs, bacon or sausage, toast, and our ever-popular hash browns 950

Using XSLT to transform XML into HTML

```
<?xml version="1.0" encoding="UTF-8"?>
<html xsl:version="1.0" xmlns:xsl="http://www.w3.org/1
999/XSL/Transform">
<body style="font-family:Arial;font-
size:12pt;background-color:#EEEEEE">

<xsl:for-each select="breakfast_menu/food">

<div style="background-
color:teal;color:white;padding:4px">

<span style="font-weight:bold"><xsl:value-
of select="name"/> - </span>

<xsl:value-of select="price"/>

</div>
<div style="margin-left:20px;margin-bottom:1em;font-
size:10pt">

<p>
    <xsl:value-of select="description"/>
    <span style="font-style:italic"> (<xsl:value-
of select="calories"/> calories per serving)</span>
</p>
</div>
</xsl:for-each>
</body>
</html>
```

NOTES

Output after applying XSLT

BLOCK – IV
SERVER SIDE PROGRAMMING

INTRODUCTION TO JAVA SERVLETS AND NETBEANS IDE

The following are the steps for Servlets and java configuration

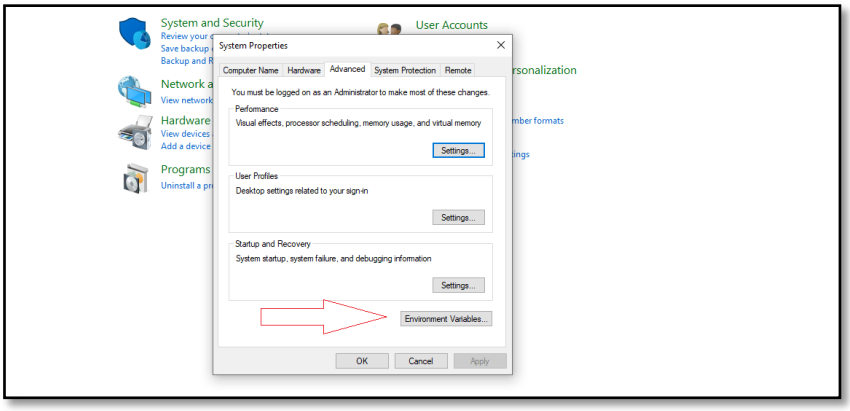
- ✓ Download and install the following

  Java Download link
  https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

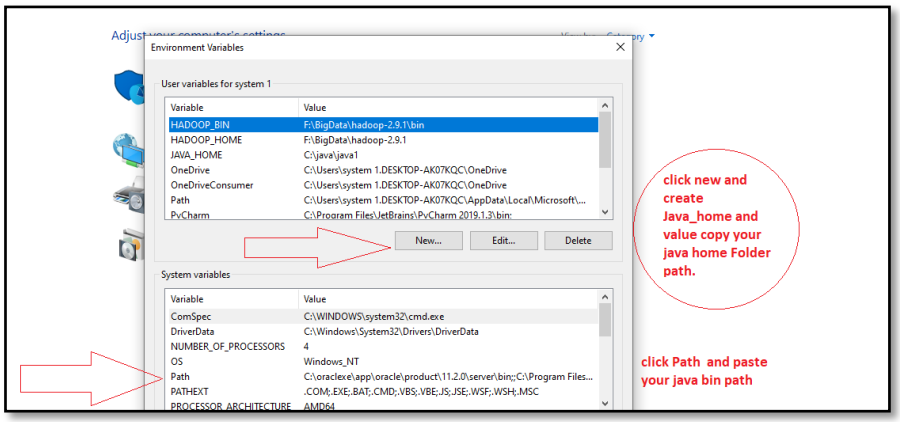
  Net beans IDE link
  https://netbeans.org/downloads/8.2/

- ✓ Set environment variable.

  Right Click on MyComputer →Properties →Advanced System settings→Inside Advanced tab→Click Environment variables



Inside System Vaiables click New →Givevariable name (For example var) →Give variable value



It is path in your systemwhere java compiler is available

(For example variable value :
C:\ProgramFiles\Java\jdk *.* version\bin).
Inside bin javac is Java compiler.

Click Ok.

Go to command prompt by using Start→Run→cmd

OR

Start →typecmd in search program and file.

✓ Server Configuration

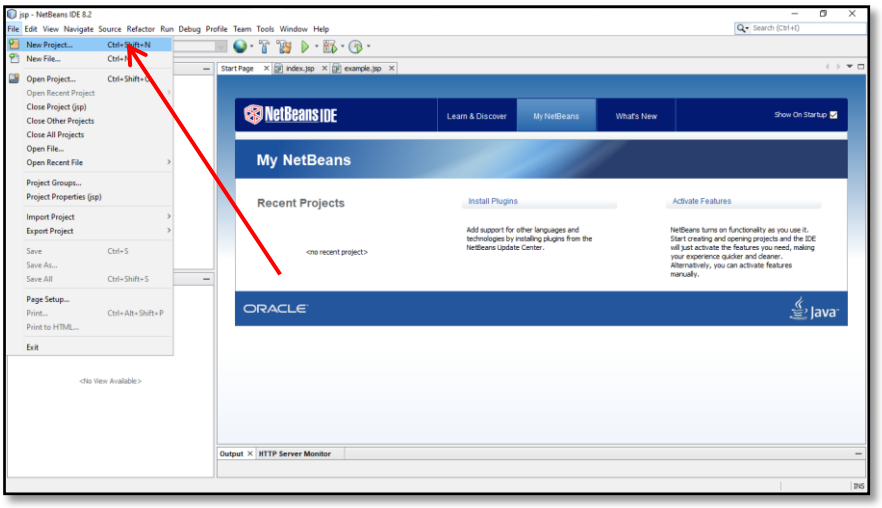
1. From the Netbeans installation, **customize option and check apache server**
2. Select **Finish then install net beans**

✓ Open the Servers view to see the server listed:

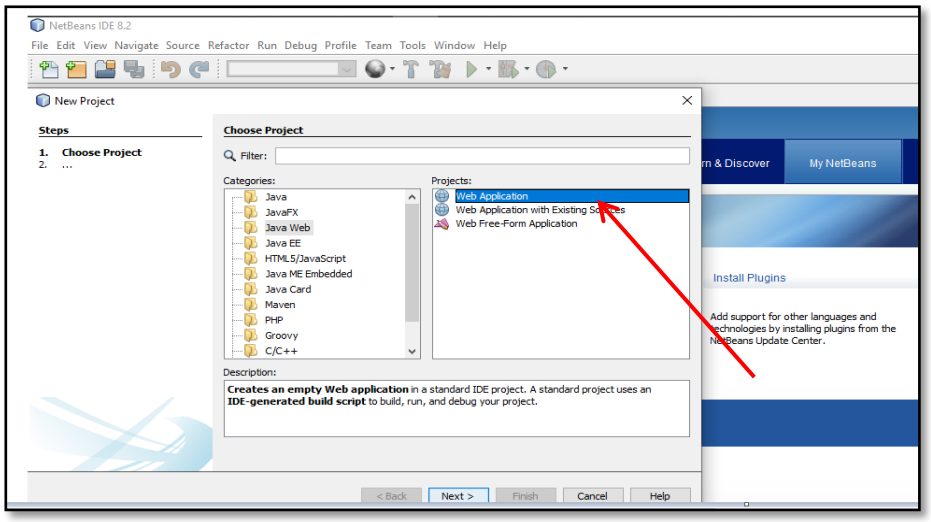
1. In the main menu select **Window →Services →servers**.
2. Choose apache server.

<u>The following are the steps to create a Project using NetBeans IDE</u>

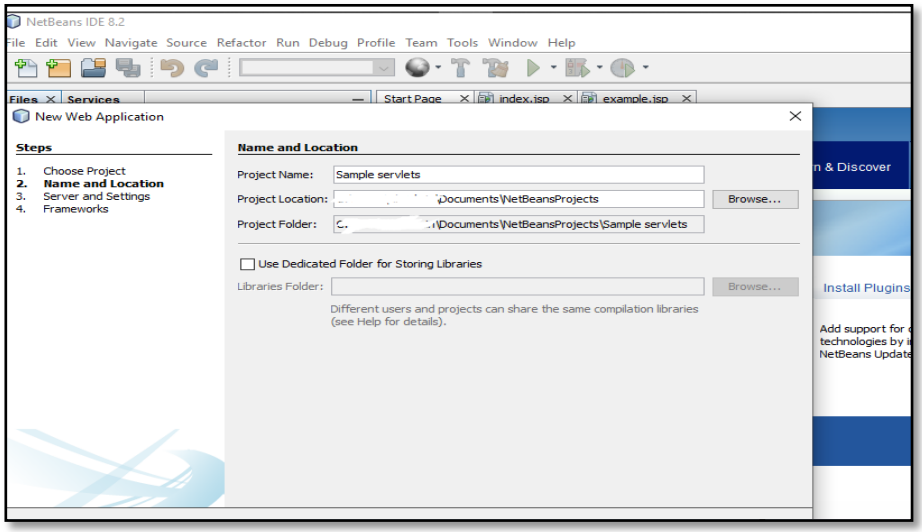
1. NetBeans create New Project



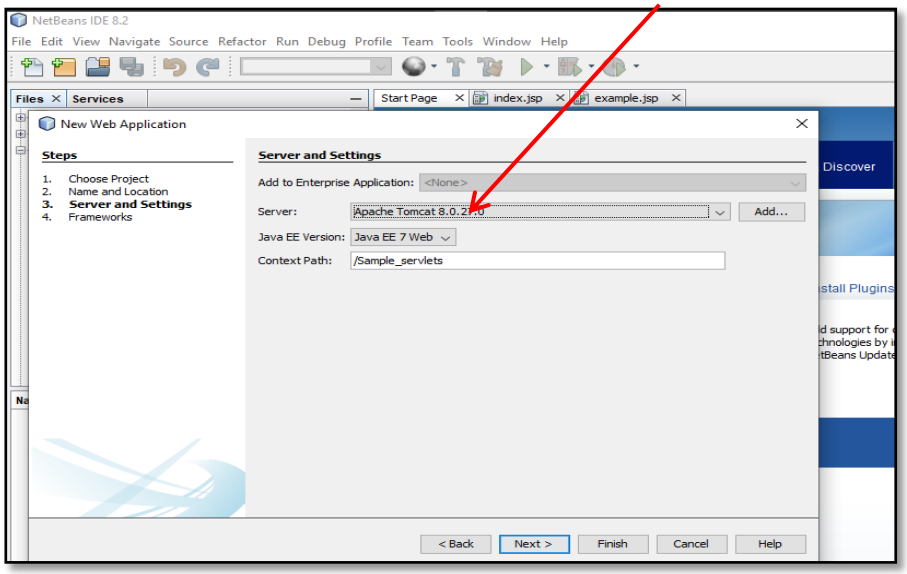
2. Click java web and web application option and next step



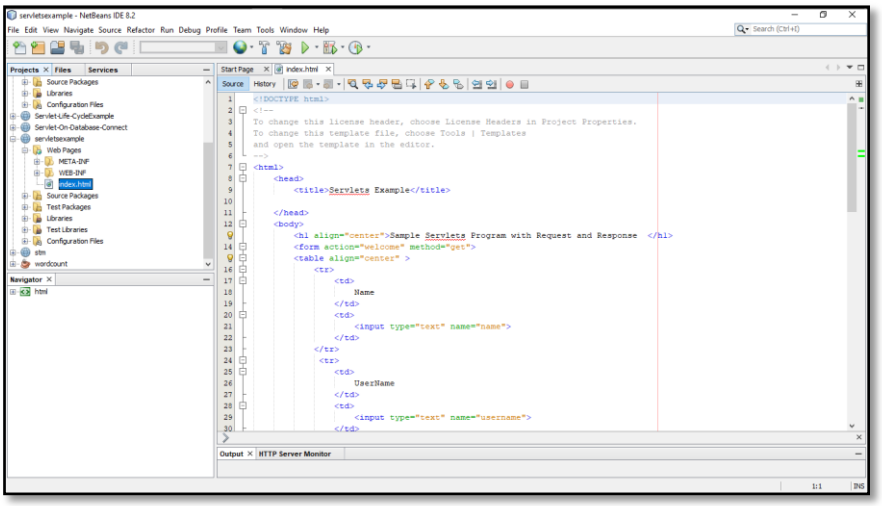
3. Give Project Name then click next



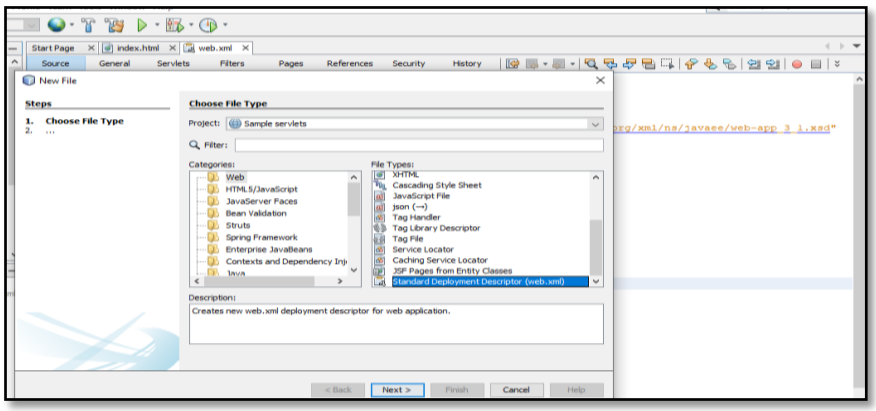
4. Choose server



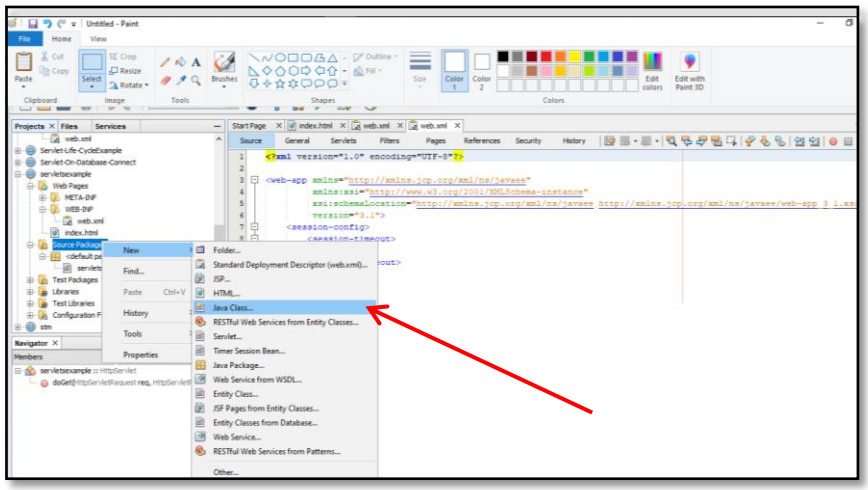
5. Then click Finish. The following screen will appear where you can type your code.



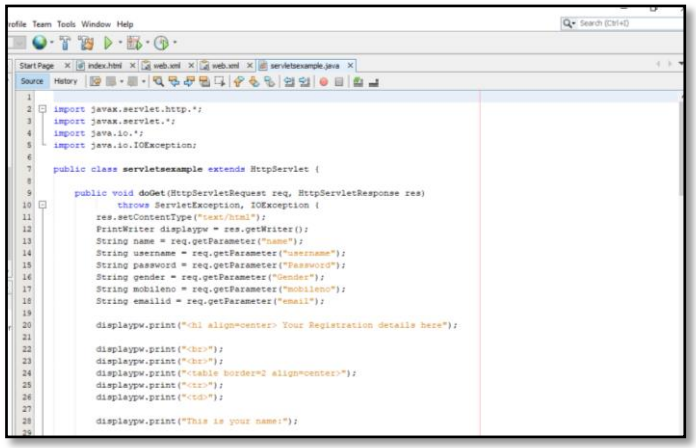
6. Web.xml file can be obtained by opening the WEB-INF folder



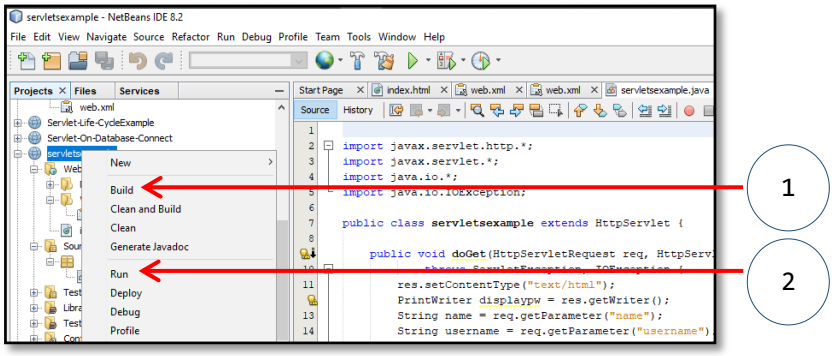
7. Java class file can be obtained from the Source packages folder



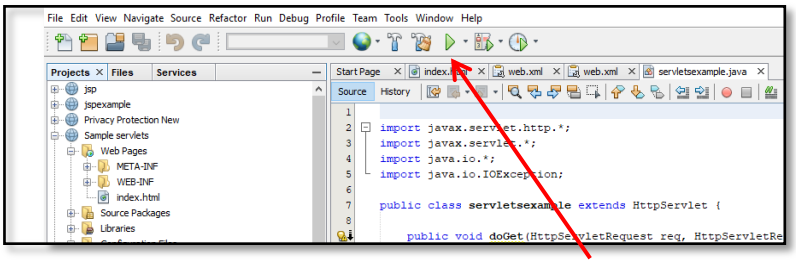
8. Give class name and paste your code in java file



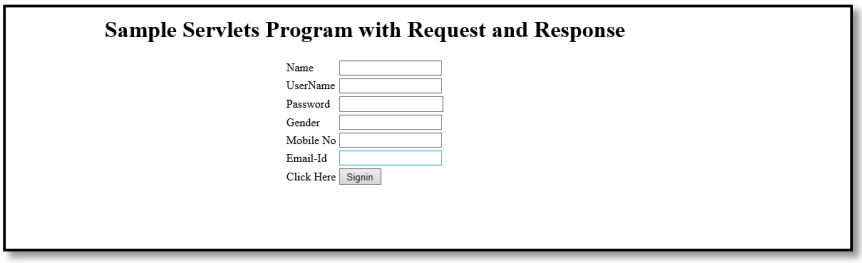
9. To execute the code, Select the Project →Right click→ Select Build and Run option



Also you can click Run Button and select Show Output in web browser



10. Output in internet Explorer will be



10 PROGRAMS WITH SIMPLE JAVA SERVLETS

40. Create a Java Servlet using NetBeans IDE

servletsexample.java

```
import javax.servlet.http.*;
import javax.servlet.*;
import java.io.*;
import java.io.IOException;

public class servletsexample extends HttpServlet {

    public void doGet(HttpServletRequest req,
HttpServletResponse res)
            throws ServletException, IOException {
        res.setContentType("text/html");
        PrintWriter displaypw = res.getWriter();
        String name = req.getParameter("name");
        String username =
req.getParameter("username");
        String password =
req.getParameter("Password");
        String gender = req.getParameter("Gender");
        String mobileno =
req.getParameter("mobileno");
        String emailid = req.getParameter("email");

        displaypw.print("<h1 align=center> Your
Registration details here");

        displaypw.print("<br>");
        displaypw.print("<br>");
        displaypw.print("<table border=2
align=center>");
        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("This is your name:");

        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(name);

        displaypw.print("</td>");
        displaypw.print("</tr>");
```

```
        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("this is your Username:");

        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(username);

        displaypw.print("</td>");
        displaypw.print("</tr>");

        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("this is your password:");
        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(password);

        displaypw.print("</td>");
        displaypw.print("</tr>");

        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("this is your Gender:");
        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(gender);

        displaypw.print("</td>");
        displaypw.print("</tr>");
        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("this is your Mobileno:");
        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(mobileno);

        displaypw.print("</td>");
        displaypw.print("</tr>");
        displaypw.print("<tr>");
        displaypw.print("<td>");

        displaypw.print("this is your emailid:");
        displaypw.print("</td>");
        displaypw.print("<td>");
        displaypw.print(emailid);
```

```
        displaypw.print("</td>");
        displaypw.print("</tr>");


        displaypw.print("</table>");
        displaypw.close();
    }
}
```

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.1"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://xmlns.jcp.org/xml/ns/javaee">
<servlet>
<servlet-name>servletsexample</servlet-name>
<servlet-class>servletsexample</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>servletsexample</servlet-name>
<url-pattern>/servletsexample</url-pattern>
</servlet-mapping>
<welcome-file-list>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
</web-app>
```

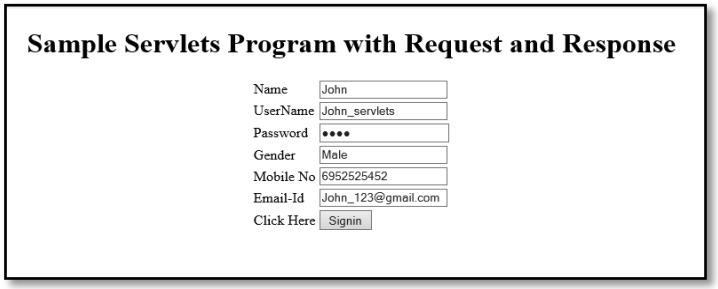
index.html

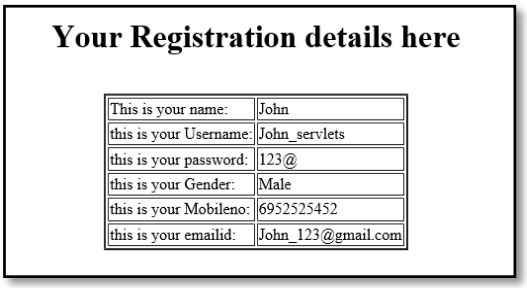
```
<html>
<head>
<title>Servlets Example</title>
<script>

function getServletAction(){
document.forms[0].action = "ServletExample";
document.forms[0].submit();

}
</script>

</head>
<body>
<h1 align="center">Sample Servlets Program with
Request and Response  </h1>
<form action=" ServletExample " method="get">
<table align="center" >
```

```
<tr>
<td>
Name
</td>
<td>
<input type="text" name="name">
</td>
</tr>
<tr>
<td>
UserName
</td>
<td>
<input type="text" name="username">
</td>
</tr>
<tr>
<td>
Password
</td>
<td>
<input type="password"  name="Password">
</td>
</tr>
<tr>
<td>
Gender
</td>
<td>
<input type="text" name="Gender">
</td>
</tr>
<tr>
<td>
Mobile No
</td>
<td>
<input type="text" name="mobileno">
</td>
</tr>
<tr>
<td>
Email-Id
</td>
<td>
<input type="text" name="email">
</td>
</tr>
<tr>
<td>
Click Here
```

```
</td>
<td>
<input type="button" name="Submit"  value="Signin"
onclick="getServletAction();">
</td>
</tr>

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

Output





41. Create a Java Servlet to access Database using NetBeans IDE

Create the following table in SQL

```
Create table employee1 (Name varchar(10),UserName
varchar(10),Password  varchar(10),Gender
varchar(10),Moibileno varchar(10),E-mailid
varchar(10));
```

index.html

```
<html>
<head>
<title>Servlets Example</title>
</head>
```

```
<body>
<h1 align="center">Servlets Program to User Login and
validate data base. </h1>
<form action="servletsexample" method="post">
<table align="center" >
<tr>
<td>
Name
</td>
<td>
<input type="text" name="name" required>
</td>
</tr>
<tr>
<td>
UserName
</td>
<td>
<input type="text" name="username" required>
</td>
</tr>
<tr>
<td>
Password
</td>
<td>
<input type="password"  name="Password"  required>
</td>
</tr>
<tr>
<td>
Gender
</td>
<td>
<input type="text" name="Gender">
</td>
</tr>
<tr>
<td>
Mobile No
</td>
<td>
<input type="number" name="mobileno" required>
</td>
</tr>
<tr>
<td>
Email-Id
</td>
<td>
<input type="email" name="email" required>
```

```
</td>
</tr>
<tr>
<td>
Click Here
</td>
<td>
<input type="submit" name="Submit"  value="Signin" >
</td>
</tr>
</table>
</form>
</body>
</html>
```

login.html

```
<html>
<head>
<title>Servlets Example</title>

</head>
<body>
<h1 align="center"> Servlets Program to User Login and
validate data base.    </h1>
<form action="servletslogin" method="post">
<table align="center" >
<tr>
<td>
UserName
</td>
<td>
<input type="text" name="username" required>
</td>
</tr>
<tr>
<td>
Password
</td>
<td>
<input type="password"  name="password" required>
</td>
</tr>
<tr>
<td>
Click Here
</td>
<td>
<input type="submit" name="Submit"  value="Signin" >
```

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

web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.1"
xmlns="http://xmlns.jcp.org/xml/ns/javaee"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">
<welcome-file-list>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
<servlet>
<servlet-name>servletsexample</servlet-name>
<servlet-class>servletsexample</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>servletsexample</servlet-name>
<url-pattern>/servletsexample</url-pattern>
</servlet-mapping>

<servlet>
<servlet-name>servletslogin</servlet-name>
<servlet-class>servletslogin</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>servletslogin</servlet-name>
<url-pattern>/servletslogin</url-pattern>
</servlet-mapping>

</web-app>
```

servletexample.java

```
import javax.servlet.http.*;
import java.io.*;
import java.io.IOException;
import java.sql.*;
import javax.servlet.ServletException;

public class servletsexample extends HttpServlet {
public void doPost(HttpServletRequest req,
HttpServletResponse res)
```

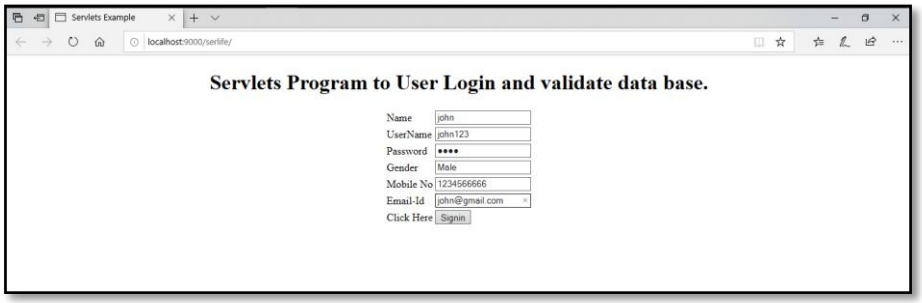
```
throws ServletException, IOException {
res.setContentType("text/html");

String name = req.getParameter("name");
String username = req.getParameter("username");
String password = req.getParameter("Password");
String gender = req.getParameter("Gender");
String mobileno = req.getParameter("mobileno");
String emailid = req.getParameter("email");
PrintWriter pw=res.getWriter();

try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@HbA
dmin:1521:XE","system","system");
Statement st=con.createStatement();
System.out.println("connection established
successfully...!!"+name);

PreparedStatement ps=con.prepareStatement("insert into
employee1 values(1,?,?,?,?,?,?)");
ps.setString(1,name);
ps.setString(2,username);
ps.setString(3,password);
ps.setString(4,gender);
ps.setString(5,mobileno);
ps.setString(6,emailid);

int i = ps.executeUpdate();
if(i>0)  {
System.out.print("You are successfully
registered...");

}
}
catch (Exception ex)
{
ex.printStackTrace();
}

req.getRequestDispatcher("/login.html").forward(req,
res);
}
}
```

servletlogin.java

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class servletslogin extends HttpServlet
{

@Override
protected void doPost(HttpServletRequest
req,HttpServletResponse res)throws
ServletException,IOException
{
PrintWriter pw=res.getWriter();
res.setContentType("text/html");

String username=req.getParameter("username");
String password=req.getParameter("password");
try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@HbA
dmin:1521:XE","system","system");

PreparedStatement ps = con.prepareStatement("select *
from employee1 where userName=? and password=?");
ps.setString(1, username);
ps.setString(2, password);

ResultSet rs = ps.executeQuery();

if (rs.next()) {
pw.println("<h1 align=center> User Details </h1>");
pw.println("<table align=center border=1>");
pw.println("<tr><th>" + "Name " + "</th><th>" +
"UserName " + "</th><th>" + "Password" + "</th>"
+ "<th>" + "Gender" + "</th><th>" + "Moibileno" +
"</th><th>" + "E-mailid" + "</th><tr>");
pw.println(
```

```
"<tr><td>" +rs.getString(2) + "</td>"
+ "<td>" + rs.getString(3) + "</td>"
+ "<td>" + rs.getString(4) + "</td>"
+ "<td>" + rs.getString(5) + "</td>"
+ "<td>" + rs.getString(6) + "</td>"
+ "<td>" + rs.getString(7) + "</td></tr>"
);
pw.println("</table>");
}else{
pw.println("<h1  align=center>Invalide User & Go
Back</h1>");
}
pw.close();
}
catch(Exception e) {
e.printStackTrace();
}

}
}
```

Output



42. Write a program to demonstrate retrieving information using Servlet

STEP 1:

- Create the HTML file

```
<html>
<head>
<title>TODO supply a title</title>
<meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
<meta name="viewport" content="width=device-width">
</head>
<body>
<form action="Search">
Enter your Name: <input
type="text" name="uname"/><br/>
<input type="submit" value="search"/>
</form>
</body>
</html>
```

STEP 2:

- Create the Servlet file

```
import java.io.*;
import java.sql.*;
import javax.servlet.ServletException;
import javax.servlet.http.*;

public class Search extends HttpServlet
{

public void doGet(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException
{
response.setContentType("text/html");
PrintWriter out = response.getWriter();
```

```
String name=request.getParameter("uname");
Try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@mcn
desktop07:1521:xe","sandeep","welcome");
PreparedStatement ps=con.prepareStatement("select *
from userlogin where name=?");
ps.setString(1,name);
out.print("<table width=25% border=1>");
out.print("<center><h1>Result:</h1></center>");
ResultSet rs=ps.executeQuery();

/* Printing column names */
ResultSetMetaData rsmd=rs.getMetaData();
while(rs.next())
{
out.print("<tr>");
out.print("<td>"+rsmd.getColumnName(1)+"</td>");
out.print("<td>"+rs.getString(1)+"</td></tr>");
out.print("<tr><td>"+rsmd.getColumnName(2)+"</td>");
out.print("<td>"+rs.getString(2)+"</td></tr>");
out.print("<tr><td>"+rsmd.getColumnName(3)+"</td>");
out.print("<td>"+rs.getString(3)+"</td></tr>");
out.print("<tr><td>"+rsmd.getColumnName(4)+"</td>");
out.print("<td>"+rs.getString(4)+"</td></tr>");
}
out.print("</table>");
}
catch (Exception e2)
{
e2.printStackTrace();
}
Finally
{
out.close();
}
}
}
```

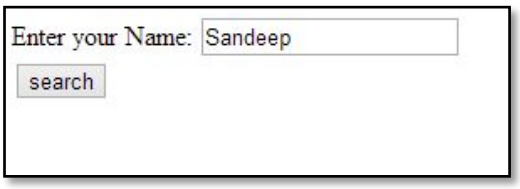
STEP 3:

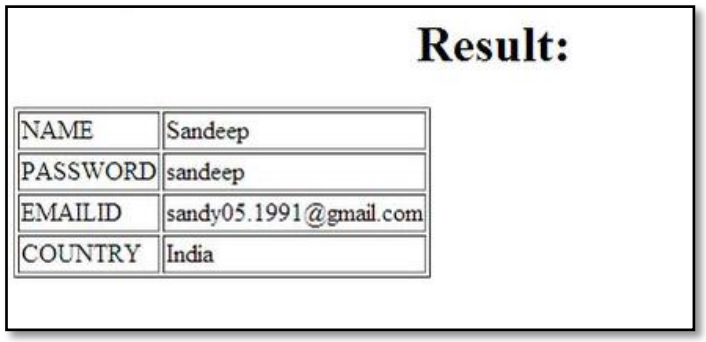
- Create the web.xml file

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app
version="3.0" xmlns="http://java.sun.com/xml/ns/javaee
" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
```

```
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_3_0.xsd">

<servlet>
<servlet-name>Search</servlet-name>
<servlet-class>Search</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>Search</servlet-name>
<url-pattern>/Search</url-pattern>
</servlet-mapping>
</web-app>
```

Output





11 PROGRAMS WITH INIT AND DESTROY, SINGLE THREAD MODEL, CLIENT SIDE CACHING AND SERVER SIDE CACHING

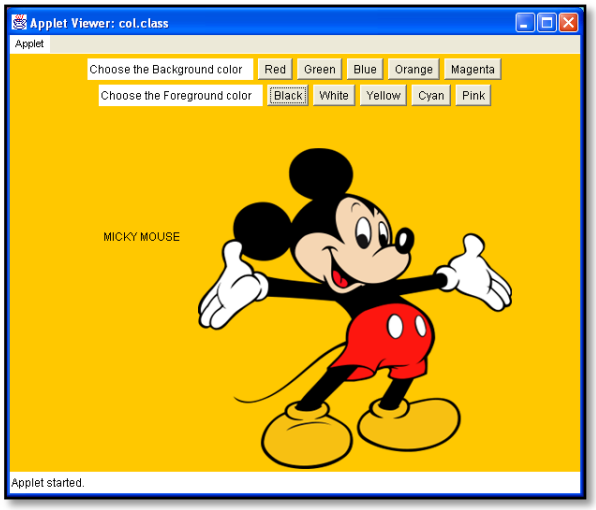
43. Create an Applet to demonstrate init and destroy method

```
import java.awt.*;
import java.applet.*;

/*<applet code="col.class" height=400
width=400></applet>*/

public class col extends Applet
{
Label b,f;
Button b1,b2,b3,b4,b5,f1,f2,f3,f4,f5;
Image im;

public void init()
{
b=new Label("Choose the Background color");
b1=new Button("Red");
b2=new Button("Green");
b3=new Button("Blue");
b4=new Button("Orange");
b5=new Button("Magenta");
f=new Label("Choose the Foreground color");
f1=new Button("Black");
f2=new Button("White");
f3=new Button("Yellow");
f4=new Button("Cyan");
f5=new Button("Pink");
im=getImage(getDocumentBase(),"one.png");
add(b);
add(b1);add(b2);add(b3);add(b4);add(b5);
add(f);
add(f1);add(f2);add(f3);add(f4);add(f5);
}

public boolean action(Event e,Object o)
{

if(e.target==b1)
{
setBackground(Color.red);
}
```

```
if(e.target==b2)
{
setBackground(Color.green);
}

if(e.target==b3)
{
setBackground(Color.blue);
}

if(e.target==b4)
{
setBackground(Color.orange);
}

if(e.target==b5)
{
setBackground(Color.magenta);
}

if(e.target==f1)
{
setForeground(Color.black);
}

if(e.target==f2)
{
setForeground(Color.white);
}

if(e.target==f3)
{
setForeground(Color.yellow);
}

if(e.target==f4)
{
setForeground(Color.cyan);
}

if(e.target==f5)
{
setForeground(Color.pink);
}

return true;
}

public void paint(Graphics g)
{
```

```
g.drawImage(im,200,100,this);
g.drawString("MICKY MOUSE",100,200);
}

public void destroy()
{
System.out.println\n(".....destroy method
invoked.....");
}

}
```

Output



44. Create a Java Servlet to demonstrate init and destroy method

index.html

```
<html>
<head>
<title>Servlets Example</title>
<script>

function getServletAction()
{
document.forms[0].action = "ServletLifeCycle";
document.forms[0].submit();
}

</script>
</head>

<body>
```

```
<h1 align="center">Sample Servlets Program with
Request and Response  </h1>
<form action="ServletLifeCycle" method="get">
<table align="center" >
<tr>
<td>
Name
</td>
<td>
<input type="text" name="name">
</td>
</tr>

<tr>
<td>
UserName
</td>
<td>
<input type="text" name="username">
</td>
</tr>

<tr>
<td>
Password
</td>
<td>
<input type="password"  name="Password">
</td>
</tr>

<tr>
<td>
Gender
</td>
<td>
<input type="text" name="Gender">
</td>
</tr>

<tr>
<td>
Mobile No
</td>
<td>
<input type="text" name="mobileno">
</td>
</tr>

<tr>
<td>
```

```
Email-Id
</td>
<td>
<input type="text" name="email">
</td>
</tr>

<tr>
<td>
Click Here
</td>
<td>
<input type="button" name="Submit"  value="Signin"
onclick="getServletAction();">
</td>
</tr>

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

web.xml

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

<web-app version="3.1"
xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://xmlns.jcp.org/xml/ns/javaee">
<servlet>
<servlet-name>ServletLifeCycle</servlet-name>
<servlet-class>ServletLifeCycle</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>ServletLifeCycle</servlet-name>
<url-pattern>/ServletLifeCycle</url-pattern>
</servlet-mapping>

<welcome-file-list>
<welcome-file>index.html</welcome-file>
</welcome-file-list>
</web-app>
```

SeverletLifeCycle.java

```
import java.io.IOException;
import java.io.PrintWriter;

import javax.servlet.ServletConfig;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.time.format.DateTimeFormatter;
import java.time.LocalDateTime;
public class ServletLifeCycle extends HttpServlet
{

DateTimeFormatter dtf =
DateTimeFormatter.ofPattern("yyyy/MM/dd HH:mm:ss");
LocalDateTime now = LocalDateTime.now();
long initValue=0;
private static final long serialVersionUID = 1L;
public ServletLifeCycle()
{

System.out.println("Am from default constructor");

}

public void init(ServletConfig config)
{
System.out.println("Am from Init method...!");
System.out.println("Init
methods======>"+System.currentTimeMillis());
initValue=System.currentTimeMillis();
}

public void doGet(HttpServletRequest
req,HttpServletResponse res)throws
ServletException,IOException
{

String time ="100";// res.getParameter("time");
int secs = Integer.valueOf(time);
// max 10 seconds
if (secs > 10000)
secs = 10000;

longProcessing(secs);
res.setContentType("text/html");
PrintWriter pw = res.getWriter();
```

```
pw.println("Am from Init
method...!======>"+initValue+"</br>");
pw.println("Am from doGet
method...!======>"+System.currentTimeMillis()+"
</br>");
pw.println("Can you please check from console log for
Destroy time....! </br>");
pw.close();
}

private void longProcessing(int secs)
{
// wait for given time before finishing
try {
Thread.sleep(secs);
} catch (InterruptedException e) {
e.printStackTrace();
}
}

public void destroy()
{
System.out.println("Am from Destroy methods");
System.out.println("Destroy
methods======>"+System.currentTimeMillis());

}

}
```

45. Write a Java source code to demonstrate the single thread model

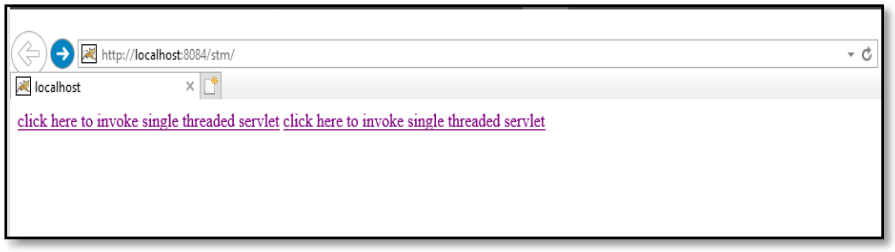
SingleThreadModel.java

```
class SingleThreadModel extends Thread
{
public SingleThreadModel(String str)
{
super(str);
}
public void run()
{
for (int i = 0; i < 10; i++)
{
System.out.println(i + " " + getName());
Try
 {
sleep((int)(Math.random() * 1000));
}
catch (InterruptedException e) {}
}
System.out.println("DONE! " + getName());
}
}
```

TestSingleThread.java

```
class TestSingleThread {
public static void main (String[] args) {
new SingleThreadModel("First").start();
new SingleThreadModel("Second").start();
}
}
```

Output



12 PROGRAMS USING RETRIEVING INFORMATION FROM THE SERVLET-THE SERVER-THECLIENT

46. Create Client Server information passing using Sockets

server.java

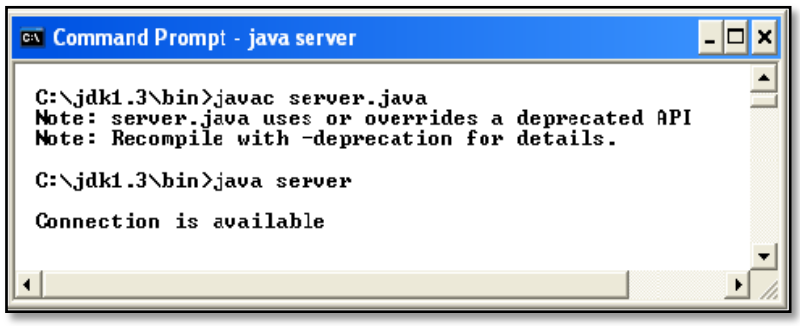
```
import java.io.*;
import java.net.*;

class server
{

public static void main(String args[])
{

try
{
ServerSocket ss=new ServerSocket(4000);
System.out.println();
System.out.println("Connection is available");

while(true)
{
Socket sk=ss.accept();
DataInputStream ds;
ds=new DataInputStream(sk.getInputStream());
String s,s1,s2;
s1=ds.readLine();
s2=ds.readLine();
s=s1.concat(s2);
PrintStream ps;
ps=new PrintStream(sk.getOutputStream());
ps.println("concatenation ="+s);
}

}

catch(Exception e){}
}
}
```

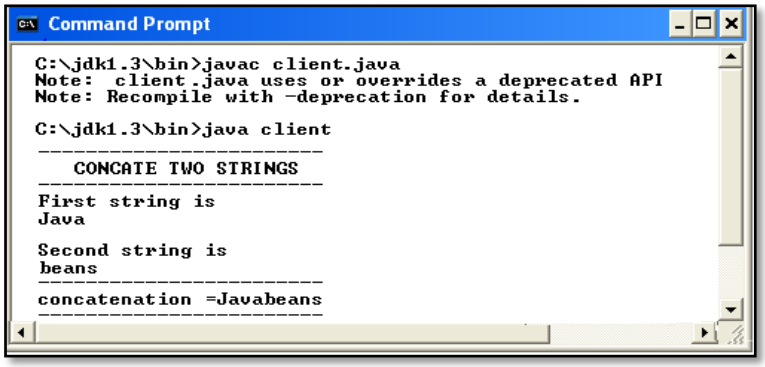
client.java

```
import java.io.*;
import java.net.*;
```

```
class client
{

public static void main(String args[])
{

try
{
Socket sk=new Socket("LocalHost",4000);
String s,s1,s2;
DataInputStream ds;
ds=new DataInputStream(System.in);
System.out.println("----------------------------------
------");
System.out.println("   CONCATE TWO STRINGS  ");
System.out.println("----------------------------------
------");
System.out.println("First string is");
s1=ds.readLine();
System.out.println();
System.out.println("Second string is");
s2=ds.readLine();
System.out.println("----------------------------------
-------");
PrintStream ps;
ps=new PrintStream(sk.getOutputStream());
ps.println(s1);
ps.println(s2);
ds=new DataInputStream(sk.getInputStream());
s=ds.readLine();
System.out.println(s);
System.out.println("----------------------------------
-------");
}

catch(Exception e){}
}
}
```

Output




Command Prompt
C:\jdk1.3\bin>javac client.java
Note: client.java uses or overrides a deprecated API
Note: Recompile with -deprecation for details.
C:\jdk1.3\bin>java client
CONCATE TWO STRINGS
First string is
Java
Second string is
beans
concatenation =Javabeans

BLOCK – V
JSP PROGRAMS

13 PROGRAMS WITH SIMPLE JSP APPLICATIONS

47. Create a simple JSP application to print the Iterations

```
<body>
 This is HTML code Line 1  <br>
<%
   for(int i = 0; i < 10; i++)
   {
     out.println("Iteration: " + i + "<br>");
   }
%>
This is HTML code Line 2 <br>
</body>
```

Output

48. Create a simple JSP application using NetBean IDE

STEP 1:

- Create a new web project and webpage folder
- Create new JSP file thentype following code

index.jsp

```
<%@ page language="java" contentType="text/html;
charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>

<html>
<head>
<meta http-equiv="Content-Type" content="text/html;
charset=ISO-8859-1">
<title>Simple Registration Form</title>
</head>

<body>
<h1>Student Register Form</h1>
<form action="example.jsp">

<table>
<tr>
<td>UserName</td>
<td><input type="text" name="username" /></td>
</tr>

<tr>
<td>Password</td>
<td><input type="password" name="password" /></td>
</tr>

<tr>
<td>Contact No</td>
<td><input type="text" name="contact" /></td>
</tr>
</table>

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

</body>
</html>
```

STEP2:

- Goto webpage folder and open WEB-INF folder
- If web-inf folder not present, then create the WEB-INF folder
- Paste the web.xml
- Create index.html under webpage folder

example.jsp

```
<%--
Document   : example
Created on : Aug 8, 2019, 11:47:01 AM
Author     : system 1
```

```
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html>

<head>
<meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
<title>JSP Page</title>
</head>

<body>
<center>
<h1>Sample Jsp Program To Get Student Registration
Details</h1>

<%
String name=request.getParameter("username");
out.print("This is your User name "+name);
%>

<br>

<%
String password=request.getParameter("password");
out.print("This is your Password "+password);
%>

<br>

<%
String contact=request.getParameter("contact");
out.print("your Contact no is "+contact);
%>

</center>

</body>
</html>
```

STEP3:

- Right click on project build and run.

STEP4:

- Project will be viewed in the Browser

14 DEVELOPING A PROGRAM TO ACCESS A DATABASE FROM A JSP PAGE

49. Program to access MySQL Employee databaseusing JSP

STEP 1:

- Open a Command Prompt and change to the installation directory as follows:

```
C:\>

C:\>cd Program Files\MySQL\bin

C:\Program Files\MySQL\bin>
```

STEP 2:

- Login to database as follows

```
C:\Program Files\MySQL\bin>mysql -u root -p
Enter password: ********

mysql>
```

STEP 3:

- Create the table Employee in TEST database as follows:

```
mysql> use TEST;

mysql> create table Employees
(
id int not null,
age int not null,
first varchar (255),
last varchar (255)
);
Query OK, 0 rows affected

mysql>
```

STEP 4:

- Create Data Records
- Create few records in Employee table as follows:

```
mysql> INSERT INTO Employees VALUES (100, 18, 'Zara',
'Ali');
Query OK, 1 row affected (0.05 sec)
```

```
mysql> INSERT INTO Employees VALUES (101, 25,
'Mahnaz', 'Fatma');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Employees VALUES (102, 30, 'Zaid',
'Khan');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO Employees VALUES (103, 28, 'Sumit',
'Mittal');
Query OK, 1 row affected (0.00 sec)

mysql>
```

STEP 5:

- Execute SQL SELECT statement using JSP programming:

```
<%@ page import="java.io.*,java.util.*,java.sql.*"%>
<%@ page import="javax.servlet.http.*,javax.servlet.*"
%>

<%@ taglib uri="http://java.sun.com/jsp/jstl/core"
prefix="c"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/sql"
prefix="sql"%>

<html>
<head>
<title>SELECT Operation</title>
</head>

<body>

<sql:setDataSource var="snapshot"
driver="com.mysql.jdbc.Driver"
url="jdbc:mysql://localhost/TEST"
user="root" password="pass123"/>

<sql:query dataSource="${snapshot}" var="result">
SELECT * from Employees;
</sql:query>

<table border="1" width="100%">
<tr>
<th>Emp ID</th>
<th>First Name</th>
<th>Last Name</th>
<th>Age</th>
</tr>
```

```
<c:forEach var="row" items="${result.rows}">

<tr>
<td><c:out value="${row.id}"/></td>
<td><c:out value="${row.first}"/></td>
<td><c:out value="${row.last}"/></td>
<td><c:out value="${row.age}"/></td>
</tr>

</c:forEach>

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

Output

Emp ID	First Name	Last Name	Age
100	Zara	Ali	18
101	Mahnaz	Fatma	25
102	Zaid	Khan	30
103	Sumit	Mittal	28

50. Program to access User Profile database using JSP

STEP1:

- Create a table in SQL as given below

```
Create table profile (id number(10), name varchar(10),
email varchar(10),  password varchar(10), location
varchar(10));
```

STEP2:

- Go to webpage folder and create new html files
- Save them as index.jsp and insertregistration.jsp and paste the following code.

index.jsp

```
<%@ page language="java" contentType="text/html;
charset=ISO-8859-1"
pageEncoding="ISO-8859-1"%>

<html>
<head>
```

```
<meta http-equiv="Content-Type" content="text/html;
charset=ISO-8859-1">
<title>Simple Registration Form</title>
</head>

<body>
<h1>Student Register Form</h1>

<form action="example.jsp">

<table>
<tr>
<td>UserName</td>
<td><input type="text" name="username" /></td>
</tr>

<tr>
<td>Password</td>
<td><input type="password" name="password" /></td>
</tr>

<tr>
<td>Contact No</td>
<td><input type="text" name="contact" /></td>
</tr>

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

insertregistration.jsp

```
%@page
import="java.sql.*,java.lang.*,dbconnection.*,java.tex
t.SimpleDateFormat,java.util.*,java.io.*,javax.servlet
.*, javax.servlet.http.*"  errorPage="Error.jsp"%

<%@page import=" java.security.MessageDigest"%>
<%@page import=" java.security.*"%>
<%@page import="javax.crypto.*"%>

<%
Connection con;
Statement st = null;
ResultSet rs1=null;
int id=0;

try
{
```

```
Class.forName("oracle.jdbc.driver.OracleDriver");

con=DriverManager.getConnection("jdbc:oracle:thin:@HbA
dmin:1521:XE","system","system");

st=con.createStatement();

String sql1="select max(id) from profile";
rs1=st.executeQuery(sql1);

while(rs1.next())
{

if(rs1.getInt(1)==0)
id=1;
else
id=rs1.getInt(1)+1;

session.setAttribute("id",id);
String
name=null,location=null,gender=null,email=null,passwor
d=null,phone=null,image=null,comment=null;
int report=0;
int upload=0;

try
{
name=request.getParameter("name");
email=request.getParameter("email");
password=request.getParameter("password");
location=request.getParameter("location");

Connection con1=db.getconnection();
PreparedStatement ps=con1.prepareStatement("INSERT
INTO profile VALUES(?,?,?,?,?)");

ps.setInt(1,id);
ps.setString(2,name);
ps.setString(3,email);
ps.setString(4,password);
ps.setString(5,location);
int x=ps.executeUpdate();

if(x!=0)
{
response.sendRedirect("index.jsp?message=successfully
registered");
}

else
{
```

```
response.sendRedirect("index.html?message=fail");
}

}
catch (Exception e)

{
out.println(e.getMessage());
}
}

}

catch (Exception eq)
{
out.println(eq.getMessage());
}
%>
```

STEP 4:

- Check database connection and save files in the web page folder.

STEP 5:

- Right click on the project.
- Build and Run the project

Output