

NEAR ITPB, CHANNASANDRA, BENGALURU – 560 067
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

V SEMESTER

ACADEMIC YEAR 2021–2022 [ODD] WEB PROGRAMMING LABORATORY MVJ19CSL58

LABORATORY MANUAL

NAME OF THE STUDENT	:
Branch	: COMPUTER SCIENCE AND ENGINEERING
University Seat No.	:
SEMESTER & SECTION	: <u>v</u>
Ватсн	:

Department of Computer Science and Engineering

Vision of the Department:

To create an ambience in excellence and provide innovative emerging programs in Computer Science and Engineering and to bring out future ready engineers equipped with technical expertise and strong ethical values.

Mission of the Department:

- 1. **Concepts of computing discipline**: To educate students at under graduate, postgraduate and doctoral levels in the fundamental and advanced concepts of computing discipline.
- **Quality Research**: To provide strong theoretical and practical background across the Computer Science and Engineering discipline with the emphasis on computing technologies, quality research, consultancy and trainings.
- **3. Continuous Teaching Learning:** To promote a teaching learning process that brings advancements in Computer Science and Engineering discipline leading to new technologies and products.
- 4. Social Responsibility and Ethical Values: To inculcate professional behavior, innovative research Capabilities, leadership abilities and strong ethical values in the young minds so as to work with the commitment for the betterment of the society.

PEOs ,POs & PSOs of the Department

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: Current Industry Practices: Graduates will analyze real world problems and give solution using current industry practices in computing technology.

PEO2: **Research & Higher Studies:** Graduates with strong foundation in mathematics and engineering fundamentals that will enable graduates to pursue higher learning ,R&D activities and consultancy.

PEO3: **Social Responsibility:** Graduates will be professionals with ethics, who will provide industry growth and social transformation as responsible citizens.

PEO4: **Entrepreneur**: Graduates will be able to become entrepreneur to address social, technical and business challenges.

PROGRAM OUTCOMES

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

PROGRAM SPECIFIC OUTCOMES

PSO1: Programming: Ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, DBMS, and networking for efficient design of computer-based systems of varying complexity.

PSO2:Practical Solution: Ability to practically provide solutions for real world problems with a broad range of programming language and open source platforms in various computing domains.

PSO3:Research: Ability to use innovative ideas to do research in various domains to solve societal problems.

COURSE OBJECTIVES:

- Design and develop static and dynamic web pages.
- Develop a web application project using HTML, JavaScript, XML, CSS and PHP with a good look and feel effects.
- Design the layouts and understand the requirements for web page creation.
- Familiarize with client side program, server-side programming and active server pages.
- Learn Database Connectivity to web applications

PREREQUISITES:

Basic knowledge about computer programming

COURSE OUTCOMES (CO's):

Course	Course Outcome
Code	
C308.1	Design and develop dynamic web pages with good aesthetic sense of designing
	and latest technical know-how's.
C308.2	Design, develop and implement web applications based on Javascript, HTML5,
	XML,CSS and PHP.
C308.3	Gain the creativity and imagination to build the web pages
C308.4	Have a good understanding of Web Application Terminologies, Internet Tools
	other web services
C308.5	Learn how to link and publish web sites

<u>Lab Experiments</u> WEB TECHNOLOGY PRACTICALS

Sl No	Experiment Name	RBT Level	Hours
1	Create a web page with the following.		
	a. Cascading style sheets.		
	b. Embedded style sheets.	L3	3
	c. Inline style sheets.		
	Use our college information(Department of CSE) for the web pages.		
2	Design HTML form for keeping student record and validate it using Java script.	L3	3
3	Write an HTML program to design an entry form of student details and send it to		_
	store at database server like SQL, Oracle or MS Access.	L3	3
4	Write a JavaScript code that displays text "TEXT-GROWING" with increasing		
	font size in the interval of 100ms in RED COLOR, when the font size reaches		
	50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size	L3	3
	decreases to 5pt.		
5	Assume four users user1, user2, user3 and user4 having the passwords pwd1,		
	pwd2, pwd3 and pwd4 respectively. Write a servlet for doing the following.		
	1.Create a Cookie and add these four user id's and passwords to this Cookie. 2.	L3	3
	Read the user id and passwords entered in the Login form and authenticate with		
	the values available in the cookies.		
6	Write a JSP which insert the details of the 3 or 4 users who register with the web		
	site by using registration form. Authenticate the user when he submits the login	L3	3
	form using the user name and password from the database.		
7	Validate the form using PHP regular expression. PHP stores a form data in to the		_
	database	L3	3
8	Write a PHP program to display a digital clock which displays the current time of		_
	the server.	L3	3
9	Creating simple application to access data base using JDBC Formatting HTML		
	with CSS.	L3	3
10	Write a Program for manipulating Databases and SQL with real time application	L3	3

Mapping of Course Outcomes to Program Outcomes															
	РО	PS	PS	PS											
	1	2	3	4	5	6	7	8	9	10	11	12	O1	O2	O3
C308.	3	3	2	2	-	-	-	-	-	-	-	-	3	3	
C308.	3	3	2	2	-	-	-	-	-	-	-	-	3	3	
C308.	3	3	3	2	-	-	-	-	-	-	-	-	3	3	
C308.	3	3	2	2	-	-	-	-	-	-	-	-	3	3	
C308.	3	3	3	2	-	-	-	-	-	-	-	-	3	3	
Avera	3	3	3	2			-					-	3	3	

Conduction of Practical Examination

- 1. All laboratory experiments are to be included for practical examination.
- 2. Students are allowed to pick one experiment from the lot.
- 3. Strictly follow the instructions as printed on the cover page of the answer script.
- 4. Marks distribution: Procedure + Conduction + Viva:20 + 25 +5 =50 Marks
- 5. Change of experiment is allowed only once and marks allotted to the procedure part to be made zero.

INSTRUCTIONS

- 1. The exercises are to be solved in an editor like Notepad++, TeamViewer.
- 2. Front end may be created using either HTML5 or HTML or any other framework.
- 4. The student need not create the front end in the examination. The results of the program may be displayed directly.
- 5. Modification of existing programs also be asked in the examination.
- 6. Questions must be asked based on lots.

Web Programs

- 1. Create a web page with the following.
- a. Cascading style sheets.
- b. Embedded style sheets.
- c. Inline style sheets.

Use our college information(Department of CSE) for the web pages

```
P.special {
color: green;
border: solid red;
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<HTML>
 <HEAD>
  <LINK href="special.css" rel="stylesheet" type="text/css">
 </HEAD>
 <BODY>
  <P class="special">This paragraph should have special green text.
</HTML>
<HEAD>
<STYLE type="text/css">
 H1 {border-width: 1; border: solid; text-align: center}
</STYLE>
</HEAD>
<HEAD>
<STYLE type="text/css">
 H1.myclass {border-width: 1; border: solid; text-align: center}
</STYLE>
</HEAD>
<BODY>
<H1 class="myclass"> This H1 is affected by our style </H1>
<H1> This one is not affected by our style </H1>
</BODY>
<HEAD>
<STYLE type="text/css">
 #myid {border-width: 1; border: solid; text-align: center}
</STYLE>
</HEAD>
<BODY>
<H1 class="myclass"> This H1 is not affected </H1>
<H1 id="myid"> This H1 is affected by style </H1>
<H1> This H1 is not affected </H1>
</BODY>
```

```
<HEAD>
<STYLE type="text/css">
 SPAN.sc-ex { font-variant: small-caps }
</STYLE>
</HEAD>
<BODY>
 <P><SPAN class="sc-ex">The first</SPAN> few words of
 this paragraph are in small-caps.
</BODY>
<HEAD>
<STYLE type="text/css">
 DIV.Abstract { text-align: justify }
</STYLE>
</HEAD>
<BODY>
<DIV class="Abstract">
 <P>The Chieftain product range is our market winner for
  the coming year. This report sets out how to position
  Chieftain against competing products.
 <P>Chieftain replaces the Commander range, which will
  remain on the price list until further notice.
</DIV>
</BODY>
<HEAD>
<STYLE type="text/css" media="projection">
  H1 { color: blue}
</STYLE>
<STYLE type="text/css" media="print">
 H1 { text-align: center }
</STYLE>
<STYLE type="text/css" media="aural">
 A { cue-before: uri(bell.aiff); cue-after: uri(dong.wav)}
</STYLE>
</HEAD>
b. Embedded style sheets.
<style>
 p {
    font-family: georgia, serif;
    font-size: x-small;
  }
 hr {
    color: #ff9900;
    height: 1px;
```

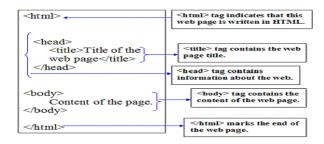
```
}
 a:hover {
    color: #ff0000;
    text-decoration: none;
  }
</style>
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
 font-family: georgia, serif;
 font-size: x-large;
 color:#ff9900;
 }
a:hover {
 color: LimeGreen;
 text-decoration: none;
</style>
</head>
<body>
This paragraph tag has been preset using embedded style sheets. Same for the horizontal
rule below and the hyperlink under that. 
Also see <a href="/css/external_style_sheets.cfm" target="_blank">external style
sheets</a>
</body>
</html>
```

Viva Questions:

1. What is HTML?

HTML, or HyperText Markup Language, is a Universal language which allows an individual using special code to create web pages to be viewed on the Internet.

2. What is the structure of HTML?



3. What is a tag?

In HTML, a tag tells the browser what to do. When we write an HTML page, we enter tags for many reasons -- to change the appearance of text, to show a graphic, or to make a link to another page.

4. Explain 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.

5. Explain CSS Selectors.

CSS selectors are used to "find" (or select) HTML elements based on their element name, id, class, attribute, and more.

The element Selector

The element selector selects elements based on the element name. You can select all elements on a page like this (in this case, all elements will be center-aligned, with a red text color):

Example

```
p {
  text-align: center;
  color: red;
}
```

The id Selector

The id selector uses the id attribute of an HTML element to select a specific element. The id of an element should be unique within a page, so the id selector is used to select one unique element!

To select an element with a specific id, write a hash (#) character, followed by the id of the element. The style rule below will be applied to the HTML element with id="para1":

Example

```
#para1 {
   text-align: center;
   color: red;
}
```

The class Selector

The class selector selects elements with a specific class attribute. To select elements with a specific class, write a period (.) character, followed by the name of the class. In the example below, all HTML elements with class="center" will be red and center-aligned:

Example

```
.center {
  text-align: center;
  color: red;
}
```

6. Explain JavaScript HTML DOM Elements

HTML Elements can be handled by the following ways:

- Finding HTML elements by id
- Finding HTML elements by tag name
- Finding HTML elements by class name
- Finding HTML elements by CSS selectors

7. How can I include comments in HTML?

Technically, since HTML is an SGML application, HTML uses SGML comment syntax. However, the full syntax is complex, and browsers don't support it in its entirety anyway. Therefore, use the following simplified rule to create HTML comments that both have valid syntax and work in browsers:

An HTML comment begins with "<!--", ends with "-->", and does not contain "--" or ">" anywhere in the comment.

The following are examples of HTML comments:

```
* <!-- This is a comment. -->
```

* <!-- This is another comment, and it continues onto a second line. --> * <!--->

8. What is <!DOCTYPE>?

The <!DOCTYPE> declaration must be the very first thing in your HTML document, before the <html> tag.

The <!DOCTYPE> declaration is not an HTML tag; it is an instruction to the web browser about what version of HTML the page is written in.

9. What is a Hypertext link?

A hypertext link is a special tag that links one page to another page or resource. If you click the link, the browser jumps to the link's destination..

2. Design HTML form for keeping student record and validate it using Java script.

PROGRAM:

Save with .html extension

```
<html>
<head>
<title>Student Registration Form</title>
<style>
body{
background-image: linear-gradient(to right, yellow, red);
ul {list-style-type:none;}
#heading{
text-decoration:underline;
font-style: italic;
color:black;
text-align:center;
#para{
font-size:20px;
font-style: italic;
color:blue;
text-align:center;
</style>
</head>
<body>
<script>
function validate()
var f=document.getElementById("fname");
var l=document.getElementById("lname");
var u=document.getElementById("USN");
var s=document.getElementById("sem");
var e=document.getElementById("email");
var p=document.getElementById("phone");
var a=document.getElementById("address");
var r1=document.getElementById("g1");
var r2=document.getElementById("g2");
var c1=document.getElementById("ch1");
var c2=document.getElementById("ch1");
var c3=document.getElementById("ch1");
```

```
var c4=document.getElementById("ch1");
var b=document.getElementById("branch");
var i=document.getElementById("image");
var usn = /^{[1-4][a-zA-Z]}{2}[0-9]{2}[a-zA-Z]{2}[0-9]{3}$/;
var sem=/^[1-8]$/;
var email=/[a-z][a-z0-9_]+@[a-z]+\.[a-z]+/;
var phone = /[0-9]{10}/;
if(f.value.length==0||l.value.length==0)
       alert("please enter ur name");
       f.focus();
       return;
if(u.value.length==0)
alert("USN field can not be empty");
u.focus();
return;
}
else
       if(!u.value.match(usn))
               alert("invalid USN");
              u.focus();
              return;
if(s.value.length==0)
alert("Semester field can not be empty");
s.focus();
return;
}
else
       if(!s.value.match(sem))
               alert("invalid Semester");
              e.focus();
              return;
       }
if(e.value.length==0)
alert("Email ID field can not be empty");
```

```
e.focus();
return;
else
       if(!e.value.match(email))
              alert("invalid emailid");
              e.focus();
              return;
if(p.value.length==0)
alert("phone no field can not be empty");
p.focus();
return;
else
       if(!p.value.match(phone))
               alert("invalid phone no");
              p.focus();
              return;
       }
if(a.value.length==0)
       alert("please enter address");
       a.focus();
       return;
if(r1.checked==false&&r2.checked==false)
alert("please select the gender");
return;
if(c1.checked==false&&c2.checked==false&&c3.checked==false&&c4.checked==false)
alert("please select the Area of Interest");
return;
if(b.selectedIndex == 0)
alert("Please choose your branch");
```

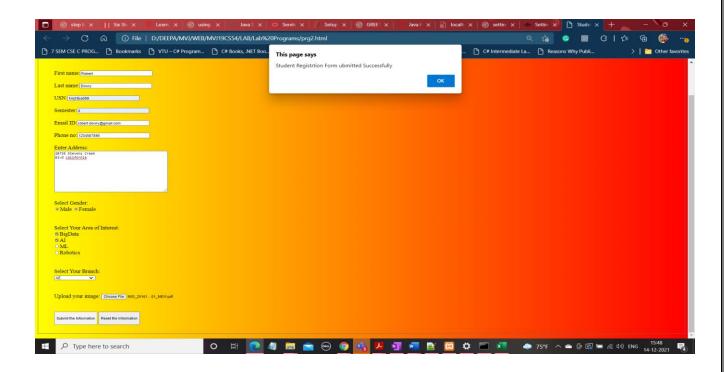
```
return;
if(i.value.length==0)
     alert("please upload your photo");
     i.focus();
     return;
alert("Student Registrtion Form ubmitted Successfully");
</script>
<form style="font-size:20px;">
<fieldset>
<le>egend> Student Registrtion Form</legend>
<h1 id="heading"> Student Registration Details</h1>
(All Fields are Mandatory *)
<div cellpadding="2" width="20%" align="left"</pre>
cellspacing="2">
\langle ul \rangle
<
\langle li \rangle
Last name:<input type="text" id="lname" size="30"><br><br>
<
\langle li \rangle
\langle li \rangle
\langle li \rangle
<
Enter Address:<br>
<textarea rows="10" cols="50" id="address" size="30"></textarea><br><br><br><br/><br/><br/>
<
Select Gender:<br>
<input type="radio" id="g1" size="30">Male
<input type="radio" id="g2">Female<br><br><br>
```

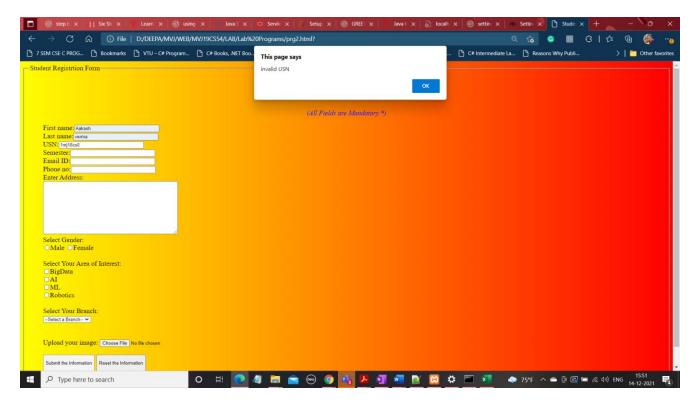
2021-22

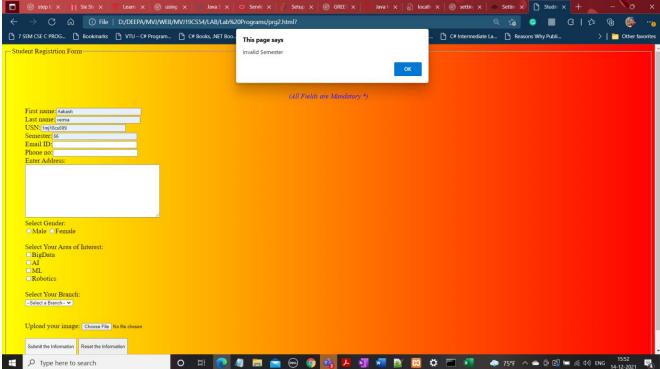
```
>
Select Your Area of Interest:<br>
<input type="checkbox" id="ch1">BigData<br/>br>
<input type="checkbox" id="ch2">AI<br>
<input type="checkbox" id="ch3">ML<br>
<input type="checkbox" id="ch4">Robotics<br><br><br><br>
<
Select Your Branch: <br>
<select id="branch">
<option>--Select a Branch--</option>
<option>AE</option>
<option>AS</option>
<option>CS</option>
<option>IS</option>
</select>
<br>><br>>
<
Upload your image:
<input type="file" id="image"><br><br><br>
<
<input type="submit" id="submit" onclick="validate()" value="Submit the Information"</pre>
style="height:50px" >
<input type="reset" id="reset" size="30" value="Reset the Information" style="height:50px"><br>
</div>
</fieldset>
</form>
</body>
</html>
```

Output:









Viva Questions and Answers:

1. What is difference between HTML and XHTML?

The differences between HTML and XHTML are:

- HTML is application of Standard Generalized Markup Language(SGML) whereas XML is application of Extensible Markup Language(XML).
- HTML is a static Web Page whereas XHTML is dynamic Web Page.
- HTML allows programmer to perform changes in the tags and use attribute minimization whereas XHTML when user need a new markup tag then user can define it in this.
- HTML is about displaying information whereas XHTML is about describing the information

2. What is JavaScript?

Javascript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages.

3. Does HTML support Javascripts?

Yes, HTML supports JavaScripts. We can use JavaScript anywhere in the HTML Coding. Mainly there are four sections where we can add JavaScript in HTML.

- **Head Section:** we can add JavaScript in Head section of HTML. <head>.....Javascript....</head>
- **Body Section:** <body>..... Javascript...</body>
- **Head and Body both:** we can add Javascript in both head and body section.

 body....Javascript...</br/>
 /head>
- External File: script in and external file and then include in <head> </head> section.

4. How to insert Javascript in HTML?

We can insert JavaScript in HTML using <Script tag>. JavaScript can be enclosed in <script type = text/javascript> and ending with </script>.

Example:

5. How to write comment in JavaScript?

There are two types of comments in JavaScript.

- 1. Single Line Comment: It is represented by // (double forward slash)
- 2. Multi Line Comment: It is represented by slash with asterisk symbol as /* write comment here */

6. How to create function in JavaScript?

To create function in JavaScript, follow the following syntax.

```
function function_name()
{
//function body
}
```

3. Write an HTML program to design an entry form of student details and send it to store at database server like SQL, Oracle or MS Access

1. Create a database with a student table in mySQL

- Go to http://localhost/phpmyadmin/
- Type "student db" under Create database and click "Create"
- Type "student_tbl" and give number of fields as 5 under "Create New Table" and click "Create"
- Specify names of fields, ID, USN, Name, Branch, batch with appropriate data types. Add more fields if required, click "Save".
- Click on the key button in the ID row and make it Primary Key
- Edit ID field and set it to AutoIncrement.
- Enter 5 rows by clicking on insert and using GUI or selecting SQL and writing SQL statements (Leave ID field empty, it will be auto-incremented)
- Click on "Browse" to see all the rows

Student.html

```
<html>
<head>
<style>
body{
background-image: linear-gradient(to right, green, blue);
</style>
</head>
<body>
<h1> <center>Student Information</center></h1>
<form action="studentdb.php" method="get">
Enter USN
     <input type="text" name="usn">
Enter Name
     <input type="text" name="name">
```

Enter Branch

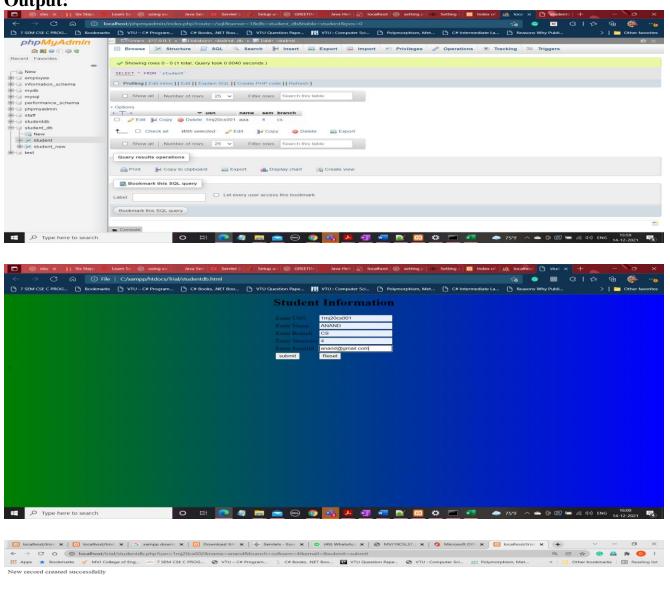
```
<input type="text" name="branch">
      Enter Semester
            <input type="text" name="sem">
      Enter Emailid
            <input type="text" name="email">
      <input type="submit" name="submit" value="submit">
            <input type="reset" name="reset" value="Reset">
      </form>
      </center>
      <
      </body>
      </html>
Studentdb.php
<html>
<body>
<?php
$usn=$_GET["usn"];
$name=$_GET["name"];
$branch=$_GET["branch"];
$sem=$_GET["sem"];
$email=$_GET["email"];
$conn = mysqli_connect("localhost","root","","studentdb");
if (mysqli_connect_errno())
echo "Failed to connect to MySQL: " . mysqli_connect_error();
$sql = "INSERT INTO student VALUES
           ('$usn', '$name', '$branch', $sem, '$email')";
if ($conn->query($sql) === TRUE) {
 echo "New record created successfully";
} else {
 echo "Error: " . $sql . "<br>" . $conn->error;
```

?>

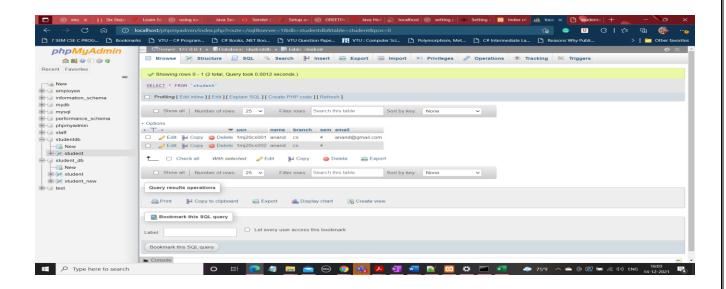
</body>

</html>

Output:



2021-22



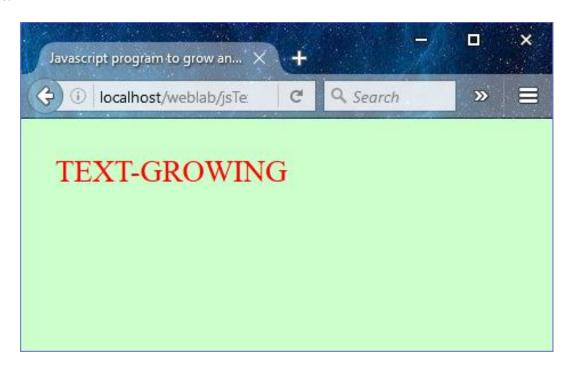
4. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the font size decreases to 5pt.

PROGRAM:

Save with .html extension

```
<!DOCTYPE html>
<head>
<meta charset=utf-8 />
<title> Javascript program to grow and shrink text</title>
<style type="text/css">
body
background-color: #CCFFCC;
color:green;
margin: 30px;
</style>
<script type="text/javascript">
var anim= setInterval(grow,100);
var fs=5;
function grow()
       fs+=5;
       document.getElementById("animText").innerHTML="TEXT-GROWING";
       document.getElementById("animText").style.color="red";
       document.getElementById("animText").style.fontSize=fs+"pt";
      if(fs>50)
              clearInterval(anim);
              anim = setInterval(shrink,100);
       }
function shrink()
      fs-=5;
```

Output:





Viva Questions:

1. What is CSS?

CSS stands for Cascading Style Sheets. By using CSS with HTML we can change the look of the web page by changing the font size and color of the font. CSS plays an important role in building the website. Well written CSS file can be used to change the presentation of each web page. By including only one CSS file. It gives web site developer and user more control over the web pages.

2. How many types CSS can be include in HTML?

There are three ways to include the CSS with HTML:

- **Inline CSS:** it is used when only small context is to be styled.
 - o To use inline styles add the style attribute in the relevant tag.
- External Style Sheet: is used when the style is applied to many pages.
 - o Each page must link to the style sheet using the k> tag. The k> tag goes inside the head section:
 - <head>
 - k rel="stylesheet" type="text/css" href="mystyle.css" />
 - </head>
- **Internal Style Sheet:** is used when a single document has a unique style.
 - o Internal styles sheet needs to put in the head section of an HTML page, by using the <style>

```
tag, like this:
  <head>
  <style type="text/css">
hr {color:sienna}
p {margin-left:20px}
body {background-image:url("images/back40.gif")}
  </style>
  </head>
```

3. What are style sheet properties?

CSS Background CSS Text CSS Font
CSS Border CSS Outline CSS Margin
CSS Padding CSS List CSS Table

4. List various font attributes used in style sheet.

font-style	font-variant	font-weight
font-size/line-height	font-family	caption
icon	menu	message-box

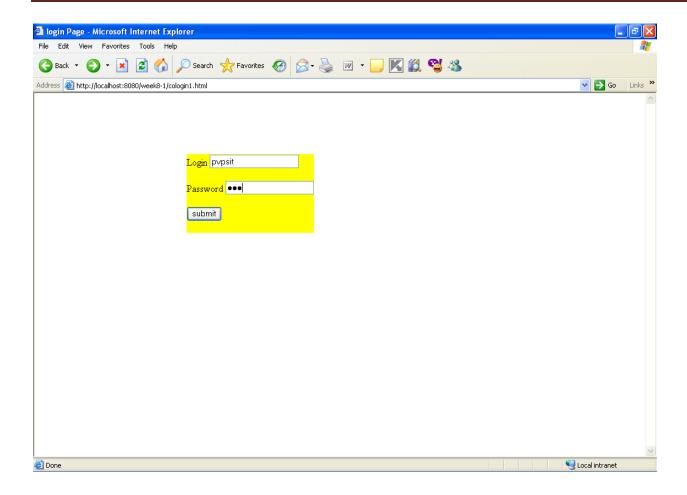
5. Assume four users user1, user2, user3 and user4 having the passwords pwd1, pwd2, pwd3 and pwd4 respectively. Write a servlet for doing the following. 1.Create a Cookie and add these four users id's and passwords to this Cookie. 2. Read the user id and passwords entered in the Login form and authenticate with the values available in the cookies.

PROGRAM:

```
cologin.html:
<html>
<head>
<title> login Page </title>
</head>
<body>
<form ACTION="clogin">
<label> Login </label>
<input type="text" name="usr" size="20"> <br> <br>>
<label> Password </label>
<input type="password" name="pwd" size="20"> <br> <br>>
<input type="submit" value="submit">
</form>
</body>
</html>
cologin1.html
<html>
<head>
<title> login Page </title>
</head>
<body>
<form ACTION="clogin1">
<label> Login </label>
<input type="text" name="usr" size="20"> <br> <br>>
<label> Password </label>
<input type="password" name="pwd" size="20"> <br> <br>>
<input type="submit" value="submit">
</form>
</body>
</html>
Addcook.java:
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;
public class Addcook extends HttpServlet
```

```
String user, pas;
public void service(HttpServletRequest req,HttpServletResponse res) throws
ServletException,IOException
res.setContentType("text/html");
PrintWriter out=res.getWriter();
Cookie c1=new Cookie("usr1", "suni");
Cookie p1=new Cookie("pwd1","ani");
Cookie c2=new Cookie("usr2", "abc");
Cookie p2=new Cookie("pwd2","123");
Cookie c3=new Cookie("usr3","def");
Cookie p3=new Cookie("pwd3","456");
Cookie c4=new Cookie("usr4","mno");
Cookie p4=new Cookie("pwd4","789");
res.addCookie(c1);
res.addCookie(p1);
res.addCookie(c2);
res.addCookie(p2);
res.addCookie(c3);
res.addCookie(p3);
res.addCookie(c4);
res.addCookie(p4);
out.println("COOKIE ADDED");
Clogin.java:
import javax.servlet.*;
import javax.servlet.http.*;
import java.io.*;
public class Clogin extends HttpServlet
String user, pas;
public void service(HttpServletRequest req,HttpServletResponse res) throws
ServletException, IOException
res.setContentType("text/html");
PrintWriter out=res.getWriter();
user=req.getParameter("usr");
pas=req.getParameter("pwd");
Cookie[] c=req.getCookies();
for(int i=0;i<c.length;i++)
if((c[i].getName().equals("usr1")\&\&c[i+1].getName().equals("pwd1"))||c[i].getName().equals("usr2")
\&\&c[i+1].getName().equals("pwd2"))||(c[i].getName().equals("usr3")\&\&
c[i+1].getName().equals("pwd3"))||(c[i].getName().equals("usr4")&&
c[i+1].getName().equals("pwd4") ))
```

```
if((user.equals(c[i].getValue()) && pas.equals(c[i+1].getValue())) )
          //RequestDispatcher rd=req.getRequestDispatcher("/cart.html");
          rd.forward(req,res);
          else
          out.println("YOU ARE NOT AUTHORISED USER ");
          //res.sendRedirect("/cookdemo/cologin.html");
Web.xml:
<web-app>
<servlet>
<servlet-name>him</servlet-name>
<servlet-class>Clogin</servlet-class>
</servlet>
<servlet>
<servlet-name>him1</servlet-name>
<servlet-class>Addcook/servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>him</servlet-name>
<url-pattern>/clogin</url-pattern>
</servlet-mapping>
<servlet-mapping>
<servlet-name>him1</servlet-name>
<url-pattern>/clogin1</url-pattern>
</servlet-mapping>
</web-app>
```



Viva Question and Answer:

1. What is the Use of SPAN in HTML and explain?

SPAN: Used for the following things:

- Highlight the any color text
- For adding colored text
- For adding background image to text.

Example:

```
<span style="color:#000000;">
In this page we use span.
</span>
```

2. Explain various HTML list tags.

In HTML we can list the element in two ways:

• Ordered list: in this list item are marked with numbers.

```
Syntax: 
first item 
second item
```

Display as:

- 1. First item
- 2. Second item.
- Unordered Lists: in this item are marked with bullets.

```
Syntax: 
first item 
second item 

Display as:
-First item
-Second item.
```

3. What is section and article tag?

The <section> tag:

The section tag defines sections in a document, such as chapters, headers, footers, or any other sections of the document.

```
The <article> tag:
```

The article tag specifies independent, self-contained content. An article should make its own appearance and it should be possible to distribute it independently from the rest of the site.

4. What is buttons in HTML?

The <button> tag defines a clickable button.

Inside a <button> element you can put content, like text or images. This is the difference between this element and buttons created with the <input> element.

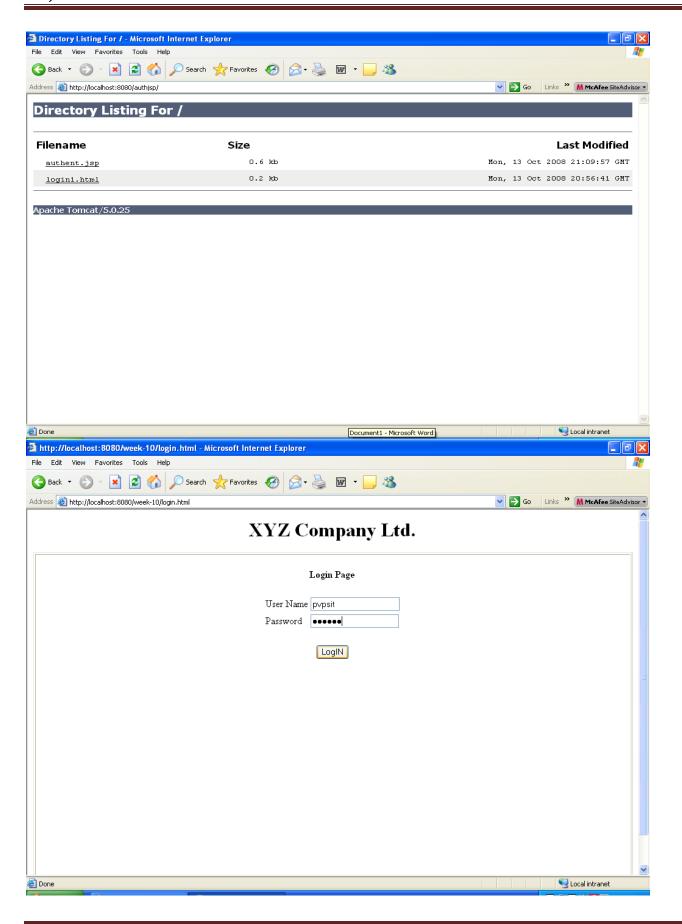
6. Write a JSP which insert the details of the 3 or 4 users who register with the web site by using registration form. Authenticate the user when he submits the login form using the user name and password from the database.

PROGRAM:

Login.html:

```
<!--Home.html-->
<html> <body>
<center><h1>XYZ Company Ltd.</h1></center>
<br/>
          <form action="auth.jsp">
          <b>Login Page</b>
          \langle tr \rangle
            <b>&nbsp;
          User Name
             <input type="text" name="user"/>
          Password
              <input type="password" name="pwd"/>
           
                 
          <input type="submit" value="LogIN"/>
          </form>
   </body>
</html>
Auth.jsp:
<%@page import="java.sql.*;"%>
<html>
<head>
<title>
```

```
This is simple data base example in JSP</title>
</title>
</head>
<body bgcolor="yellow">
<%!String uname,pwd;%>
<%
uname=request.getParameter("user");
pwd=request.getParameter("pwd");
 try
 Class.forName("oracle.jdbc.driver.OracleDriver");
 Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@195.100.101.158:1521:CCLAB", "scott", "tiger
");
 Statement st=con.createStatement();
 ResultSet rs=st.executeQuery("select name,password from personal where name=""+uname+"" and
password=""+pwd+""");
 if(rs.next())
out.println("Authorized person");
else
out.println("UnAuthorized person");
con.close();
catch(Exception e){out.println(""+e);}
%>
</body>
</html>
```



7. Validate the form using PHP regular expression. PHP stores a form data in to database

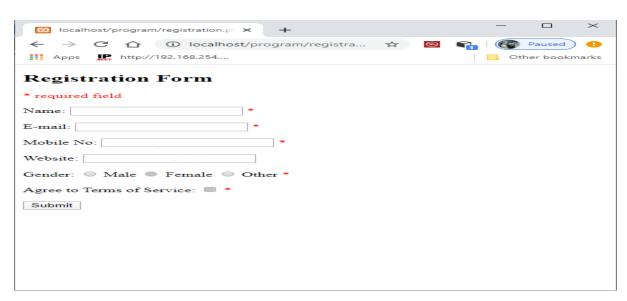
```
<!DOCTYPE html>
<html>
<head>
<style>
.error {color: #FF0001;}
</style>
</head>
<body>
<?php
// define variables to empty values
$nameErr = $emailErr = $mobilenoErr = $genderErr = $websiteErr = $agreeErr = "";
$name = $email = $mobileno = $gender = $website = $agree = "";
//Input fields validation
if ($_SERVER["REQUEST_METHOD"] == "POST") {
//String Validation
  if (emptyempty($_POST["name"])) {
     $nameErr = "Name is required";
  } else {
    $name = input_data($_POST["name"]);
      // check if name only contains letters and whitespace
      if (!preg_match("/^[a-zA-Z]*$/",$name)) {
         $nameErr = "Only alphabets and white space are allowed";
       }
  }
  //Email Validation
  if (emptyempty($_POST["email"])) {
       $emailErr = "Email is required";
  } else {
       $email = input_data($_POST["email"]);
      // check that the e-mail address is well-formed
      if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
         $emailErr = "Invalid email format";
       }
  //Number Validation
  if (emptyempty($_POST["mobileno"])) {
       $mobilenoErr = "Mobile no is required";
       $mobileno = input_data($_POST["mobileno"]);
```

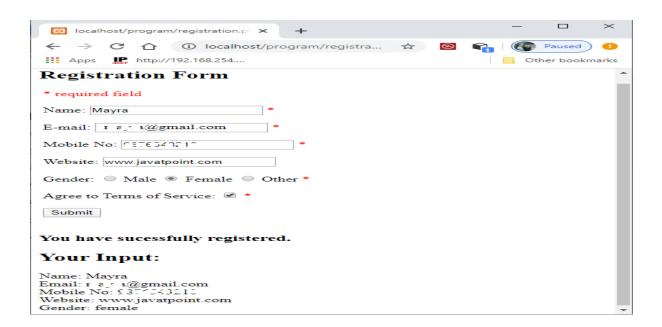
```
// check if mobile no is well-formed
       if (!preg_match ("/^[0-9]*$/", $mobileno) ) {
       $mobilenoErr = "Only numeric value is allowed.";
    //check mobile no length should not be less and greator than 10
    if (strlen ($mobileno) != 10) {
       $mobilenoErr = "Mobile no must contain 10 digits.";
  //URL Validation
  if (emptyempty($_POST["website"])) {
     $website = "";
  } else {
       $website = input_data($_POST["website"]);
       // check if URL address syntax is valid
       if (!preg_match("\b(?:(?:https?|ftp):\\)|-a-z0-9+&@#\\%?=~_|!:,.;]*[-a-z0-9+&@#\\%]
9+\&@\#/\%=\sim_{|]/i",\$website)) {
         $websiteErr = "Invalid URL";
  }
  //Empty Field Validation
  if (emptyempty ($_POST["gender"])) {
       $genderErr = "Gender is required";
  } else {
       $gender = input_data($_POST["gender"]);
  //Checkbox Validation
  if (!isset($_POST['agree'])){
       $agreeErr = "Accept terms of services before submit.";
  } else {
       $agree = input_data($_POST["agree"]);
function input_data($data) {
 $data = trim($data);
 $data = stripslashes($data);
 $data = htmlspecialchars($data);
 return $data;
?>
<h2>Registration Form</h2>
<span class = "error">* required field </span>
```

```
<br>><br>>
<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>" >
  Name:
  <input type="text" name="name">
  <span class="error">* <?php echo $nameErr; ?> </span>
  <br>><br>>
  E-mail:
  <input type="text" name="email">
  <span class="error">* <?php echo $emailErr; ?> </span>
  Mobile No:
  <input type="text" name="mobileno">
  <span class="error">* <?php echo $mobilenoErr; ?> </span>
  <br>><br>>
  Website:
  <input type="text" name="website">
  <span class="error"><?php echo $websiteErr; ?> </span>
  <br>><br>>
  Gender:
  <input type="radio" name="gender" value="male"> Male
  <input type="radio" name="gender" value="female"> Female
  <input type="radio" name="gender" value="other"> Other
  <span class="error">* <?php echo $genderErr; ?> </span>
  <br>><br>>
  Agree to Terms of Service:
  <input type="checkbox" name="agree">
  <span class="error">* <?php echo $agreeErr; ?> </span>
  <br>><br>>
  <input type="submit" name="submit" value="Submit">
  <br>><br>>
</form>
<?php
  if(isset($_POST['submit'])) {
  if($nameErr == "" && $emailErr == "" && $mobilenoErr == "" && $genderErr == "" &&
$websiteErr == "" && $agreeErr == "") {
    echo "<h3 color = #FF0001> <b>You have sucessfully registered.</b> </h3>";
    echo "<h2>Your Input:</h2>";
    echo "Name: " .$name;
    echo "<br>";
    echo "Email: " .$email;
    echo "<br>";
    echo "Mobile No: " .$mobileno;
    echo "<br>":
    echo "Website: " .$website;
    echo "<br>";
```

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```
echo "Gender: " .$gender;
} else {
    echo "<h3> <b>You didn't filled up the form correctly.</b> </h3>";
}
?>
</body>
</html>
```





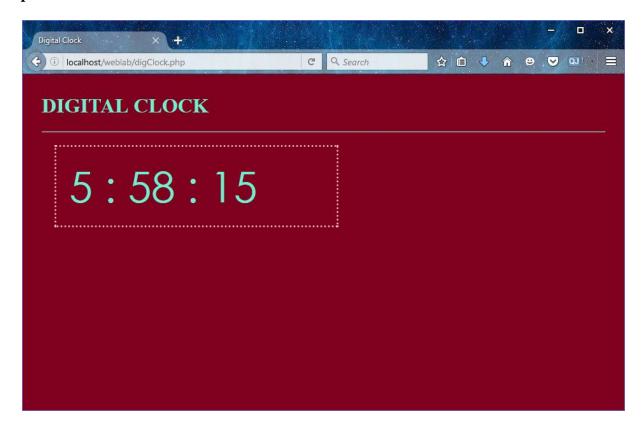
8. Write a PHP program to display a digital clock which displays the current time of the server.

PROGRAM:

```
<!DOCTYPE html >
<head >
<meta charset=utf-8 />
<title>Digital Clock</title>
<style type="text/css">
body
       background-color: #800020;
       color:#6DF3D1;
       margin: 30px;
#clock
       margin: 20px;
       padding: 20px;
       width:400px;
       border: medium dotted pink;
      font-size: 50pt;
      font-family: Century Gothic, sans-serif
</style>
</head>
<body>
<h1> DIGITAL CLOCK</h1>
<hr/>
<?php
date_default_timezone_set('Asia/Kolkata');
$page = $_SERVER['PHP_SELF'];
sec = "1";
header("Refresh: $sec; url=$page");
```

```
<div id="clock"><?php echo idate("H") . " : ". idate("i"). " : ". idate("s");
usleep (100);?> </div>
</body>
</html>
```

Output:



Viva Questions and Answers:

1. How will you get current date and time using PHP?

PHP's time() function gives you all the information that you need about the current date and time. It requires no arguments but returns an integer.

Eg:

```
<?php
$date_array = getdate();

foreach ( $date_array as $key => $val ){
```

```
print "$key = $val<br/>";
}

$formated_date = "Today's date: ";
$formated_date .= $date_array['mday'] . "/";
$formated_date .= $date_array['mon'] . "/";
$formated_date .= $date_array['year'];

print $formated_date;
?>
```

2. How will you access session variables in pHP?

Session variables are stored in associative array called \$_SESSION[]. These variables can be accessed during lifetime of a session.

3. What does \$ ENV mean?

\$_ENV is an associative array of variables sent to the current PHP script via the environment method.

4. How will you get the browser's detail in PHP?

One of the environment variables set by PHP is HTTP_USER_AGENT which identifies the user's browser and operating system.

9. Creating simple application to access data base using JDBC Formatting HTML with CSS. Implementation of required Web-pages

Create a form in HTML file, where take all the inputs required to insert data into the database. Specify the servlet name in it, with the POST method as security is important aspects in database connectivity.

```
<!DOCTYPE html>
<html>
<head>
<title>Insert Data</title>
</head>
<body>
  <!-- Give Servlet reference to the form as an instances
  GET and POST services can be according to the problem statement-->
  <form action="./InsertData" method="post">
    ID:
    <!-- Create an element with mandatory name attribute,
    so that data can be transfer to the servlet using getParameter() -->
    <input type="text" name="id"/>
    <br/>br/>
    String:
    <input type="text" name="string"/>
    <br/><br/><br/>
    <input type="submit"/>
  </form>
</body>
</html>
```

Creation of Java Servlet program with JDBC Connection

To create a JDBC Connection steps are

- 1. Import all the packages
- 2. Register the JDBC Driver

- 3. Open a connection
- 4. Execute the query, and retrieve the result
- 5. Clean up the JDBC Environment

Create a separate class to create a connection of database, as it is a lame process to writing the same code snippet in all the program. Create a .java file which returns a Connection object.

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;
 // This class can be used to initialize the database connection
public class DatabaseConnection {
  protected static Connection initializeDatabase()
    throws SQLException, ClassNotFoundException
    // Initialize all the information regarding
    // Database Connection
    String dbDriver = "com.mysql.jdbc.Driver";
    String dbURL = "jdbc:mysql:// localhost:3306/";
    // Database name to access
    String dbName = "demoprj";
    String dbUsername = "root";
    String dbPassword = "root";
    Class.forName(dbDriver);
    Connection con = DriverManager.getConnection(dbURL + dbName,
                                dbUsername,
                               dbPassword);
    return con;
```

To use this class method, create an object in Java Servlet program

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.PreparedStatement;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
// Import Database Connection Class file
import code.DatabaseConnection;
// Servlet Name
@WebServlet("/InsertData")
public class InsertData extends HttpServlet {
  private static final long serialVersionUID = 1L;
  protected void doPost(HttpServletRequest request,
HttpServletResponse response)
     throws ServletException, IOException
     try {
       // Initialize the database
       Connection con = DatabaseConnection.initializeDatabase();
       // Create a SQL query to insert data into demo table
       // demo table consists of two columns, so two '?' is used
```

```
PreparedStatement \ st = con
       .prepareStatement("insert into demo values(?, ?)");
  // For the first parameter,
  // get the data using request object
  // sets the data to st pointer
  st.setInt(1, Integer.valueOf(request.getParameter("id")));
  // Same for second parameter
  st.setString(2, request.getParameter("string"));
  // Execute the insert command using executeUpdate()
  // to make changes in database
  st.executeUpdate();
  // Close all the connections
  st.close();
  con.close();
  // Get a writer pointer
  // to display the successful result
  PrintWriter out = response.getWriter();
  out.println("<html><body><b>Successfully Inserted"
          + "</b></body></html>");
}
catch (Exception e) {
  e.printStackTrace();
```

Viva Question and Answer:

1. Explain how array can be created & elements are accessed in php?

An array is a data structure that stores one or more similar type of values in a single value.

There are three different kind of arrays and each array value is accessed using an ID c which is called array index.

- Numeric array An array with a numeric index. Values are stored and accessed in linear fashion.
- Associative array An array with strings as index. This stores element values in association with key values rather than in a strict linear index order.
- Multidimensional array An array containing one or more arrays and values are accessed using multiple indices

```
<?php
    /* Method to create Numeric array. */
    $numbers = array(1, 2, 3, 4, 5);

foreach( $numbers as $value ) {
    echo "Value is $value <br />";
    }

    /* Second method to create array. */
    $numbers[0] = "one";
    $numbers[1] = "two";
    $numbers[2] = "three";
    $numbers[3] = "four";
    $numbers[4] = "five";

foreach( $numbers as $value ) {
    echo "Value is $value <br />";
    }
?>
```

2. What is the purpose of \$_PHP_SELF variable?

The PHP default variable \$_PHP_SELF is used for the PHP script name and when you click "submit" button then same PHP script will be called.

```
10. Write a Program for manipulating Databases and SQL with real time application
<html>
<head>
 <title> Menu </title>
</head>
<br/><body bgcolor = "#CCFFFF" text = "#660099">
       <h1> Menu </h1>
       <l>
        <a href="/contact.php"> Add Contact </a> 
        <a href="/search.php"> Search for Contacts </a> 
      </body>
</html>
contact.php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"</p>
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<a href="http://www.w3.org/1999/xhtml">
<head>
 <title> Contact Details </title>
</head>
<br/><body bgcolor = "#CCFFFF" text = "#660099">
<?php
  $self = $ SERVER['PHP SELF'];
  $dbh=mysql_connect("localhost", "root", ""')or die(mysql_error());
  mysql_select_db('contactDB') or die(mysql_error());
      if(isset($_POST['submit'])){
     ne = POST['name'];
     ad1 = POST['add1'];
     ad2 = POST['add2'];
        $eml = $ POST['email'];
      if($nme != "" && $ad1 != "")
      $query = "INSERT INTO contact VALUES
            ('$nme', '$ad1', '$ad2', '$eml')";
       $result = mysql_query($query) or die(mysql_error());
         header("Location: /menu.html");
         die();
     else
```

```
echo "One of the required fields is empty!";
?>
<form action="<?=$self?>" method = "POST">
<h1> Enter the contact Details </h1>
Go to <a href="/menu.html">Menu</a>
Name 
 <input type="text" name="name" />*
Address Line 1 
 <input type="text" name="add1" />*
Address Line 2 
 <input type="text" name="add2" value="" />
Email 
 <input type="text" name="email" value=""/><BR>
<input type="submit" value="SUBMIT" />
          <input type="hidden" name="submit" value="yes" />
  </form>
 * Required Fields 
</body>
</html>
search.php
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"</p>
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<a href="http://www.w3.org/1999/xhtml">
<head>
<title> Search for contact</title>
```

```
</head>
<br/><body bgcolor = "#CCFFFF" text = "#660099">
<h1> Search for Contacts </h1>
Go to <a href="menu.html"> Menu </a>
<?php
     $self = $_SERVER['PHP_SELF'];
?>
 <form action="<?=$self?>" method="GET">
   Enter Name : <input type="text" name="name" />
             <input type="hidden" name="search" />
   <input type="submit" value = "Search" />
 </form>
<?php
if(isset($_GET['search'])) {
$dbh=mysql_connect("localhost", "root", ""')or die(mysql_error());
  mysql_select_db('contactDB') or die(mysql_error());
  $nme=$_GET["name"];
  echo "Searching for $nme...";
 $query=mysql_query("SELECT * FROM contact WHERE name like '%$nme%'");
 if(mysql_num_rows(\$query) > 0) {
?>
 Name
     Address Line 1
     Address Line 2
    E-mail
  <?php
   while ($row=mysql_fetch_array($query))
      echo " $row[0] $row[1]";
      echo "$row[2] $row[3] ";
 } else
     echo "<b> No matches found... </b>";
```

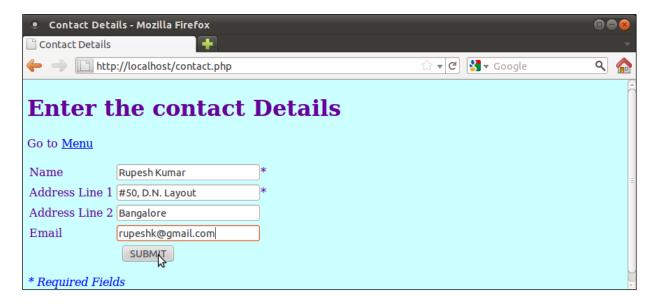
```
mysql_free_result($row);
mysql_close($dbh);
}
?>

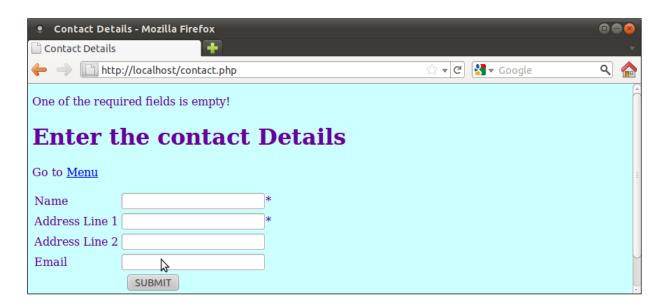
    </body>
    </html>
```

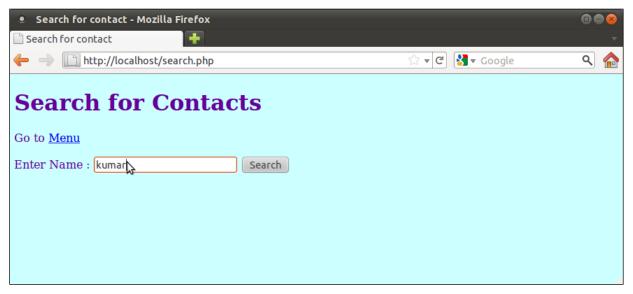
Output:

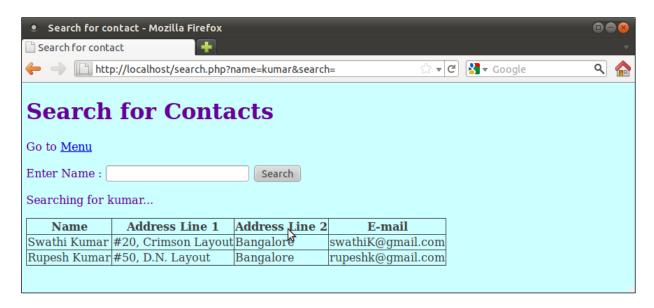
SAMPLE OUTPUT













Viva Questions:

1. How do you get information from a form that is submitted using the "get" method?

\$_[GET]

2. How will you get information sent via GET & POST method?

The PHP provides \$_GET associative array to access all the sent information using GET method.

The PHP provides \$_POST associative array to access all the sent information using POST method.

CONTENT BEYOND SYLLABUS

1) Program to display a message "Welcome!!!" on your webpage and when the user hovers over the message, a popup should be displayed with a message "Welcome to my WebPage!!!"

```
<html>
<head>
<title>Event!!!</title>
<script type="text/javascript">
function trigger()
document.getElementById("hover").addEventListener("mouseover", popup);
       function popup()
       alert("Welcome to my WebPage!!!");
</script>
<style>
p
font-size:50px;
position: fixed;
left: 550px;
top: 300px;
</style>
</head>
<body onload="trigger();">
       Welcome!!!
</body>
</html>
2) Program to illustrate the different phases of event propogation
<html>
<head>
<style type="text/css">
body * {
margin: 10px;
```

border: 1px solid blue;

</style> </head>

```
<body>
<form onclick="alert('form')">FORM
<div onclick="alert('div')">DIV
P
</div>
</form>
</body>
</html>
3)PHP function to test whether a number is greater than 30, 20 or 10 using ternary operator.
<?php
function trinary_Test($n){
r = n > 30
? "greater than 30"
: (\$n > 20)
? "greater than 20"
: (\$n > 10)
? "greater than 10"
: "Input a number at least greater than 10!"));
4) Write a PHP program to print following pattern:
 AAAAA
```

```
AAAAA
BBBB
CCC
DD
E
<?php
for($i=65; $i<=69; $i++){
    for($j=5; $j>=$i-64; $j--){
        echo chr($i);
    }
    echo "<br/>;
}
```

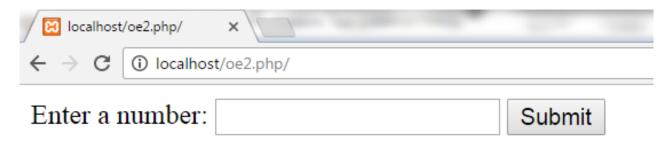
5) Even Odd Program using Form in PHP.

<html>

```
<body>
<form method="post">
  Enter a number:
  <input type="number" name="number">
  <input type="submit" value="Submit">
</form>
</body>
</html>
<?php
  if($_POST){
    $number = $_POST['number'];
    //divide entered number by 2
    //if the reminder is 0 then the number is even otherwise the number is odd
    if((\text{number }\%\ 2) == 0)
       {
      echo "$number is an Even number";
       else
       echo "$number is Odd number";
?>
```

Output:

On entering the number 23456, following output appears.



23456 is an Even number

MVJ COLLEGE OF ENGINEERING DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DO'S AND DON'TS

Do's

- 1. Do wear ID card and follow dress code.
- 2. Do log off the computers when you finish.
- 3. Do ask the staff for assistance if you need help.
- 4. Do keep your voice low when speaking to others in the LAB.
- 5. Do ask for assistance in downloading any software.
- 6. Do make suggestions as to how we can improve the LAB.
- 7. In case of any hardware related problem, ask LAB in charge for solution.
- 8. If you are the last one leaving the LAB, make sure that the staff in charge of the LAB is informed to close the LAB.
- 9. Be on time to LAB sessions.
- 10. Do keep the LAB as clean as possible.

Don'ts

- 1. Do not use mobile phone inside the lab.
- 2. Don't do anything that can make the LAB dirty (like eating, throwing waste papers etc).
- 3. Do not carry any external devices without permission.
- 4. Don't move the chairs of the LAB.
- 5. Don't interchange any part of one computer with another.
- 6. Don't leave the computers of the LAB turned on while leaving the LAB.
- 7. Do not install or download any software or modify or delete any system files on any lab computers.
- 8. Do not damage, remove, or disconnect any labels, parts, cables, or equipment.
- 9. Don't attempt to bypass the computer security system.
- 10. Do not read or modify other user's file.
- 11. If you leave the lab, do not leave your personal belongings unattended. We are not responsible for any theft.