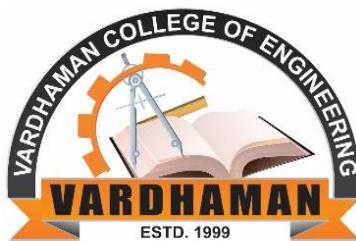


VARDHAMAN COLLEGE OF ENGINEERING (AUTONOMOUS)

Affiliated to JNTUH, Approved by AICTE, Accredited by NAAC with A++ Grade ISO 9001:2015 Certified
Kacharam, Shamshabad, Hyderabad – 501218, Telangana, India

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Laboratory Manual WEB TECHNOLOGIES (IIIB. Tech- I SEMESTER) (VCE-R20)

COURSE OVERVIEW:

This course introduces web technologies such as HTML, CSS, XML, PHP and Server-side scripting. The course covers how to use these technologies to develop static and dynamic web pages with an emphasis on client-side scripting. The course also explains the differences between client-side and server-side Web development and how to build applications using Servlets, JSP and JDBC

COURSE OBJECTIVE

The course enables the learner to apply various web technologies for developing static and dynamic web pages; as well it gives immense knowledge to work in Full Stack Development.

COURSE OUTCOMES (COs)

After the completion of the course, the student will be able to:

CO#	Course Outcomes
A6602.1	Make use of HTML, CSS, JAVASCRIPT, BOOTSTRAP to design Webpages.
A6602.2	Construct XML document using DTD, Schema and parsers.
A6602.3	Use JDBC API to communicate with database server.
A6602.4	Develop server-side programs using Servlets and JSP.
A6602.5	Write PHP script for generating dynamic content.

PROGRAM OUTCOMES (POS)

PO1: Engineering Knowledge: Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution complex engineering problems.

PO2: Problem Analysis: Identify, formulate, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3: Design/ Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.

PO5: 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.

PO6: The Engineer and Society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice.

PO7: Environment and Sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.

PO9: Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.

PO10: 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.

PO11: Project Management and Finance: Demonstrate knowledge and understanding of 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.

PO12: 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 (PSOs)

PSO1: To collect requirements, analyze, design, implement and test software Systems.

PSO2: To analyze the errors and debug them within minimal time.

BLOOM'S LEVEL OF THE COURSE OUTCOMES

CO#	Bloom's Level					
	Remember (L1)	Understand (L2)	Apply (L3)	Analyze (L4)	Evaluate (L5)	Create (L6)
A6602.1		✓				
A6602.2			✓			
A6602.3			✓			
A6602.4			✓			
A6602.5			✓			

COURSE ARTICULATION MATRIX

CO#/ Pos	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	P O 11	P O 12	P S O 1	PSO 2
A6602.2			2		2								2	
A6602.3			3		3								2	
A6602.4			3		3								2	
A6602.5			3		3								2	

Note: 1-Low, 2-Medium, 3-High

LIST OF PROGRAMS FOR PRACTICE:

No	Title of the Experiment	Tools and Techniques	Expected Skills/Ability
1	(a) HTML Program to work with Lists. (b) HTML Program to work with tables.	Open-source Ubuntu/Linux Operating System. Visual Studio, XAMPP Server and Web Browser	Identify basic tags such as list, table, images, link and text format
2	(a) HTML Program to design login page and registration page (b) CSS Program to work with background and border properties.		Create forms and change the style of a web page
3	(a) JavaScript program to check a number is Armstrong or not. (b) JavaScript program to validate username, password, mobile number and email.		To do Client-Side validation and create interactive web pages
4	a) Create a DTD document to validate the XML document. (b) Create a XML Schema document to validate the XML document.		To store and transfer the data between client and server
5	JDBC Program to create, retrieve, insert, delete and update student data.		Develop a Java application to connect with database and do CRUD operations
6	(a) JDBC program to create, retrieve, insert, delete and update student data using PreparedStatement. (b) JDBC program to retrieve student data using CallableStatement.		Develop a Java application to connect with database and do CRUD operations
7	(a) Servlet program to read the parameters from user form (name, contact no) and display using servlet response. (b) Servlet program to read initialization parameters using ServletConfig		Develop a Java Server side application and perform CRUD operations
8	(a) Servlet program to demonstrate cookie management. (b) Servlet program to insert data into student table.		Develop a Java Server side application and perform CRUD operations
9	(a) JSP Program to print multiplication table. (b) JSP Program to handle the exceptions. (c) JSP Program to retrieve the student data from database.		Develop a JSP application using MVC paradigm and perform CRUD operations
10	(a) JSP Program to access a java bean component. (b) JSP Program to authenticate the login details. If user is valid forward the control to success.html otherwise forward to fail.html		Develop a JSP application using MVC paradigm and perform CRUD operations
11	(a) PHP program to work with numeric and associative arrays. (b) PHP program to find factorial using Recursion. (c) PHP Program to handle form Data		Develop a PHP application and perform CRUD operations
12	PHP Program to perform database operations create, insert, update, delete and retrieve on employee data.		Develop a PHP application and perform CRUD operations

ASSESSMENT SCHEME

S.NO#	EVALUATION METHOD	ASSESSMENT TOOL	Max. Marks	
			Marks	Total
1	Day to Day Evaluation (Before CAT-I => 6 Weeks) (Before CAT-II=> 6 Weeks)	Pre-Lab Questions	1	5
		Observations	1	
		Program Execution	1	
		Post-Lab Questions	1	
		Viva-Voce	1	
2	Preparatory Lab Test CAT-I	Test – Basic tags	4	10
		Test- List, Table, Images and Forms	6	
3	Preparatory Lab Test CAT-II	Test– Programs	8	10
		Viva-Voce	2	
4	Alternate Assessment	Content Beyond Syllabus Programs	5	5
5	External Lab Examination	Test	15	25
		Viva-Voce	5	
		Record Work and Day to Day Evaluation (From- Row-1)	5	

LAB SESSION PLAN

No	Title of the Experiment	CO	BLOOM's LEVEL
1	(a) HTML Program to work with Lists. (b) HTML Program to work with tables.	CO-2	L-3
2	(a) HTML Program to design login page and registration page (b) CSS Program to work with background and border properties.	CO-2	L-3
3	(a) JavaScript program to check a number is Armstrong or not. (b) JavaScript program to validate username, password, mobile number and email.	CO-2	L-3,5
4	a) Create a DTD document to validate the XML document. (b) Create an XML Schema document to validate the XML document.	CO-3	L-3,5
5	JDBC Program to create, retrieve, insert, delete and update student data.	CO-5	L-3,5
6	(a) JDBC program to create, retrieve, insert, delete and update student data using PreparedStatement. (b) JDBC program to retrieve student data using CallableStatement.	CO-5	L-3,5
7	(a) Servlet program to read the parameters from user form (name, contact no) and display using servlet response. (b) Servlet program to read initialization parameters using ServletConfig	CO-4	L-3,5
8	(a) Servlet program to demonstrate cookie management. (b) Servlet program to insertdata into student table.	CO-4	L-3,5
9	(a) JSP Program to print multiplication table. (b) JSP Program to handle the exceptions. (c) JSP Program to retrieve the student data from database.	CO-4	L-3,5
10	(a) JSP Program to access a java bean component. (b) JSP Program to authenticate the login details. If user is valid forward the control to success.html otherwise forward to fail.html	CO-4	L-3,5
11	(a) PHP program to work with numeric and associative arrays. (b) PHP program to find factorial using Recursion. (c) PHP Program to handle form Data	CO-4	L-3,5
12	PHP Program to perform database operations create, insert, update, delete and retrieve on employee data.	CO-4	L-3,5

Week-1	(a) HTML Program to work with Lists. (b) HTML Program to work with tables.
Pre-Lab Questions	<ol style="list-style-type: none"> What is HTML? Write the Structure of an HTML program? What are elements of an HTML program? What is the difference between web page and a web site? List out the various text formatted tags?
1.a	HTML program to work with Lists
Program	<pre> <html> <body>

 <ul type="disk"> VEGETARIAN STARTERS Manchooria Noodles French Fries MAINS Veg Biryani Plain Rice Dal Tadka <ul type="disk"> NON-VEGETARIAN STARTERS Chilli Chicken Grilled Prawns Chicken Noodles MAINS Chicken Dum Biryani Egg Fried Rice Mutton Curry </body> </html></pre>

Output	<ul style="list-style-type: none"> • VEGETARIAN <ul style="list-style-type: none"> ◦ STARTERS <ol style="list-style-type: none"> 1. Manchooria 2. Noodles 3. French Fries ◦ MAINS <ol style="list-style-type: none"> 1. Veg Biryani 2. Plain Rice 3. Dal Tadka • NON-VEGETARIAN <ul style="list-style-type: none"> ◦ STARTERS <ol style="list-style-type: none"> 1. Chilli Chicken 2. Grilled Prawns 3. Chicken Noodles ◦ MAINS <ol style="list-style-type: none"> 1. Chicken Dum Biryani 2. Egg Fried Rice 3. Mutton Curry
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1.b	HTML program to work with Tables
Program	<pre><html> <body>

 <table border="5" align="center" height="400" width="500" cellpadding="9" bordercolor="purple" bgcolor="#b08490"> <tr> <th colspan="2">BROWSER</th> <th colspan="2">VISITORS</th> <th colspan="2">RATING</th> </tr> <tr> <td>NUMBER</td> <td>PERCENTAGE</td> </td> <td> <td align="center">MOZILLA FIREFOX</td> <td>163</td> <td>59%</td> <td bgcolor="#7dbd42">4.5</td> </td> <td align="center">GOOGLE CHROME</td> <td>78</td> <td>28%</td> <td>4</td> </td> <td align="center">SAFARI</td> <td>35</td> <td>13%</td> <td>3</td> </td> </table> </body></pre>

	</html>																		
Output	<table border="1"> <thead> <tr> <th rowspan="2">BROWSER</th> <th colspan="2">VISITORS</th> <th rowspan="2">RATING</th> </tr> <tr> <th>NUMBER</th> <th>PERCENTAGE</th> </tr> </thead> <tbody> <tr> <td>MOZILLA FIREFOX</td> <td>163</td> <td>59%</td> <td>4.5</td> </tr> <tr> <td>GOOGLE CHROME</td> <td>78</td> <td>28%</td> <td>4</td> </tr> <tr> <td>SAFARI</td> <td>35</td> <td>13%</td> <td>3</td> </tr> </tbody> </table>	BROWSER	VISITORS		RATING	NUMBER	PERCENTAGE	MOZILLA FIREFOX	163	59%	4.5	GOOGLE CHROME	78	28%	4	SAFARI	35	13%	3
BROWSER	VISITORS		RATING																
	NUMBER	PERCENTAGE																	
MOZILLA FIREFOX	163	59%	4.5																
GOOGLE CHROME	78	28%	4																
SAFARI	35	13%	3																
Post-Lab Questions	<ol style="list-style-type: none"> 1. What is head and body tag? 2. What is! DOCTYPE? 3. What is a paired tag? List out some of the paired tags? 4. What is a singular tag? List out some of the singular tags? 5. What is the extension for an HTML file? 6. What is the use of Meta tag? 7. Why do we use title tag? 8. What is an Attribute? 9. List out different types of list tags? Give examples for it. 10. List any four text formatted tags. 11. How to navigate from one web page to another? 12. What are heading tags? List out them. 13. How do we create an image link? 14. How can we add caption to a table? 15. What is col span and row span? Explain with an example 16. Difference between cell spacing and cell padding. 																		

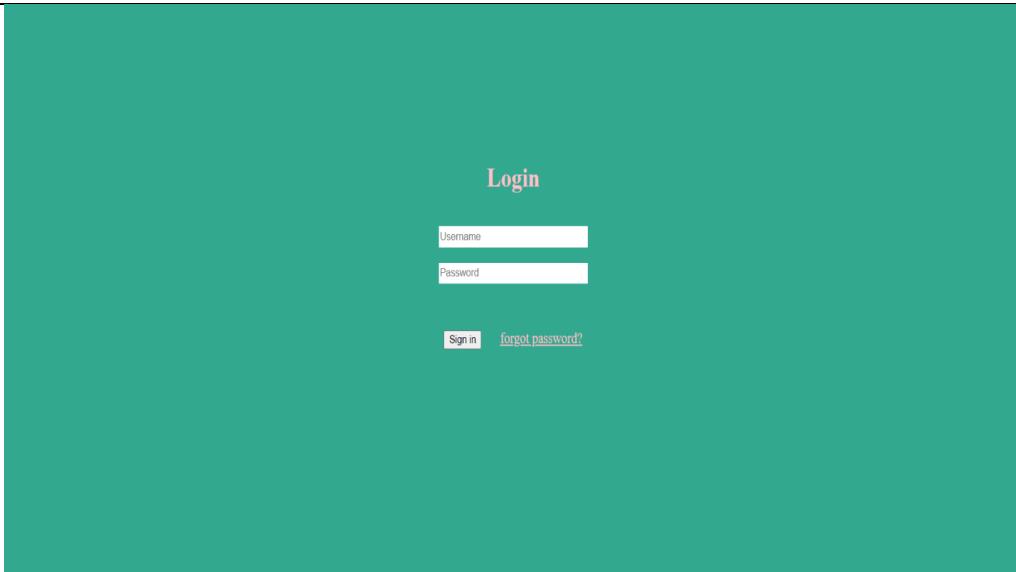
Week-2	(a) HTML Program to design login page and registration page. (b) CSS Program to work with background and border properties.
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Pre-Lab Questions	<ol style="list-style-type: none"> 1. What is CSS? 2. Types of CSS? 3. What is a form and what are form elements? 4. What are CSS properties? 5. What are CSS background properties? 6. What are CSS border properties?
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2a(i)	HTML Program to design login page.
Program	<pre> <html> <head> <meta charset="utf-8"> <meta name="viewport" content="width=device-width, initial-scale=1.0"> <style> input[type=text], input[type=password] { border: none; border-bottom: 2px black; width=50%; height:25px; } body{ background-color:#32a88f; } form,h1 { position: relative; top:190px; } A { color: pink; font-size: 18px; } </style> </head> <body align="center"> <h1 style="color: pink">Login</h1>
 <form name="logform" method="post"> <input type="text" name="logun" placeholder="Username" size="30" maxlength="30">

 <input type="password" name="logpwd" placeholder="Password" size="30" maxlength="30">

</pre>

	<pre><input type="button" value="Sign in">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp; forgot password? </form> </body> </html></pre>
Output	
2a(ii)	HTML Program to design registration page.
Program	<pre><html> <body align="center"> <h1>Registration Form</h1>
 <form name="regform" method="post"> FIRST NAME:<input type="text" name="un" size="20" maxlength="30">

 MIDDLE NAME:<input type="text" name="un" size="20" maxlength="30">

 LAST NAME: <input type="text" name="un" size="20" maxlength="30">

 COURSE: <select> <option selected disabled>Select one</option> <option value="bt">BTECH</option> <option value="mt">MTECH</option> </select>

 Gender
<input type="radio"> Male
 <input type="radio"> Female
 <input type="radio"> Other

 E-Mail: <input type="text" name="mail" placeholder="Email" size="20" maxlength="30">

 ADDRESS: <input type="text" name="loc" placeholder="Address" size="20" maxlength="30">

 MOBILE NO: <input type="text" name="phno" placeholder="Contact Number" size="20" maxlength="30">

 PASSWORD: <input type="password" name="pwd" placeholder="password" size="20" maxlength="30">

 RE-TYPE PASSWORD:<input type="password" name="cpwd" placeholder="Confirm password" size="20" maxlength="30">

 <input type="submit" value="SUBMIT">
 </form> </body> </html></pre>

Output

Registration Form

FIRST NAME:

MIDDLE NAME:

LAST NAME:

COURSE:

Gender

- Male
- Female
- Other

E-Mail:

ADDRESS:

MOBILE NO:

PASSWORD:

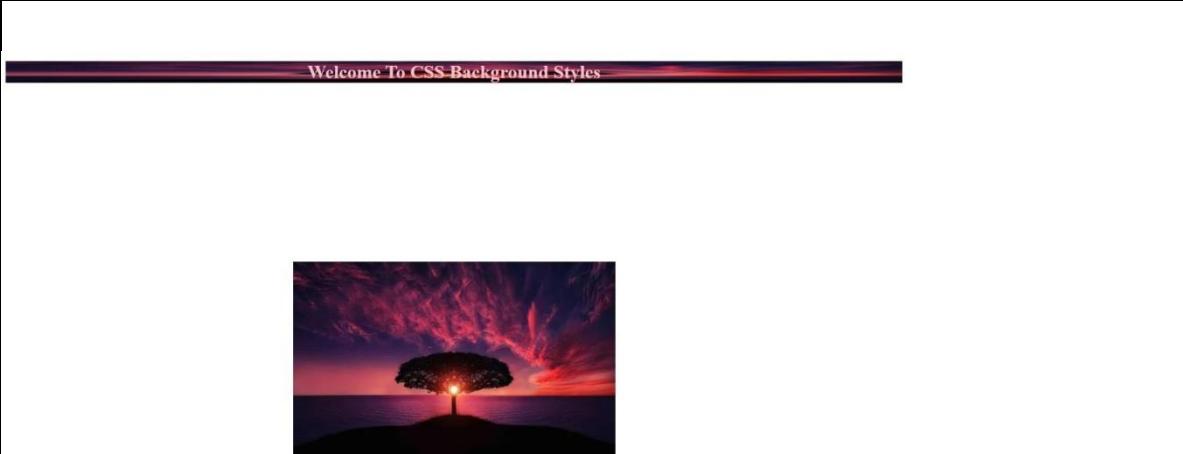
RE-TYPE PASSWORD:

2b(i)

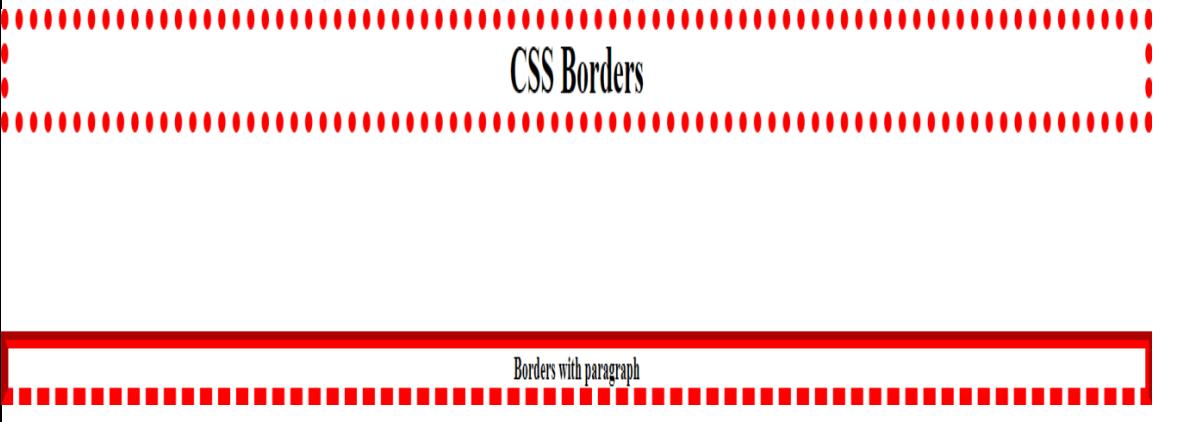
CSS Program to work with background properties.

Program

```
<html>
<head>
<style>
h1{
background-image:
url("https://cdn.pixabay.com/photo/2015/04/23/22/00/tree- 736885 340.jpg");
background-size:100%;
background-repeat: no-repeat;
background-color: red;
}
</style>
</head>
<body style="background-image:
url('https://cdn.pixabay.com/photo/2015/04/23/22/00/tree-736885 340.jpg');
background-repeat:no-repeat;
background-position:bottom center;">
<br>
<br>
<h1 align="center">
<font color="pink">Welcome To CSS BackgroundStyles</font>
</h1>
</body>
</html>
```

Output	
2b(ii)	CSS Program to work with border properties. <pre><html> <head> <style> h1 { border-style:dotted; border-color:red; border-width:10; border-radius:5; } P { border-style:groove ridge dashed inset; border-color:red; border-width:8 10; } </style> </head> <body>

 <h1 align="center">CSS Borders</h1>

 <p align="center">Borders with paragraph</p> </body> </html></pre>
Output	
Post-Lab Questions	<ol style="list-style-type: none"> 1. What are Input tags in a form? List out. 2. Which tags are used to submit and reset a form?

3. How do you create a drop-down menu?
4. How to create an element which select one option among given options?
5. What is text area tag?
6. Which attribute is used to disable an input form element?
7. In selection statement how to make an option as default option?
8. In how many ways we can embed a CSS into HTML document?
9. Which tag is used to include an external CSS?
10. What is a Selector? List out types of selectors.
11. Can we include more than one CSS into an HTML document?
12. How can we create an empty box using CSS properties?
13. How can reflect background color in multiple web pages?
14. What is the purpose of CSS?
15. Do we have any other frame works to add CSS into a web page?
If so, List it out?
16. Which tag is used to include internal CSS?

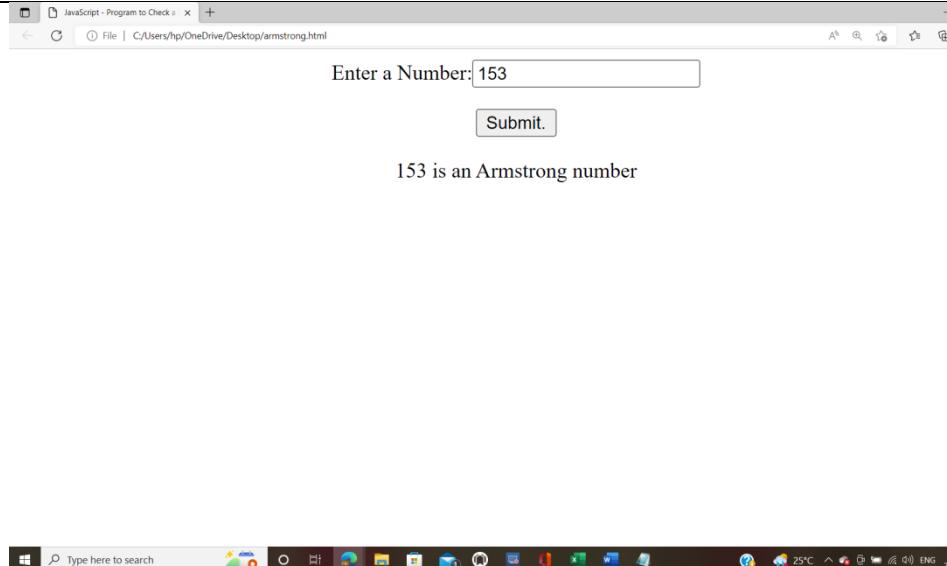
	Week-3	(a) JavaScript program to check a number is Armstrong or not. (b) JavaScript program to validate username, password, mobile number and email.
	Pre-Lab Questions	<ol style="list-style-type: none"> 1. What is JavaScript? 2. How do we declare variables in JavaScript? 3. What are operators? List out the types of operators? 4. What are conditional statements in JavaScript? 5. What is iterative statement in JavaScript? 6. How to declare a function in JavaScript? 7. What are regular expressions? 8. Types of Validations in JavaScript? 9. What is event handling? 10. What is exception handling in JavaScript? 11. What is error handling in JavaScript?
3a	JavaScript program to check a number is Armstrong or not.	
Program	<pre><html> <head> <title>JavaScript - Program to Check a number is Armstrong or not</title> <script type="text/javascript"> function checkArmstrong(){ let sum = 0; var num; num=Number(document.getElementById('txtNumber').value); var pTag= document.getElementById('pPrint');</pre>	

```

let temp=num;
while (temp > 0) {
    let remainder = temp % 10;// finding the one's digit
    sum += remainder * remainder * remainder;// removing last digit
    from the number
    temp = parseInt(temp / 10); // convert float into integer
}
if (sum == num) {// check the condition
pTag.innerHTML=(num)+" is an Armstrong number";
}
else {
pTag.innerHTML=(num)+" is not an Armstrong number"
}
</script></head>
<body style="text-align: center;">
<p>Enter a Number:<input type="text" id="txtNumber"
placeholder="Enter three digit number"/></p>
<p><input type="button" value="Submit."
onclick='checkArmstrong()'>
<!--print numbers-->
<p id="pPrint"></p></body></html>

```

Output



3b

JavaScript program to validate username, password, mobile number and email.

Program

```

<html>
<head>
<title> Data Validation </title>
<script language="javascript">
function validate()
{
var un=new RegExp("^[a-zA-Z]+$","g");
var pw=new RegExp("^[a-zA-Z0-9]+$","g");
var mob=new RegExp("^[0-9]+$","g");
var em=new RegExp("^[a-zA-Z0-9_.]+@[a-zA-Z0-9]+.[a-zA-Z]{2,4}$","g");
var uname=document.f1.t1.value;
var pwd=document.f1.t2.value;

```

```
var mobile=document.f1.t3.value;
var email=document.f1.t4.value;
if(uname.match(un)){
if(uname.length>=6) {
if(pwd.match(pw)) {
if(pwd.length>=8) {
if(mobile.match(mob)) {
if(mobile.length==10) {
if(email.match(em)) {
alert("Form is submitted successfully");
}
else {
alert("Invalid email"); }}
```

```
else{
alert("Mobile number should be 10 digits"); } }
else {
alert("Invalid mobile number"); } }
else {
alert("password must be atleast 8 characters"); } }
else {
alert("Invalid password"); } }
else {
alert("user name must have atleast 6 characters"); } }
else{
alert("Invalid user name");}}
```

```
</script></head>
<body bgcolor="#e0aa00">
<h1>Form Validation</h1>
<form name="f1" onsubmit="validate()">
<fieldset style="width:500px; color:magenta">
<legend>Registration Form</legend>
Username: <input type="text" name="t1" placeholder="Enter Characters"><br><br>
Password: <input type="password" name="t2" placeholder="Min 8 Characters"><br><br>
Mobile no: <input type="text" name="t3" placeholder="Enter 10 digits"><br><br>
email id: <input type="email" name="t4" placeholder="Ex: username@gmail.com"><br><br>
<input type="submit" value="submit">
</fieldset></form>
</body></html>
```

Output

The screenshot shows a registration form titled "Form Validation". The form fields are:

- Username: Ganesh123
- Password: *****
- Mobile no: 3456789123
- Email id: ganesh@gmail.com

A modal dialog box displays the message: "This page says Invalid user name".

The screenshot shows a registration form titled "Form Validation". The form fields are:

- Username: Ganesh
- Password: *****
- Mobile no: 720751307
- Email id: ganesh@gmail.com

A modal dialog box displays the message: "This page says Mobile number should be 10 digits".

The screenshot shows a registration form titled "Form Validation". The form fields are:

- Username: Ganesh
- Password: *****
- Mobile no: 7207513076
- Email id: ganesh@gmail.com

A modal dialog box displays the message: "This page says Form is submitted successfully".

Post-Lab Questions

1. In how many ways we can include JavaScript into an HTML document?
2. Is JavaScript Loosely typed language.
3. Which methods are used to access HTML elements using JavaScript?
4. What is DOM? Explain?
5. How to declare an array and access array elements.

		<p>6. Explain about search() and replace() methods?</p> <p>7. What are selectors in JavaScript? Explain?</p> <p>8. What is window object? List out different types of window object methods?</p> <p>9. How to declare and object in JavaScript?</p> <p>10. Write a regular expression to validate name, cell number, email?</p> <p>11. What is the difference between validation and verification?</p>
--	--	--

Week-4	<p>(a) Create a DTD document to validate the XML document.</p> <p>(b) Create an XML Schema document to validate the XML document</p>
Pre-Lab Questions	<p>1. What is XML?</p> <p>2. What is DTD? List types of DTD?</p> <p>3. Write the rules to create an element in XML?</p> <p>4. What is an XML-Schema? List out types of data types in XML-Schema?</p> <p>5. What is XSLT?</p> <p>6. Differentiate between DOM and SAX parsers?</p>

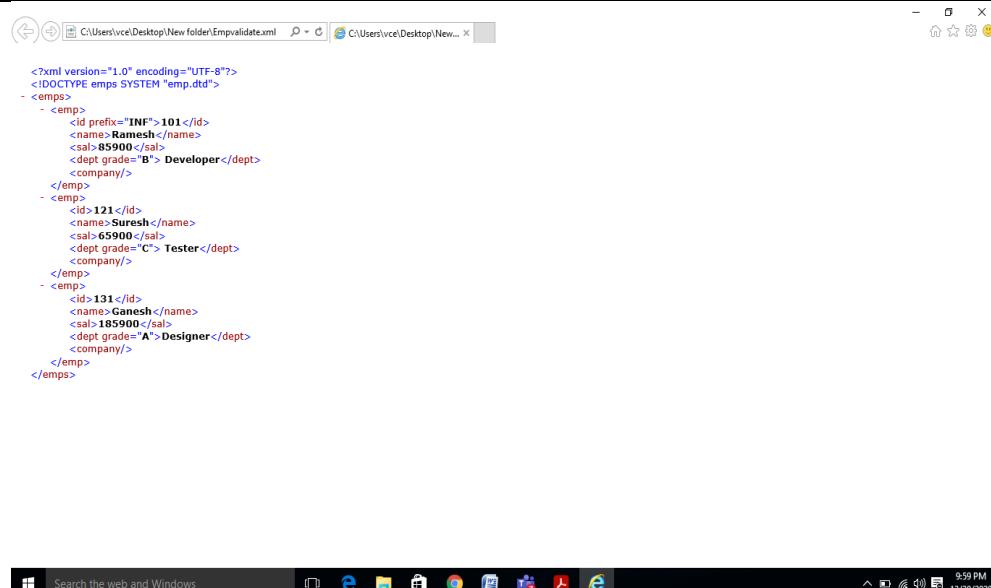
4a	Create a DTD document to validate the XML document.
Program	<p><u>emp.dtd</u></p> <pre><!ELEMENT emps (emp+)> <!ELEMENT emp (id, name, sal, dept, company)> <!ELEMENT id (#PCDATA)> <!ELEMENT name (#PCDATA)> <!ELEMENT sal (#PCDATA)> <!ELEMENT dept (#PCDATA)> <!ELEMENT company (#PCDATA)> <!ATTLIST dept grade CDATA #REQUIRED block CDATA "A"> <!ATTLIST id prefix CDATA #IMPLIED> <!ENTITY addr "Infosys Technologies, Gachibowli, Hyderabad"></pre> <p><u>Empvalidate.xml</u></p> <pre><?xml version="1.0" encoding="UTF-8" standalone="no" ?> <!DOCTYPE emps SYSTEM "emp.dtd"> <emps> <emp> <id prefix="INF">101</id></pre>

```

<name>Ramesh</name>
<sal>85900</sal>
<dept grade="B"> Developer</dept>
<company>&addr;</company>
</emp>
<emp>
<id>121</id>
<name>Suresh</name>
<sal>65900</sal>
<dept grade="C"> Tester</dept>
<company>&addr;</company>
</emp>
<emp>
<id>131</id>
<name>Ganesh</name>
<sal>185900</sal>
<dept grade="A">Designer</dept>
<company>&addr;</company>
</emp>
</emps>

```

Output



The screenshot shows a Notepad window displaying the XML code. The title bar reads "C:\Users\vce\Desktop\New folder\Emp\validate.xml". The code is identical to the one provided in the previous block.

4b

Create an XML Schema document to validate the XML document

Program

```

books.xsd
<?xml version="1.0"?>
<xss:schemaxmlns:xss="http://www.w3.org/2001/XMLSchema">
<xss:element name="catalog">
<xss:complexType>
<xss:sequence>
<xss:element ref="book" minOccurs="1" maxOccurs="unbounded" />
</xss:sequence>
</xss:complexType>
</xss:element>
<xss:element name="book">
<xss:complexType>
<xss:sequence>

```

```

<xs:element name="title" type="xs:string" minOccurs="1" maxOccurs="1"/>
<xs:element name="author" type="xs:string" minOccurs="1" maxOccurs="1"/>
<xs:element name="publisher" type="xs:string" minOccurs="1" maxOccurs="1"/>
<xs:element name="pages" type="xs:integer" minOccurs="1" maxOccurs="1"/>
<xs:element name="price" type="xs:decimal" minOccurs="1" maxOccurs="1"/>
</xs:sequence>
<xs:attribute name="course" type="xs:string" use="required"/>
</xs:complexType>
</xs:element>
</xs:schema>

```

booksdemo.xml

```

<?xml version="1.0" ?>
<?xml-stylesheet type="text/css" href="books.css" ?>
<catalog xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:schemaLocation="books.xsd">
<book course="cse" >
<title> Web Technologies </title>
<author>A.Ramesh</author>
<publisher>DreamTech</publisher>
<pages>1200</pages>
<price>2552.75</price>
</book>
<book course="cse">
<title> Operating Systems </title>
<author>Galvin</author>
<publisher>TMcH</publisher>
<pages>900</pages>
<price>850.50</price>
</book>
<book course="ece">
<title> Control Systems </title>
<author>DavidHerny</author>
<publisher>BPB</publisher>
<pages>600</pages>
<price>1250.70</price>
</book>
</catalog>

```

books.css

```

title {font-family:serif;color:green;font-size:18pt}
author{font-family:arial;color:red;font-size:12pt}
publisher{font-family:arial;color:green;font-size:12pt}
pages{font-family:arial;color:#AABB12;font-size:12pt}
price{font-family:arial;color:blue;font-size:12pt}

```



Post-Lab Questions

1. What is extension to an XML file?
2. Is XML having any predefined tags?
3. How to embed an DTD into an XML file?
4. Is DTD and XML-Schema being same? Justify
5. How to embed an XML-Schema into an XML file?
6. What is the extension for an XML-Schema file?
7. How do we convert an XML file into HTML?
8. Differentiate between XML Element and Attribute?
9. How do we assign a range of values to an XML element using XML-Schema?

Week-5

JDBC Program to create, retrieve, insert, delete and update student data

Pre-Lab Questions

1. What is JDBC?
2. Write down the steps to connect a Java application with sql database?
3. What is a driver? List out the different types of JDBC drivers?
4. What packages need to be imported for working on JDBC?
5. How do we configure the system to work with JDBC?
6. Write an SQL query to create a table, insert rows into the table, retrieve the result, update a row in a table and delete a row in a table?

5(i)

```
//Program to Create Table in MySQL
import java.sql.*;
public class CreateTable
{
    public static void main(String args[])
    {
        try
        {
            //com.mysql.cj.jdbc.Driver
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student","root","");
            Statement st=con.createStatement();
            st.executeUpdate("create table csed ( rollno varchar(10), name varchar(20))");
        }
    }
}
```

Settings

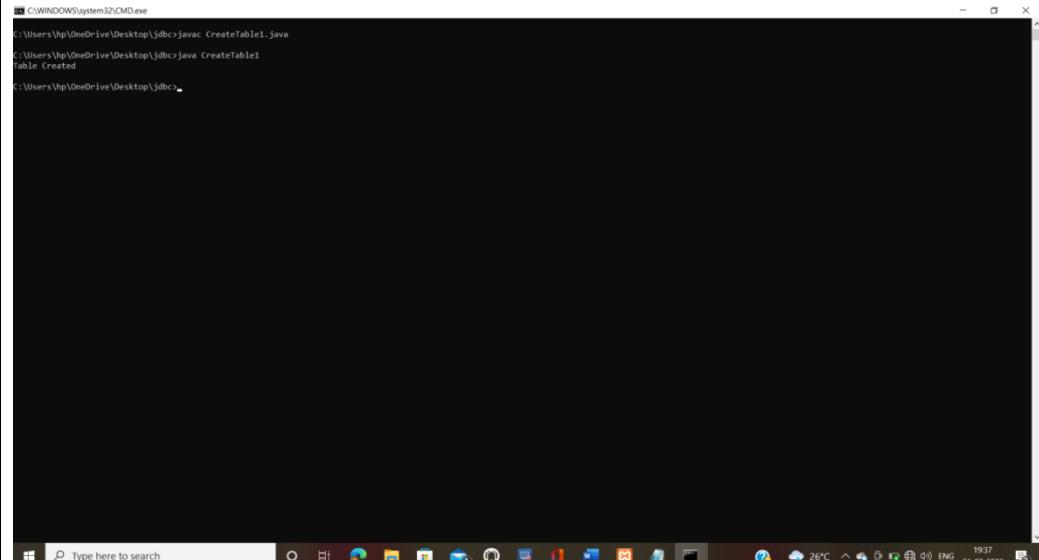
```
System.out.println("Table Created");
con.close();
}
catch(Exception e)
{
System.out.println(e);
}
}
```

1. download mysql-connector-java-5.1.48 zip file - extract
2. mysql-connector-java-5.0.8-bin.jar and copy in C:\Program Files(x86)\Java\jre7\lib\ext folder of java.
3. Set classpath for the jar file in environment variables

Variable name: Classpath

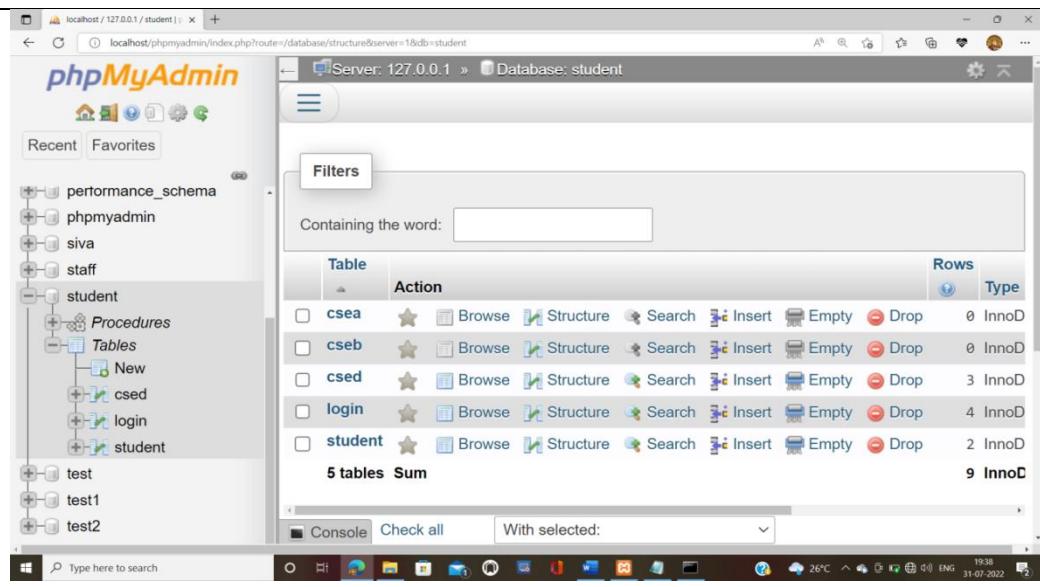
Variable Value: C:\Program Files (x86)\Java\jre7\lib\ext\mysql-connector-java-5.1.48-bin.jar;.;

Output



```
C:\WINDOWS\system32\cmd.exe
c:\Users\hp\OneDrive\Desktop\jdbc>javac CreateTable1.java
c:\Users\hp\OneDrive\Desktop\jdbc>java CreateTable1
Table Created
c:\Users\hp\OneDrive\Desktop\jdbc>
```

Cross Verify in XAMPPServer phpMyAdmin under student database



5(ii) Program

```
//Program to Insert Student Data
import java.sql.*;
import java.util.*;
public class InsertTable
{
    public static void main(String args[])
    {
        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
                DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the student details");
            int sid = sc.nextInt();
            String sname= sc.next();
            String scontact= sc.next();
            String saddr = sc.next();
            int savg=sc.nextInt();
            String qry = "INSERT INTO student(id,name,contact,address,avg) VALUES
                ("+sid+","+sname+","+scontact+","+saddr+","+savg+")";
            st.executeUpdate(qry);
            con.close();
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("Row Inserted");
    }
}
```

Output

First Create a database studentinfo database

Server: 127.0.0.1

Databases

Create database [?](#)

[Create](#)

Filters

Containing the word:

Database	Collation	Action
employee	utf8mb4_general_ci	Check privileges
employees	utf8mb4_general_ci	Check privileges
information_schema	utf8_general_ci	Check privileges
kiet	latin1_swedish_ci	Check privileges
mydb	latin1_swedish_ci	Check privileges
mysql	latin1_swedish_ci	Check privileges
performance_schema	utf8_general_ci	Check privileges
phpmyadmin	latin1_swedish_ci	Check privileges
siva	latin1_swedish_ci	Check privileges
staff	latin1_swedish_ci	Check privileges
student	latin1_swedish_ci	Check privileges
test	latin1_swedish_ci	Check privileges
test1	latin1_swedish_ci	Check privileges

Second Create student Table having five fields (id, name, contact, address and avg)

localhost / 127.0.0.1 / studentinfo / +

Table student has been altered successfully.

```
ALTER TABLE "student" CHANGE `contact` "contact" VARCHAR(40) NOT NULL;
```

[Edit inline](#) | [Edit](#) | [Create PHP code](#)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action	
1	id	int(10)	utf8mb4_general_ci		No	None		Change	Drop	More
2	name	varchar(50)	utf8mb4_general_ci		No	None		Change	Drop	More
3	contact	varchar(40)	utf8mb4_general_ci		No	None		Change	Drop	More
4	address	varchar(100)	utf8mb4_general_ci		No	None		Change	Drop	More
5	avg	int(10)	utf8mb4_general_ci		No	None		Change	Drop	More

[Check all](#) [With selected](#) [Browse](#) [Change](#) [Drop](#) [Primary](#) [Unique](#) [Index](#) [Spatial](#) [Fulltext](#) [Add to central columns](#)

[Remove from central columns](#)

[Print](#) [Propose table structure](#) [Track table](#) [Move columns](#) [Normalize](#)

[Add](#) column(s) after avg [Go](#)

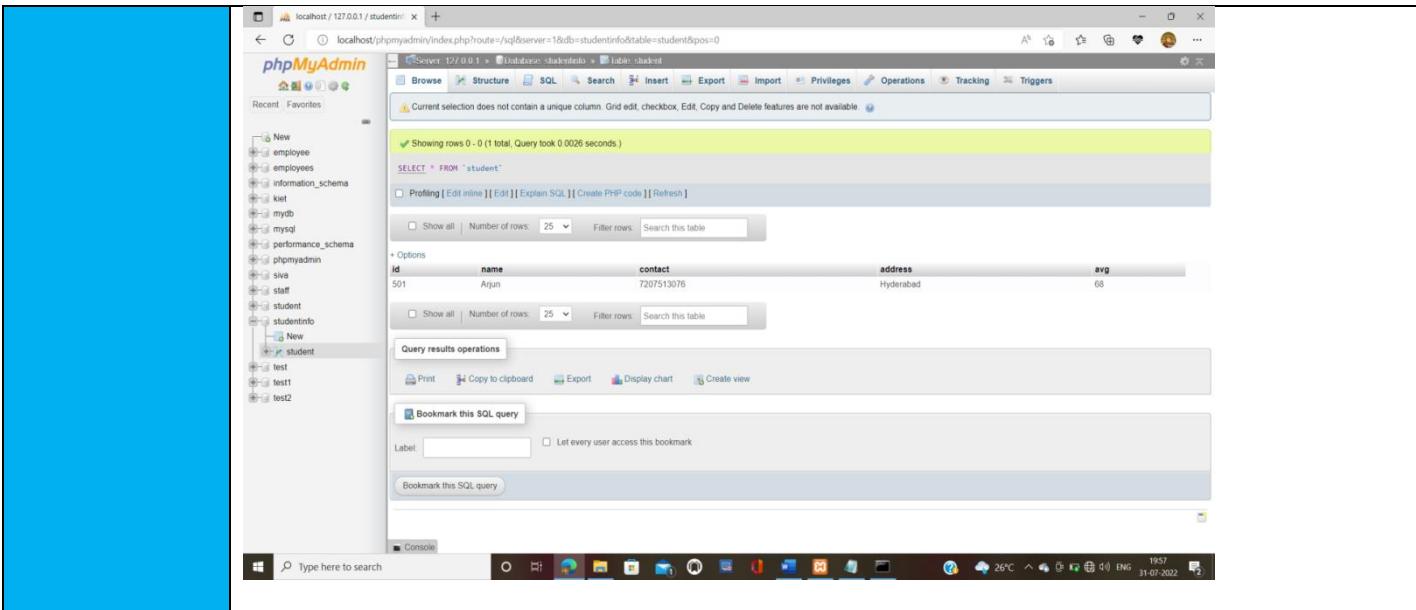
[Indexes](#)

[No index defined!](#)

[Create an index on](#) columns [Go](#)

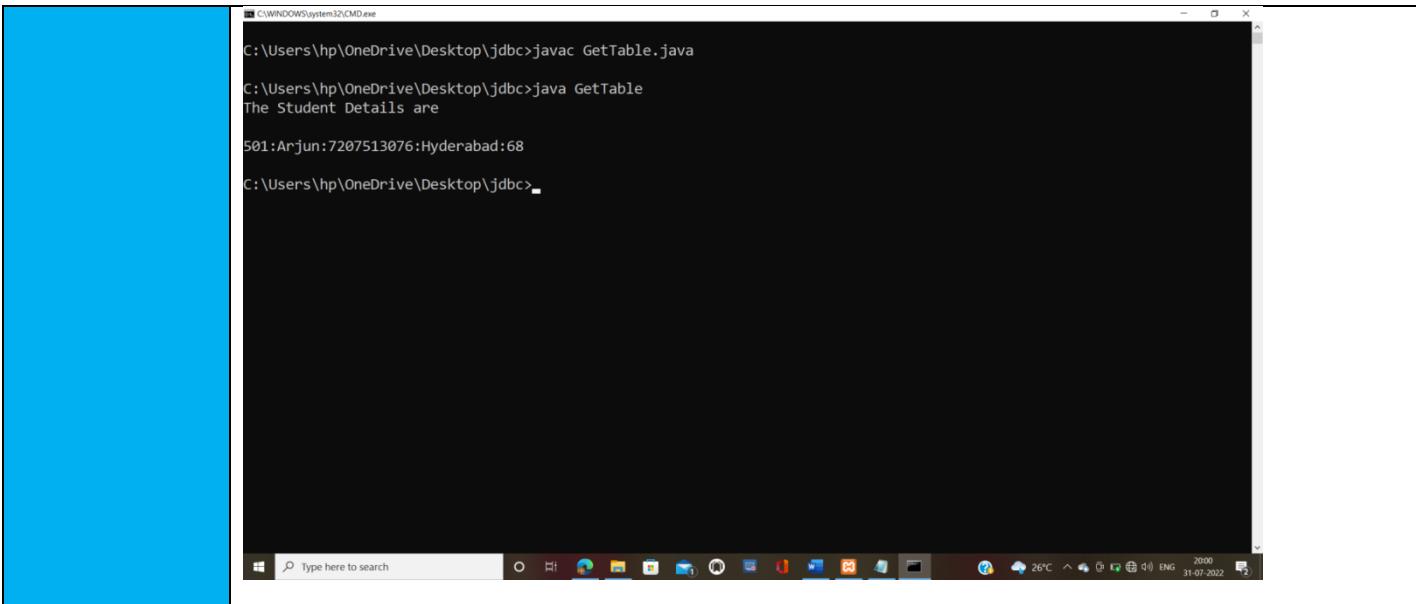
```
C:\Users\hp\OneDrive\Desktop\jdbc>javac InsertTable.java
C:\Users\hp\OneDrive\Desktop\jdbc>java InsertTable
Enter the student details
501
Arjun
7207513076
Hyderabad
68
Row Inserted
```

Check back in XAMPP server whether values got inserted



5(iii) Program

```
//Program to Retrieve Data from Database
import java.sql.*;
public class GetTable
{
    public static void main(String args[])
    {
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
                DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            ResultSet rs = st.executeQuery("select * from student");
            System.out.println("The Student Details are \n");
            while(rs.next())
            {
                System.out.println(rs.getInt(1)+":"+rs.getString(2)+":"+ rs.getString(3)+":"+rs.getString(4)
                +": "+ rs.getInt(5));
            }
            con.close();
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
    }
}
Output:
```



A screenshot of a Windows Command Prompt window titled 'C:\WINDOWS\system32\cmd.exe'. The window shows the following text:
C:\Users\hp\OneDrive\Desktop\jdbc>javac GetTable.java
C:\Users\hp\OneDrive\Desktop\jdbc>java GetTable
The Student Details are
501:Arjun:7207513076:Hyderabad:68
C:\Users\hp\OneDrive\Desktop\jdbc>

5(iv) Program

```
//Program to Update a field in Database
import java.sql.*;
import java.util.*;
public class UpdateTable
{
    public static void main(String args[])
    {
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
                DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the Studen Id to Update contact info");
            int sid = sc.nextInt();
            System.out.println("Enter the Phone no to update");
            String scontact = sc.next();
            String qry = "UPDATE student SET contact='"+scontact+"' WHERE id="+sid+"";
            //String qry = "UPDATE student SET contact='123456' WHERE id=1234;
            st.executeUpdate(qry);
            con.close();
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("Row Updated");
    }
}
```

Before Update the Table the data in student table is:

Output

Execute the program through Command Prompt:

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac UpdateTable.java
C:\Users\hp\OneDrive\Desktop\jdbc>java UpdateTable
Enter the Studen Id to Update contact info
503
Enter the Phone no to update
6300549113
Row Updated
C:\Users\hp\OneDrive\Desktop\jdbc>
```

Check Back in the XAMPP Server the student table content:

**5(v)
Program**

//Program to delete a Record in Table

```
import java.sql.*;
import java.util.*;
```

```

public class DeleteTable
{
    public static void main(String args[])
    {
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the record to be deleted");
            int sid = sc.nextInt();
            String qry = "DELETE FROM student WHERE id="+sid+"";
            st.executeUpdate(qry);
            con.close();
        }
        catch(Exception e)
        {
            System.out.println(e);
        }
        System.out.println("Row Effected / Deleted");
    }
}

```

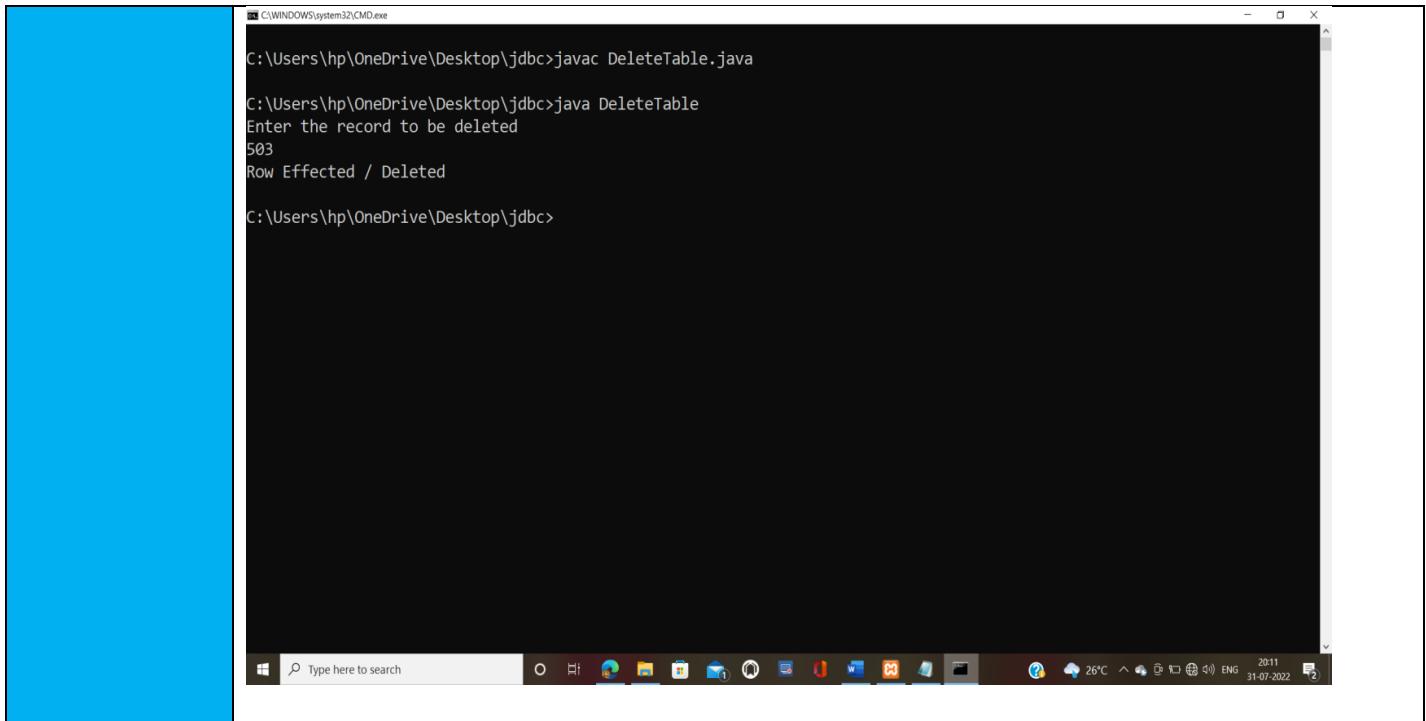
Output

Before deleting the row, data in student table is:

The screenshot shows the phpMyAdmin interface with the database 'studentinfo' selected. The left sidebar shows tables like 'employee', 'information_schema', 'ket', 'mydb', 'mysql', 'performance_schema', 'phpmyadmin', 'siva', 'staff', and 'student'. The 'student' table is selected in the center pane. The table structure is shown with columns: id, name, contact, address, and avg. There are three rows of data: Arjun (id 501), Balaji (id 502), and Chendu (id 503). Below the table, there are options to print, copy to clipboard, export, display chart, and create view.

	id	name	contact	address	avg
1	501	Arjun	7207513076	Hyderabad	68
2	502	Balaji	6300549113	Hyderabad	70
3	503	Chendu	6300549113	Hyderabad	69

Execute the program through Command Prompt:



A screenshot of a Windows Command Prompt window titled 'C:\WINDOWS\system32\cmd.exe'. The window contains the following text:

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac DeleteTable.java
C:\Users\hp\OneDrive\Desktop\jdbc>java DeleteTable
Enter the record to be deleted
503
Row Effected / Deleted
C:\Users\hp\OneDrive\Desktop\jdbc>
```

The taskbar at the bottom shows various pinned icons and the date/time as 26°C 31-07-2022.

Post-Lab Questions

1. Which driver is best suitable to work on with JDBC?
2. List out the methods to execute a query in java program?
3. Write down the driver URL for MySQL and SQL.
4. What is the use of ResultSet Class?
5. What is the usage of DriverManager class?
6. Which function is to take input from the console in java?

Week-6

- (a) JDBC program to create, retrieve, insert, delete and update student data using Prepared Statement.
(b) JDBC program to retrieve student data using Callable Statement.

Pre-Lab Questions

1. What is the purpose of Prepared and Callable Statement?
2. Write down the steps to create a Prepared Statement?
3. Write down the steps to create a Callable Statement?
4. What is a Stored procedure?
5. What is a Stored function?
6. Differentiate between Stored Procedure and Stored Function?

6a	JDBC program to create, retrieve, insert, delete and update student data using Prepared Statement.
6a(i)	Program to Create Table in Mysql - using Prepared Statement <pre>import java.sql.*; public class CreateTablePrepared { public static void main(String args[]) { try { Class.forName("com.mysql.cj.jdbc.Driver"); Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root",""); Statement st=con.createStatement(); String qry="create table student1 (id int(5), name varchar(20), contact varchar(10), address varchar(20), avg int(10)"; PreparedStatementps = con.prepareStatement(qry); ps.executeUpdate(); System.out.println("Table Created"); con.close(); } catch(Exception e) { System.out.println(e); } } }</pre>
Output	Execute Program through Command Prompt:

```
C:\Windows\system32\cmd.exe
C:\Users\hp\OneDrive\Desktop\jdbc>javac CreateTablePrepared.java
C:\Users\hp\OneDrive\Desktop\jdbc>java CreateTablePrepared
Table Created
C:\Users\hp\OneDrive\Desktop\jdbc>
```

Check Back the Table creation in XAMPP Server:

6a(ii) Program

Program to insert Student Data - using Prepared Statement

```
import java.sql.*;
import java.util.*;
public class InsertTablePrepared
{
    public static void main(String args[ ])
    {
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
                DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            Scanner sc = new Scanner(System.in);
            System.out.println("Eneter the student details");
```

```
int sid = sc.nextInt();
String sname= sc.next();
String scontact=sc.next();
String saddr = sc.next();
int savg=sc.nextInt();
String qry = "INSERT INTO student1(id,name,contact,address,avg) VALUES (?,?,?,?,?)";
PreparedStatementps = con.prepareStatement(qry);
ps.setInt(1,sid);
ps.setString(2,sname);
ps.setString(3,scontact);
ps.setString(4,saddr);
ps.setInt(5,savg);
ps.executeUpdate();
con.close();
}
catch(Exception e){ System.out.println(e);
}
System.out.println("Row Inserted");
}
}
```

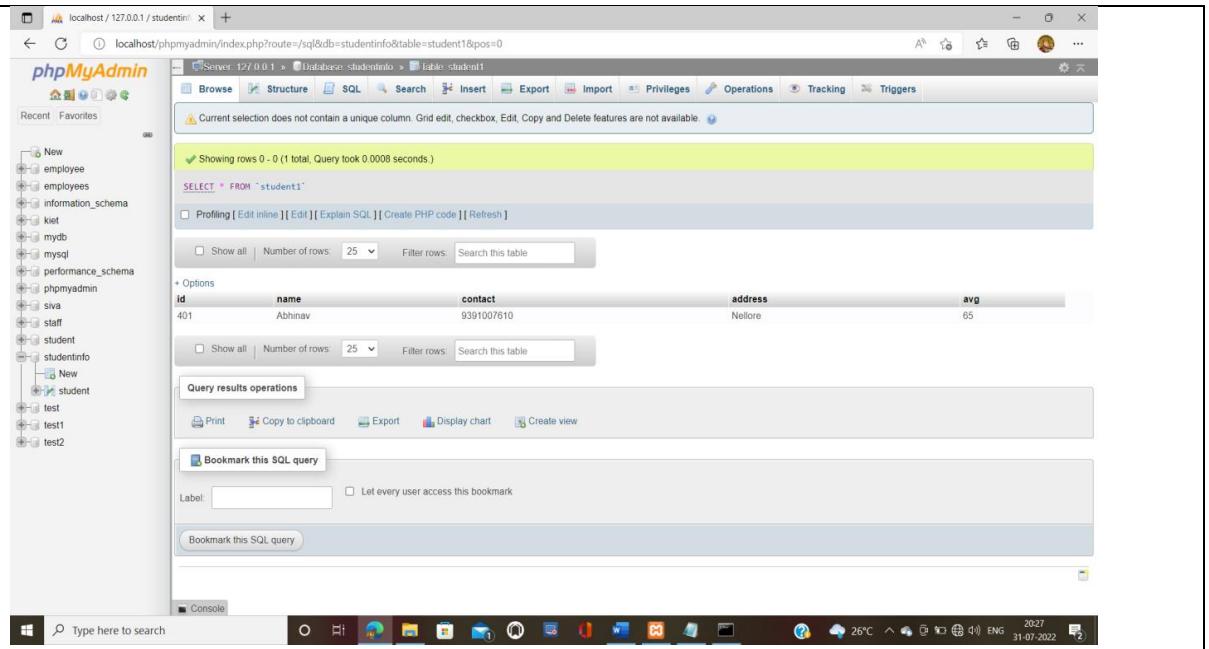
Output

Execute Program through Command Prompt:

The screenshot shows a Windows Command Prompt window titled 'C:\WINDOWS\system32\cmd.exe'. The command 'javac InsertTablePrepared.java' is run, followed by 'java InsertTablePrepared'. The user is prompted to 'Enter the student details'. The input provided is: 401, Abhinav, 9391007610, Nellore, 65. The output 'Row Inserted' is displayed, indicating the data was successfully inserted into the database.

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac InsertTablePrepared.java
C:\Users\hp\OneDrive\Desktop\jdbc>java InsertTablePrepared
Enter the student details
401
Abhinav
9391007610
Nellore
65
Row Inserted
```

Check Back the Table in XAMPP Server:



6a(iii) Program

Program to retrieve Data from Database-using prepared statement

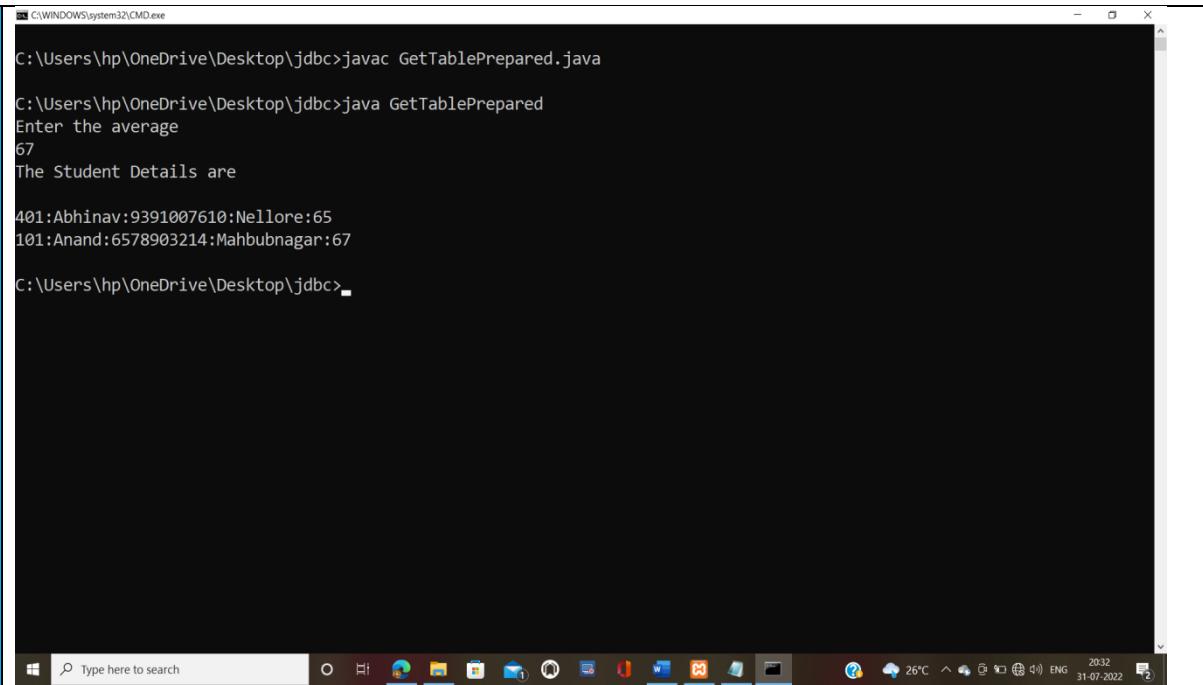
```

import java.sql.*;
import java.util.*;
public class GetTablePrepared
{
    public static void main(String args[ ])
    {
        try
        {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo"
,"root","");
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the average");
            int sAvg = sc.nextInt();
            String qry = "select * from student1 where avg <= ?";
            PreparedStatement ps = con.prepareStatement(qry); ps.setInt(1,sAvg);
            ResultSet rs = ps.executeQuery();
            System.out.println("The Student Details are \n");
            while(rs.next())
            {
                System.out.println(rs.getInt(1)+":"+rs.getString(2)+":"+rs.getString(3)+":"+rs.getString(4)
                +":"+rs.getInt(5));
            }
            con.close();
        }
        catch(Exception e){
            System.out.println(e);
        }
    }
}

```

Output

Execute Program through Command Prompt:



A screenshot of a Windows Command Prompt window titled 'C:\WINDOWS\system32\cmd.exe'. The window shows the following text:

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac GetTablePrepared.java
C:\Users\hp\OneDrive\Desktop\jdbc>java GetTablePrepared
Enter the average
67
The Student Details are
401:Abhinav:9391007610:Nellore:65
101:Anand:6578903214:Mahbubnagar:67
C:\Users\hp\OneDrive\Desktop\jdbc>
```

The taskbar at the bottom of the screen includes icons for File Explorer, Task View, Edge, Mail, Photos, OneDrive, Word, Excel, Powerpoint, and File Explorer again. The system tray shows the date as 31-07-2022, the time as 20:32, and the temperature as 26°C.

6a(iv)
Program

Program to update a field in Database-using Prepared Statement

```
import java.sql.*;
import java.util.*;
public class UpdateTablePrepared{
    public static void main(String args[])
    {
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
            Statement st=con.createStatement();
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter the Studen Id to Update contact info");
            int sid = sc.nextInt();
            System.out.println("Enter the Phone no to update");
            String scontact = sc.next();
            String qry = "UPDATE student1 SET contact=? WHERE id=?";
            PreparedStatement ps = con.prepareStatement(qry);
            ps.setString(1,scontact);
            ps.setInt(2,sid);
            ps.executeUpdate();
            con.close();
        }
        catch(Exception e){
            System.out.println(e);
        }
        System.out.println("Row Updated");
    }
}
```

Output

Check the data before update in XAMPP Server:

The screenshot shows the phpMyAdmin interface connected to the 'studentinfo' database. The 'student1' table is selected. The data is as follows:

id	name	contact	address	avg
401	Abhinav	9391007610	Nellore	65
101	Anand	6578903214	Mahbubnagar	67
201	Archana	7556889001	Vijaywada	78

Execute Program through Command Prompt:

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac UpdateTablePrepared.java
C:\Users\hp\OneDrive\Desktop\jdbc>java UpdateTablePrepared
Enter the Studen Id to Update contact info
401
Enter the Phone no to update
7207513076
Row Updated

C:\Users\hp\OneDrive\Desktop\jdbc>
```

After Execution the data gets updated in the XAMPP Server:

The screenshot shows the phpMyAdmin interface for the 'student1' database. The 'student' table is selected. A green message bar at the top indicates 'Showing rows 0 - 2 (3 total, Query took 0.0016 seconds.)'. Below it, a SQL query 'SELECT * FROM `student1`' is shown. The main area displays the table data with three rows:

id	name	contact	address	avg
401	Abhinav	7207513076	Nellore	65
101	Anand	6578903214	Mahbubnagar	67
201	Archana	7556889001	Vijaywada	78

Below the table, there are options for 'Query results operations' like Print, Copy to clipboard, Export, Display chart, and Create view.

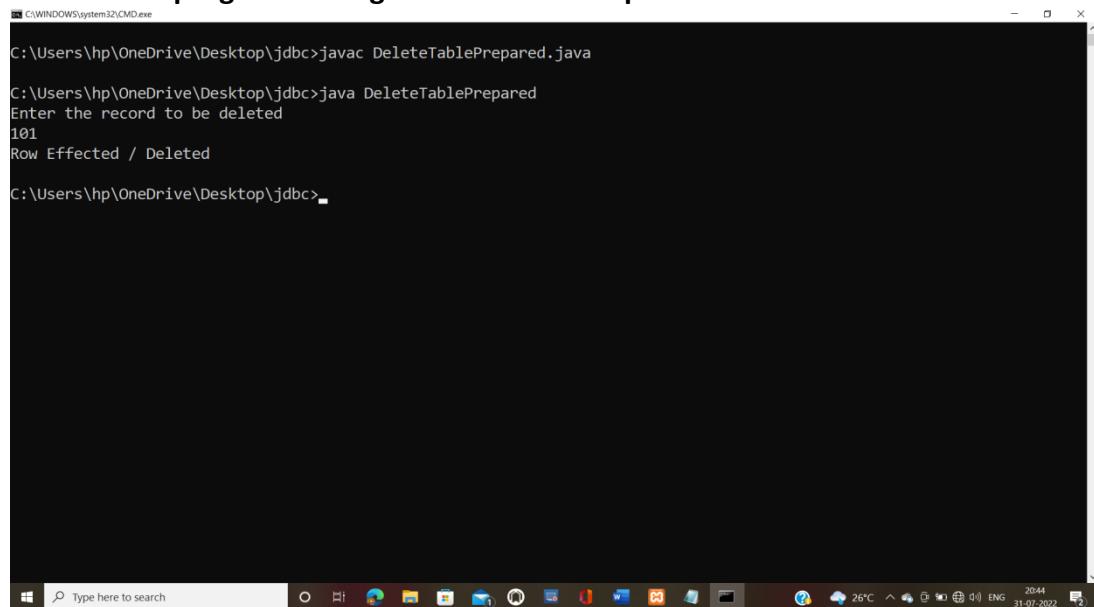
6a(v) Program

Program to Delete a Record in Table-using PreparedStatement

```
import java.sql.*;
import java.util.*;
public class DeleteTablePrepared{
public static void main(String args[])
{
try{
Class.forName("com.mysql.cj.jdbc.Driver");
Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
Statement st=con.createStatement();
Scanner sc = new Scanner(System.in);
System.out.println("Enter the record to be deleted");
int sid = sc.nextInt();
String qry = "DELETE FROM student1 WHERE id=?";
PreparedStatement ps = con.prepareStatement(qry);
ps.setInt(1,sid);
ps.executeUpdate();
con.close();
}
catch(Exception e)
{
System.out.println(e);
}
System.out.println("Row Effected / Deleted");
}
}
```

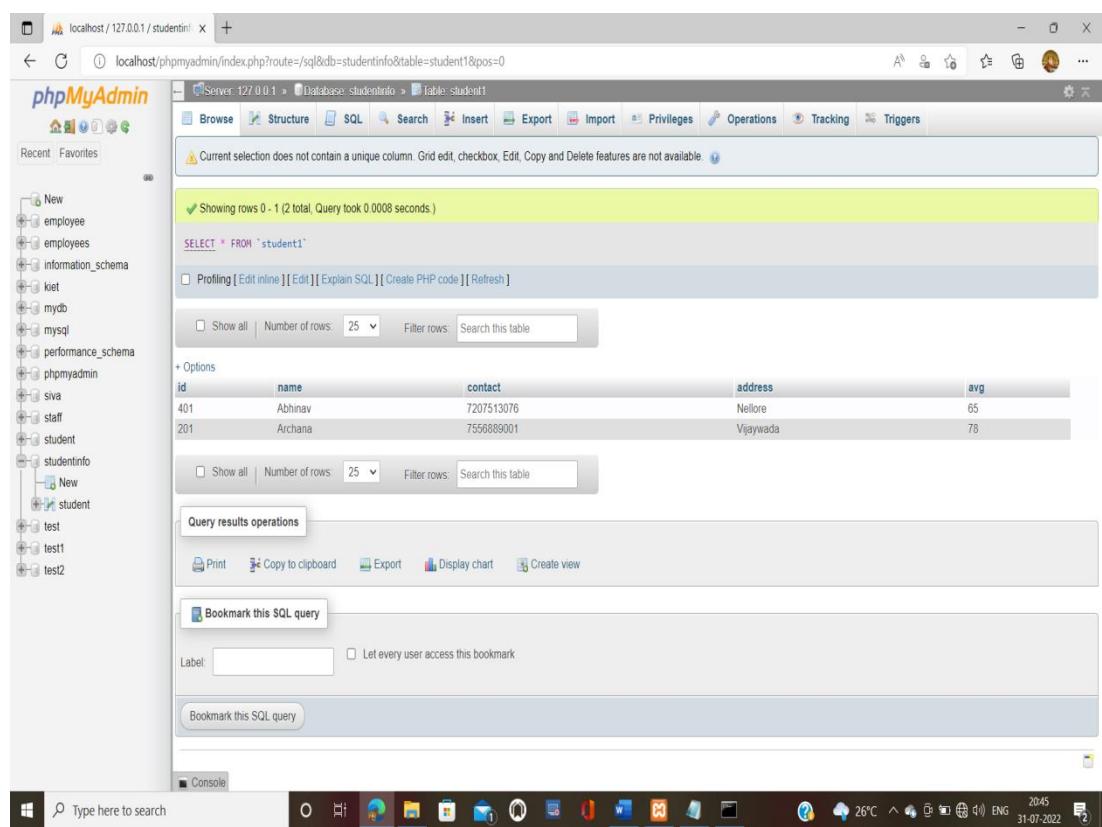
Output

Execute the program through Command Prompt:



```
C:\Users\hp\OneDrive\Desktop\jdbc>javac DeleteTablePrepared.java
C:\Users\hp\OneDrive\Desktop\jdbc>java DeleteTablePrepared
Enter the record to be deleted
101
Row Effected / Deleted
C:\Users\hp\OneDrive\Desktop\jdbc>
```

Check Back the table in the XAMPP Server for changes:



The screenshot shows the phpMyAdmin interface connected to the 'studentinfo' database. The 'student1' table is selected. The table structure includes columns: id, name, contact, address, and avg. Two rows of data are present:

id	name	contact	address	avg
401	Abhinav	7207513076	Nellore	65
201	Archana	7556889001	Vijaywada	78

6b

JDBC program to retrieve student data using Callable Statement.

6b(i)
Program

```
// Program to insert data
import java.sql.*;
import java.util.*;
public class CallableInsert
{
    public static void main(String args[])
    {
```

Procedure Creation

Procedure Creation using phpmyadmin GUI

```
try{
Class.forName("com.mysql.cj.jdbc.Driver");
Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
CallableStatementst=con.prepareCall("{call INSERTDATA(?,?,?,?,?)}");
Scanner sc = new Scanner(System.in);
System.out.println("Enter Student ID");
String id= sc.next();
System.out.println("Enter Student Name");
String name = sc.next();
System.out.println("Enter Student Contact");
String contact= sc.next();
System.out.println("Enter Student Address");
String address = sc.next();
System.out.println("Enter Student Average");
String avg = sc.next();
st.setString(1,id);
st.setString(2,name);
st.setString(3,contact);
st.setString(4,address);
st.setString(5,avg);
st.executeUpdate();
con.close();
}
catch(Exception e){
System.out.println(e);
}
System.out.println("Row Inserted");
}
```

The Stored procedure INSERTDATA on GUI

1. goto database – studentinfo
2. select routines - add routine - insert arguments
3. write query –
4. submit.

The Stored procedure INSERTDATA on Console

```
CREATE procedure INSERTDATA
( IN id varchar(10), IN name varchar(20), IN contactvarchar(10), IN address varchar(20), IN
avgvarchar(10) )
BEGIN
INSERT INTO student(id,name,contact,address,avg) VALUES (no,name,contact,addr,avg);
END
```

Stored Procedure in XAMPP phpMyAdmin:

Output

The screenshot shows the phpMyAdmin interface for a database named 'studentinfo'. In the left sidebar, under 'Procedures', there is a list of routines including 'INSERTDATA'. The main panel displays the 'Edit' dialog for the 'INSERTDATA' routine. The 'Routine name' is set to 'INSERTDATA' and the 'Type' is 'PROCEDURE'. The 'Parameters' section lists four parameters: 'id' (IN, VARCHAR(10), Char), 'name' (IN, VARCHAR(20), Char), 'contact' (IN, VARCHAR(10), Char), and 'avg' (IN, VARCHAR(10), Char). Below the parameters is the SQL code for the procedure:

```
1 BEGIN
2 INSERT INTO student(id,name,contact,address,avg) VALUES
3 (id,name,contact,address,avg);
4 END
```

At the bottom of the dialog are 'Go' and 'Close' buttons.

The screenshot shows a Windows Command Prompt window titled 'Execute with Command Prompt:' with the path 'C:\Windows\system32\cmd.exe'. The command 'javac CallableInsert.java' is run, followed by 'java CallableInsert'. The user is prompted to enter student details: ID (505), Name (Ramesh), Contact (4567890123), Address (Hyderabad), and Average (80). The output shows the message 'Row Inserted'.

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac CallableInsert.java
C:\Users\hp\OneDrive\Desktop\jdbc>java CallableInsert
Enter Student ID
505
Enter Student Name
Ramesh
Enter Student Contact
4567890123
Enter Student Address
Hyderabad
Enter Student Average
80
Row Inserted
```

6b(ii) Program

Procedure Creation

Procedure Creation using phpmyad min GUI

Output in XAMPP Server

The screenshot shows the phpMyAdmin interface for a MySQL database named 'studentinfo'. The 'student' table is selected. The table structure includes columns: id, name, contact, address, and avg. The data shows four rows of student information. Below the table, there are options for 'Query results operations' like Print, Copy to clipboard, Export, Display chart, and Create view. A 'Bookmark this SQL query' section is also present.

id	name	contact	address	avg
501	Arjun	7207513076	Hyderabad	68
502	Balaji	6300549113	Hyderabad	70
501	Abhinav	7335491105	Secunderabad	75
505	Ramesh	4567890123	Hyderabad	80

// Program to retrieve student data

```
import java.sql.*;  
import java.util.*;  
public class CallableDemo {  
public static void main(String args[]) {  
try {  
Class.forName("com.mysql.cj.jdbc.Driver");  
Connection  
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
CallableStatementst=con.prepareCall("{call GETDATA()}");
ResultSet rs=st.executeQuery();
while(rs.next()){
System.out.println(rs.getInt(1)+"----"+rs.getString(2)+"----"+rs.getInt(3)+"----"
+rs.getString(4)+"----"+rs.getInt(5));
System.out.println(); }
con.close();
}  
catch(Exception e) {  
System.out.println(e);
}
```

Stored Procedure:

```
DELIMITER //  
CREATE GETDATA()  
BEGIN  
    select * from student;  
END //
```

Output

Stored Procedure in XAMPP phpMyAdmin:

The screenshot shows the phpMyAdmin interface for creating a stored procedure. The 'Routines' section is open, and a new routine named 'GETDATA' is being defined. The code in the 'Definition' field is:

```
1 BEGIN
2 SELECT * from student;
3 END
```

The 'Type' is set to 'PROCEDURE'. The 'Parameters' section is empty. The 'Returns' panel on the right shows 'PROCEDURE'.

Execute the Code through Command Prompt:

```
C:\Users\hp\OneDrive\Desktop\jdbc>javac CallableDemo.java
C:\Users\hp\OneDrive\Desktop\jdbc>java CallableDemo
501---Arjun---7207513076---Hyderabad---68
502---Balaji---6300549113---Hyderabad---70
501---Abhinav---7335491105---Secunderabad---75
505---Ramesh---4567890123---Hyderabad---80
```

Post-Lab Questions

1. What is the use of '?' symbol in Prepared and Callable Statement?
2. What is the use of IN, OUT and INOUT parameter in Callable Statement?
3. How to execute a stored procedure?
4. List out the differences between stored procedure and callable statement?

Week-7

(a) Servlet program to read the parameters from user form (name, age) and display using servlet response.

	(b) Servlet program to read initialization parameters using ServletConfig
Pre-Lab Questions	<ol style="list-style-type: none"> 1. What is a Web server? 2. What is Client-Server Architecture? 3. List out the difference between Web Server and Application Server? 4. What is a Servlet? 5. Write down the Servlet Life Cycle? 6. How to read input parameters from a web application into a servlet? 7. List out the differences between Servlet Context and Servlet Config? 8. Write down the steps to connect a Web application to the database using servlet? 9. Does Servlet follow MVC paradigm? Justify 10. What is Tomcat? 11. Know the steps to install tomcat into your system. 12. What is Session Tracking? 13. What is the use of Session and Cookies?
7a.	<p>Servlet program to read the parameters from user form (name, contact no) and display using servlet response.</p> <p>Program</p> <p><u>Index.html</u></p> <pre><form action="details" method="get"> User Name: <input type="text" name="uname">
 Contact No: <input type="text" name="cno">
 <input type="submit" value="submit"> </form></pre> <p><u>ServletRequest.java</u></p> <pre>import javax.servlet.http.*; import javax.servlet.*; import java.io.*; public class ServletRequest extends HttpServlet{ public void doGet(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException { res.setContentType("text/html"); PrintWriter pw = res.getWriter(); String name = req.getParameter("uname"); String contact = req.getParameter("cno"); pw.println("Welcome: " + name); pw.println("Your Contact no: " + contact); pw.close(); } }</pre> <p>web.xml(Deployment Descriptor)</p> <pre><web-app></pre>

Settings

```
<servlet>
<servlet-name>ServletRequest</servlet-name>
<servlet-class>ServletRequest</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>ServletRequest</servlet-name>
<url-pattern> /details</url-pattern>
</servlet-mapping>
</web-app>
```

NOTE: Follow the below steps to deploy your application in tomcat server:

Step1: Create an application folder named ServletRequest

Step2: ServletRequest folder should contains index.html program, WEB-INF folder and src folder optional to store Servlet code

Step3: WEB-INF folder should contain classes folder and web.xml file

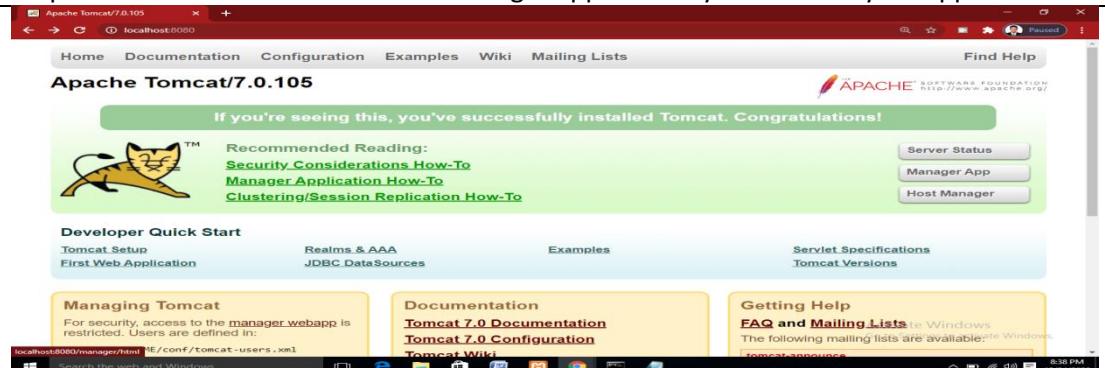
Step4: Compile your Servlet code and place the compiled .class file in classes folder under WEB-INF folder

Step5: Place the total application folder into the C:\xampp\tomcat\webapps folder

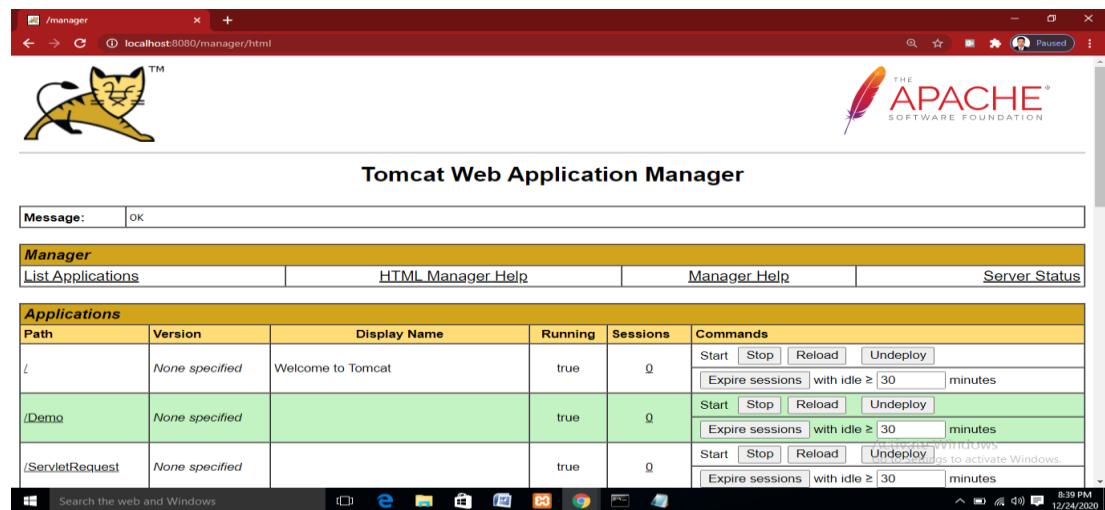
Step6: On Xampp control panel and start tomcat service, open the browser and type localhost:8080 in url bar

Step7: Under tomcat server click on manager apps where you can view your application

Output

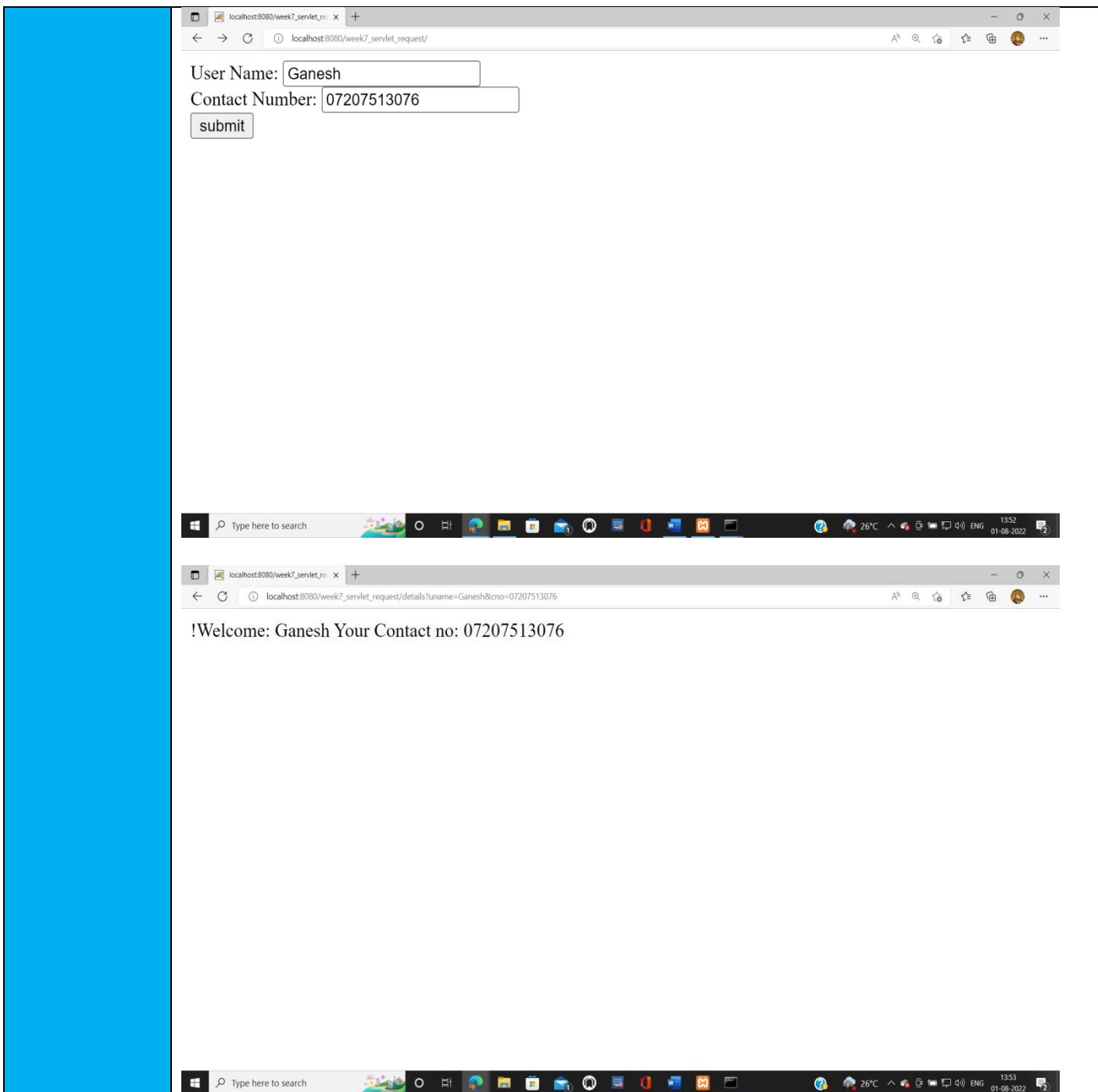


The screenshot shows the Apache Tomcat 7.0.105 homepage. At the top, it says "If you're seeing this, you've successfully installed Tomcat. Congratulations!" Below this is a cartoon cat logo. To the right are links for "Server Status", "Manager App", and "Host Manager". The main content area has sections for "Developer Quick Start", "Recommended Reading", "Documentation", and "Getting Help". The "Documentation" section links to "Tomcat 7.0 Documentation", "Tomcat 7.0 Configuration", and "Tomcat Wiki". The "Getting Help" section links to "FAQ and Mailing Lists".



The screenshot shows the Tomcat Web Application Manager. It displays a table of deployed applications:

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Reload"/> <input type="button" value="Undeploy"/> <input type="button" value="Expire sessions with idle ≥ 30 minutes"/>
/Demo	None specified		true	0	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Reload"/> <input type="button" value="Undeploy"/> <input type="button" value="Expire sessions with idle ≥ 30 minutes"/>
/ServletRequest	None specified		true	0	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Reload"/> <input type="button" value="Undeploy"/> <input type="button" value="Expire sessions with idle ≥ 30 minutes"/>



7b.

Servlet program to read initialization parameters using ServletConfig

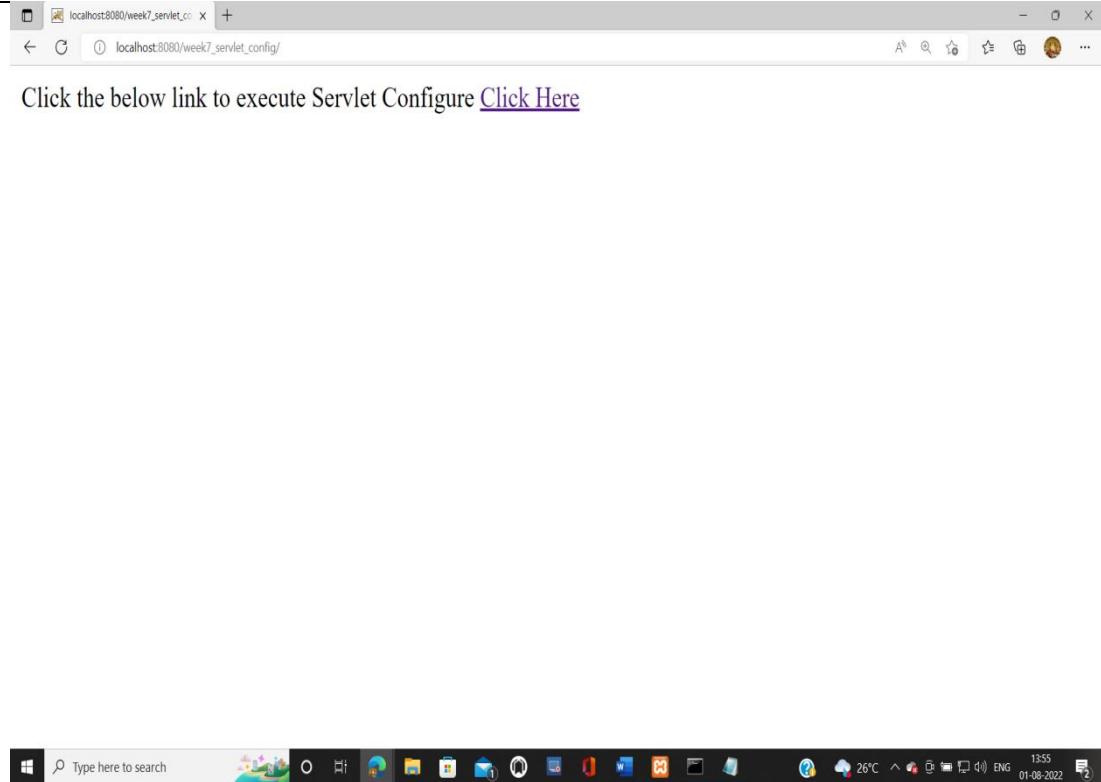
Program

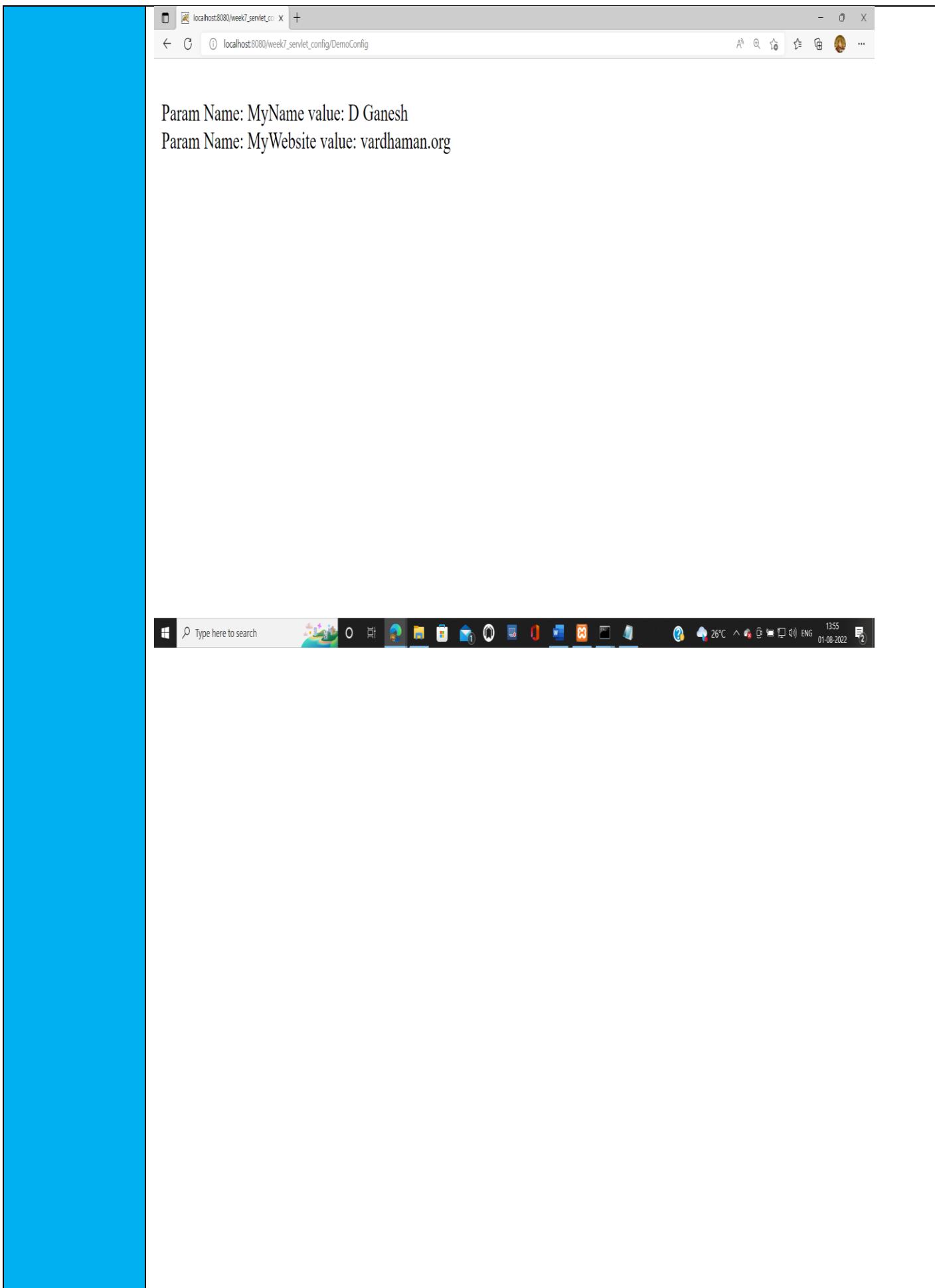
```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.Enumeration;
public class DemoConfig extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException
    {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter writer = response.getWriter();
        ServletConfig sc = getServletConfig();
        Enumeration<String> e = sc.getInitParameterNames();
        String str;
        while(e.hasMoreElements()) {
```

```
        str=e.nextElement();
        pwrtwr.println("<br>Param Name: "+str);
        pwrtwr.println(" value: "+sc.getInitParameter(str));
    }
}
}

web.xml (Deployment Descriptor)
<web-app>
<servlet>
<servlet-name>DemoConfig</servlet-name>
<servlet-class>DemoConfig</servlet-class>
<init-param>
<param-name>MyName</param-name>
<param-value>D Ganesh</param-value>
</init-param>
<init-param>
<param-name>MyWebsite</param-name>
<param-value>vardhaman.org</param-value>
</init-param>
</servlet>
<servlet-mapping>
<servlet-name>DemoConfig</servlet-name>
<url-pattern>/DemoConfig</url-pattern >
</servlet-mapping>
</web-app>
```

Output





Week-8

(a) Servlet program to demonstrate cookie management.
(b) Servlet program to insert data into student table.

8a.**Servlet program to demonstrate cookie management.****Program****Index.html**

```
<html>
<body>
<center>
<form name="f1" method="post" action="AddCookie">
<table>
<tr>
<td><B>User Name:</td>
<td><input type="text" name="un" size="25" value=""></td>
</tr>
<tr>
<td><B>Mobile No:</td>
<td><input type="text" name="no" size="25" value=""></td>
</tr>
</table>
<input type="submit" value="Submit">
</body>
</html>
```

AddCookie.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class AddCookie extends HttpServlet
{
    public void doPost(HttpServletRequest req, HttpServletResponse res)
        throws ServletException, IOException
    {
        String name = req.getParameter("un");
        String cellno=req.getParameter("no");
        Cookie ck = new Cookie("Name", name);
        Cookie ck1=new Cookie("CellNumber",cellno);
        ck.setMaxAge(24*60*60);
        ck1.setMaxAge(24*60*60);
        res.addCookie(ck);
        res.addCookie(ck1);
        res.setContentType("text/html");
        PrintWriter pw = res.getWriter();
        pw.println("<B>Cookie is Created and sent to Client Browser");
        pw.println("<br/>");
        pw.println("Welcome to " +name);
        pw.println("Your Cell Number is:"+cellno+" <br/>");
        pw.close();
    }
}
```

ReadCookie.java

```
// Import required java libraries
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;

// Extend HttpServlet class
public class ReadCookie extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        Cookie cookie = null;
        Cookie[] cookies = null;

        // Get an array of Cookies associated with this domain
        cookies = request.getCookies();

        // Set response content type
        response.setContentType("text/html");

        PrintWriter out = response.getWriter();
        String title = "Reading Cookies Example";
        String docType =
            "<!doctype html public "-//w3c//dtd html 4.0 " +
            "transitional//en\">\n";

        out.println(docType +
            "<html>\n" +
            "<head><title>" + title + "</title></head>\n" +
            "<body bgcolor = \"#f0f0ab\">\n" );

        if( cookies != null ) {
            out.println("<h2> Found Cookies Name and Value</h2>");

            for (int i = 0; i <cookies.length; i++) {
                cookie = cookies[i];
                out.print("Name : " + cookie.getName( ) + ", ");
                out.print("Value: " + cookie.getValue( ) + "<br/>");
            }
            } else {
            out.println("<h2>No cookies founds</h2>");
        }
        out.println("</body>");
        out.println("</html>");
    }

web.xml(Deployment Descriptor)
<?xml version="1.0" encoding="UTF-8" ?>
<web-app>
<servlet>
<servlet-name>AddCookie</servlet-name>
<servlet-class>AddCookie</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>AddCookie</servlet-name>
```

```

<url-pattern>/AddCookie</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>ReadCookie</servlet-name>
<servlet-class>ReadCookie</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>ReadCookie</servlet-name>
<url-pattern>/ReadCookie</url-pattern>
</servlet-mapping>
</web-app>

```

Output

If you're seeing this, you've successfully installed Tomcat. Congratulations!

Developer Quick Start

- Tomcat Setup
- First Web Application
- Realms & AAA
- JDBC DataSources
- Examples
- Servlet Specifications
- Tomcat Versions

Documentation

- Tomcat 7.0 Documentation
- Tomcat 7.0 Configuration
- Tomcat Wiki

Getting Help

- FAQ and Mailing Lists
- Tomcat Announcements

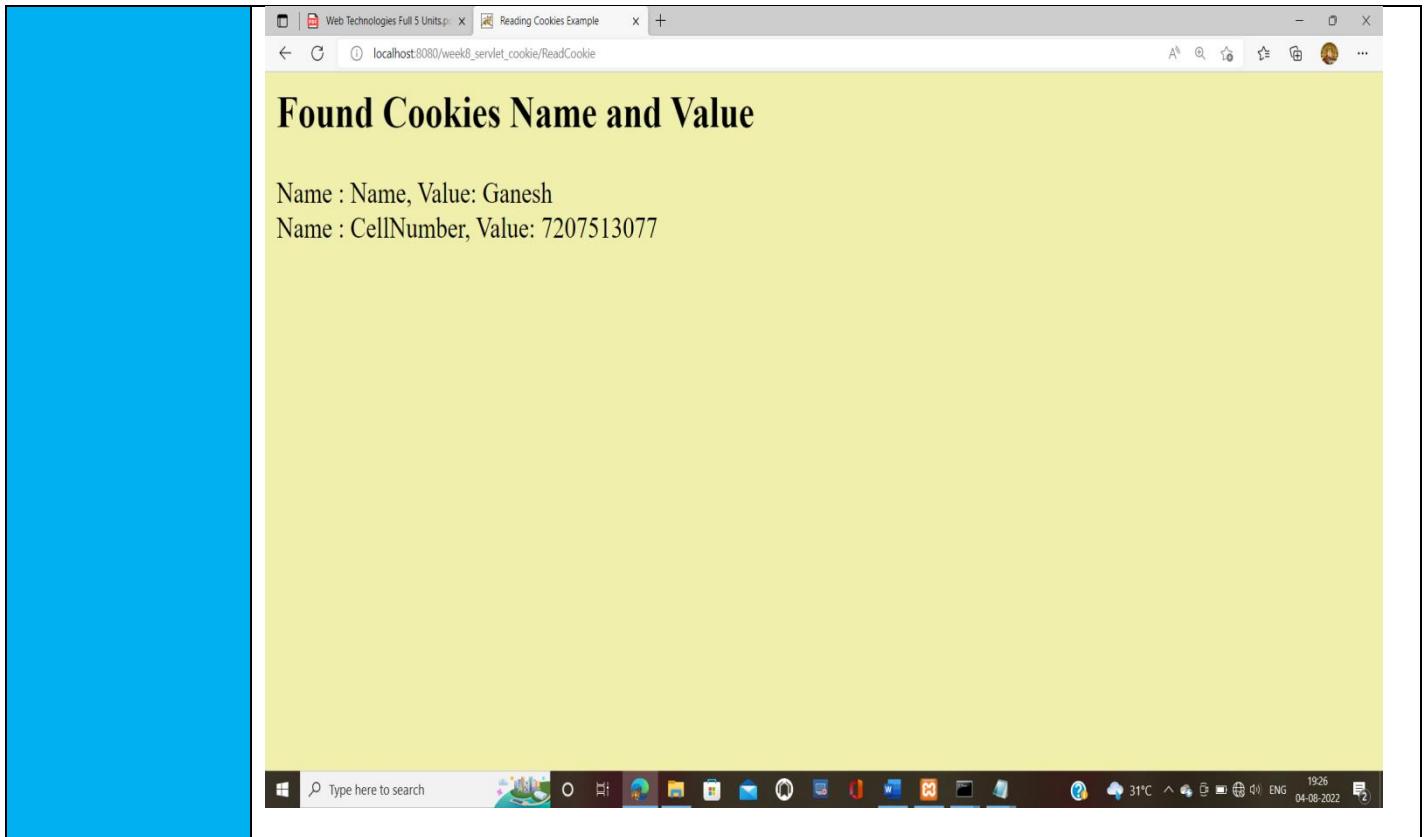
URL Pattern	Session Timeout	Active Sessions	Session Statistics
/week8_servlet_HtpSession	specified	0	Expire sessions with idle ≥ 30 minutes
/week8_servlet_cookie	None specified	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/week8_servlet_cookie_read	None specified	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/week8_servlet_db	None specified	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

The image shows a Windows desktop environment with three browser windows open:

- Top Window:** A web page titled "localhost:8080/week8_servlet_cookie/". It contains two input fields: "User Name:" with the value "Ganesh" and "Mobile No:" with the value "7207513077". Below the fields is a "Submit" button.
- Middle Window:** A web page titled "localhost:8080/week8_servlet_cookie/AddCookie". The content of the page is:

Cookie is Created and sent to Client Browser
Welcome to Ganesh Your Cell Number is:7207513077
- Bottom Window:** A partially visible web page, likely the same as the middle one, showing the same cookie creation message.

The desktop taskbar is visible at the bottom, showing various pinned icons and system status indicators like battery level and network connection.



8b.	Servlet program to insert data into student table.
Program	<u>Index.html</u> <pre><html> <body> <center> <form name="f1" method="post" action="AddStudent"> <table> <tr> <td>Student ID:</td> <td><input type="number" name="sid" size="25" value=""></td> </tr> <tr> <td>Student Name:</td> <td><input type="text" name="sname" size="25" value=""></td> </tr> <tr> <td>Student Contact:</td> <td><input type="text" name="scell" size="25" value=""></td> </tr> <tr> <td>Student Address:</td> <td><input type="text" name="saddr" size="50" value=""></td> </tr> <tr> <td>Average Marks:</td> <td><input type="number" name="savg" size="3" value=""></td> </tr> </table> <input type="submit" value="Submit"> </body></pre>

```

</html>
AddStudent.java

import java.io.*;
import java.sql.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class AddStudent extends HttpServlet
{
protected void doPost(HttpServletRequest req, HttpServletResponse res)
throws ServletException, IOException
{
PrintWriter pw = res.getWriter();
res.setContentType("text/html");
int sid = Integer.parseInt(req.getParameter("sid"));
String sname = req.getParameter("sname");
String scell = req.getParameter("scell");
String saddr = req.getParameter("saddr");
int savg = Integer.parseInt(req.getParameter("savg"));
pw.println(sid);
pw.println(sname);
pw.println(scell);
pw.println(saddr);
try
{
Class.forName("com.mysql.cj.jdbc.Driver");
Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/studentinfo","root","");
Statement st=con.createStatement();
String qry = "INSERT INTO student(id,name,contact,address,avg) VALUES
("+sid+","+sname+","+scell+","+saddr+","+savg+ ")";
st.executeUpdate(qry);
pw.println("Data Inserted");
pw.close();
con.close();
}
catch (Exception e)
{
e.printStackTrace();
}
}
}

web.xml(Deployment Descriptor)
<?xml version="1.0" encoding="UTF-8" ?>
<web-app>
<servlet>
<servlet-name>AddStudent</servlet-name>
<servlet-class>AddStudent</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>AddStudent</servlet-name>
<url-pattern>/AddStudent</url-pattern>
</servlet-mapping>
</web-app>

```

Output

The screenshot shows the Apache Tomcat 7.0.105 homepage. At the top, there's a navigation bar with links to Home, Documentation, Configuration, Examples, Wiki, and Mailing Lists. On the right, there are links for Find Help, Server Status, Manager App, and Host Manager. A green banner at the top right says, "If you're seeing this, you've successfully installed Tomcat. Congratulations!" Below the banner is a cartoon cat logo. A sidebar on the left titled "Developer Quick Start" includes links for Tomcat Setup, First Web Application, Realms & AAA, JDBC Data Sources, Examples, and Servlet Specifications/Tomcat Versions. The main content area has sections for "Managing Tomcat", "Documentation", and "Getting Help".

This screenshot shows the Apache Tomcat Manager application interface. It lists four deployed applications: "/week8_servlet_cookie", "/week8_servlet_cookie_read", "/week8_servlet_db", and "/week_8_student_db". Each application entry includes a "Status" column (true), a "Last Accessed" column (empty), and a set of control buttons: Start, Stop, Reload, Undeploy, and Expire sessions (with idle ≥ 30 minutes).

This screenshot shows a web browser displaying a form for entering student information. The form fields are: Student ID (508), Student Name (Bijay Kumar Sethi), Student Contact (6890011122), Student Address (Hyderabad), and Average Marks (65). There is a "Submit" button at the bottom.

The screenshot shows a Windows desktop environment. At the top, there are two browser windows open: one showing the URL `localhost:127.0.0.1/studentinfo` and another showing `localhost:8080/week_8_student_db/AddStudent`. Both windows display the message "508 Bijay Kumar Sethi 6890011122 Hyderabad Data Inserted". Below the browser windows is the Windows taskbar, which includes icons for File Explorer, Task View, Start, Taskbar settings, and system status indicators like battery level, temperature, and date/time.

The main content area of the desktop shows the phpMyAdmin interface. The left sidebar lists databases: performance_schema, phpmyadmin, siva, staff, student, studentinfo (selected), test, test1, and test2. Under the studentinfo database, it shows Procedures and Tables. The Tables section contains three entries: New, student (selected), and student1. The right panel displays the contents of the student table with the following data:

id	name	contact	address	avg
501	Arjun	7207513076	Hyderabad	68
502	Balaji	6300549113	Hyderabad	70
501	Abhinav	7335491105	Secunderabad	75
505	Ramesh	4567890123	Hyderabad	80
507	Ravi	6547890012	Hyderabad	78
508	Bijay Kumar Sethi	6890011122	Hyderabad	65

Post-Lab Questions

1. How do you deploy a servlet application on a web server?
2. List out the packages supported by JDK to run servlet programs?
3. What are the different methods to handle servlet request?
4. Do we require drivers to run a Servlet-Database application?
5. What is the difference between Generic servlet and HTTP Servlet?
6. Write down the syntax of doGet() method?
7. Write down the syntax of doPost() method?
8. Differentiate between GET and POST?
9. What is Deployment Descriptor?
10. Write down the syntax to create Cookie?
11. Is HTTP stateless or state full protocol?
12. List out methods by which we can identify a user over internet (WWW)?

Week-9

- (a) JSP Program to print multiplication table.
- (b) JSP Program to handle the exceptions.
- (c) JSP Program to retrieve the student data from database.

**Pre-Lab
Questions**

1. Abbreviate JSP?
2. Explain Anatomy of JSP page?
3. List out the difference between Servlet and JSP?
4. List out the advantages of JSP?
5. How to deploy a JSP program elaborate?
6. List out the different types of Scriptlet tags supported by JSP?
7. Draw the Life Cycle of JSP?
8. Does MVC paradigm supported by JSP? Justify.
9. Write the steps to connect a JSP program to database?
10. List out Implicit Objects supported by JSP?
11. What is Error Handling, list out the number of ways to handle error?
12. What is Exception handling?

9a.**JSP Program to print multiplication table.****Program**[index.html](#)

```
<html>
<body>
<h2>Enter Any 2 Numbers !!</h2>
<form action="Table2.jsp" method="post">
First No: <input type="text" name="fno"><br>
Second No: <input type="text" name="sno"><br>
<input type="submit" value="Show Tables">
</form>
<h5>VCE-WT</h5>
</body>
```

[table2.jsp](#)

```
<html>
<body>
<%
int num1=Integer.parseInt(request.getParameter("fno"));
int num2=Integer.parseInt(request.getParameter("sno"));
int range=0;%>
<h5><center>TABLES FROM <%=num1 %> to <%=num2 %></center></h5>
<table cellpadding=0 cellspacing=0 align='center' bgcolor='yellow' width=70% >
<%
try
{
for (int j = 1; j <= 10; j++) {
%><tr><th>|</th><%
for (range = num1; range <= num2; range++) { %><td align='center'><%
```

```

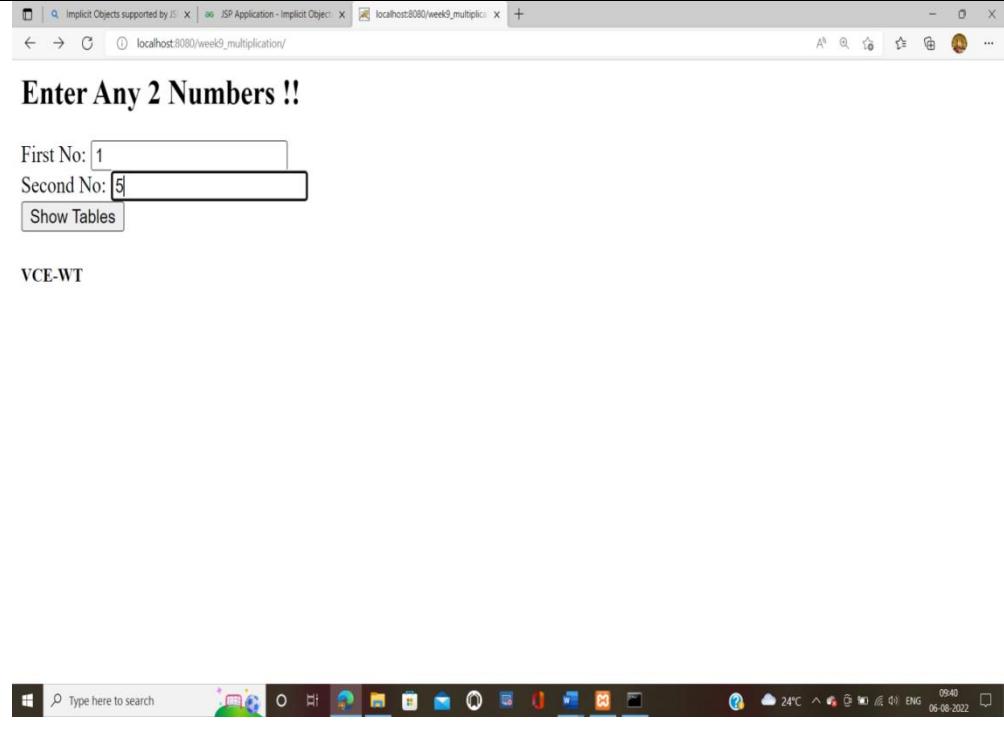
out.println(range);
%></td><td align='center'><%
out.println("*");
%></td><td align='center'><%
out.println(j);
%></td><td align='center'><%
out.println(" = ");
%></td><td align='center'><%
out.println(range * j);
%><th>|</th><%
}
%></tr><% } }
catch(Exception e) {
out.println("Error"); } %
%>
</table>
</body>
</html>

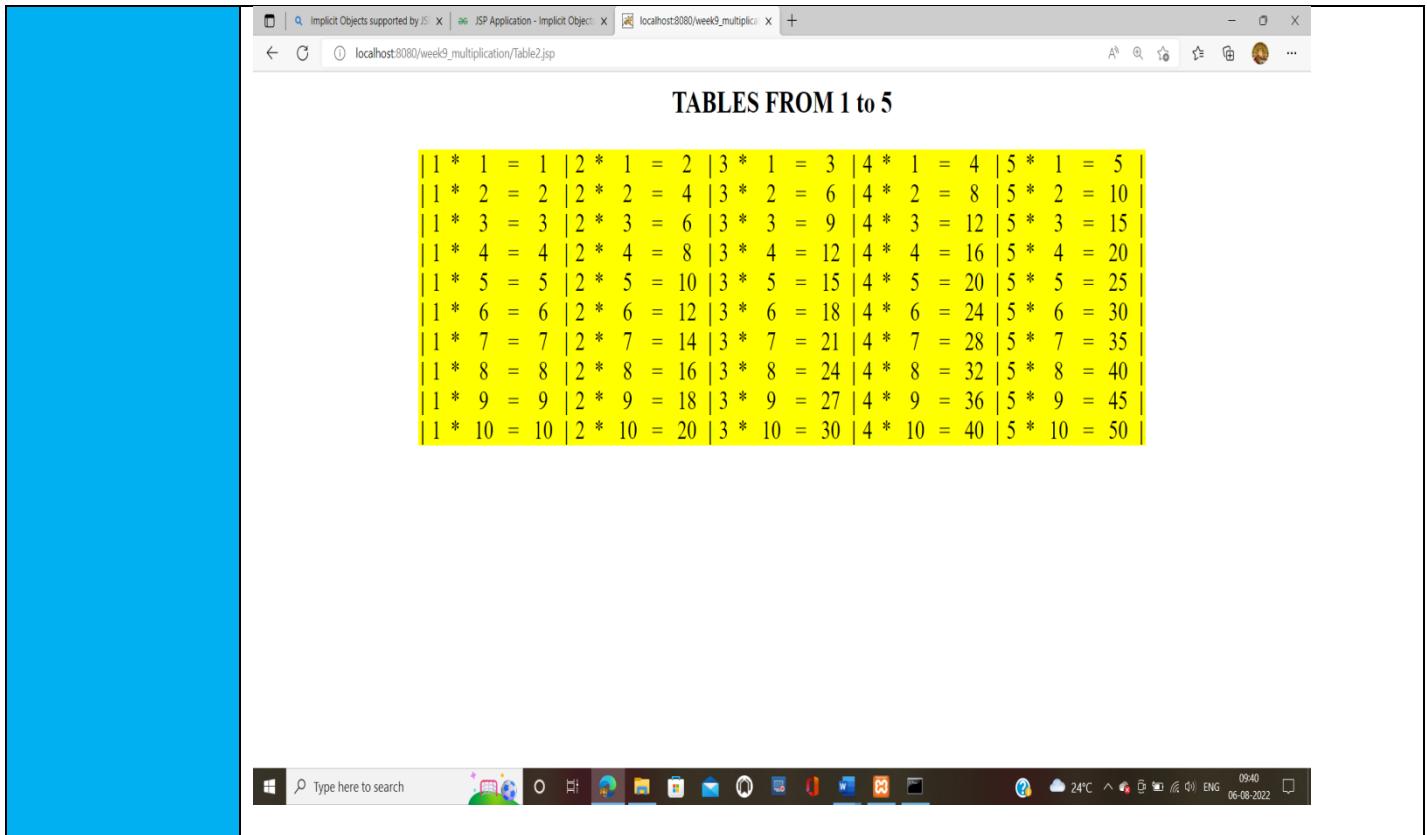
```

Configuring steps

Step1: Create a folder name week9_multiplication and place in the following path if you xampp is installed in c drive path: C:\xampp\tomcat\webapps\ROOT
 Step2: On Xampp Control Panel, on tomcat service, mysql and Apache
 Step3: On browser and type the following in url to run the program
http://localhost:8080/week9_multiplication/

Output





9b.

JSP Program to handle the exception.

Description

- The exception is normally an object that is thrown at runtime.
- Exception Handling is the process to handle the runtime errors.
- There may occur exception any time in your web application.
- So, handling exceptions is a safer side for the web developer.
- In JSP, there are three ways to perform exception handling:
 - By errorPage and isErrorPage attributes of page directive
 - By <error-page> element in web.xml file
 - try catch block

1st Approach

- In this case, you must define and create a page to handle the exceptions, as in the error.jsp page.
- The pages where may occur exception, define the errorPage attribute of page directive, as in the process.jsp page.
- There are 3 files:
 - index.jsp for input values
 - process.jsp for dividing the two numbers and displaying the result
 - error.jsp for handling the exception

Program

index.jsp

```
<form action="process.jsp">
No1:<input type="text" name="n1" /><br/><br/>
No2:<input type="text" name="n2" /><br/><br/>
<input type="submit" value="divide"/>
</form>
```

process.jsp

```
<%@ page errorPage="error.jsp" %>
<%
String num1=request.getParameter("n1");
String num2=request.getParameter("n2");

int a=Integer.parseInt(num1);
int b=Integer.parseInt(num2);
int c=a/b;
out.print("division of numbers is: "+c);
%>
```

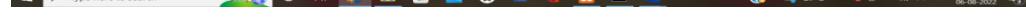
error.jsp

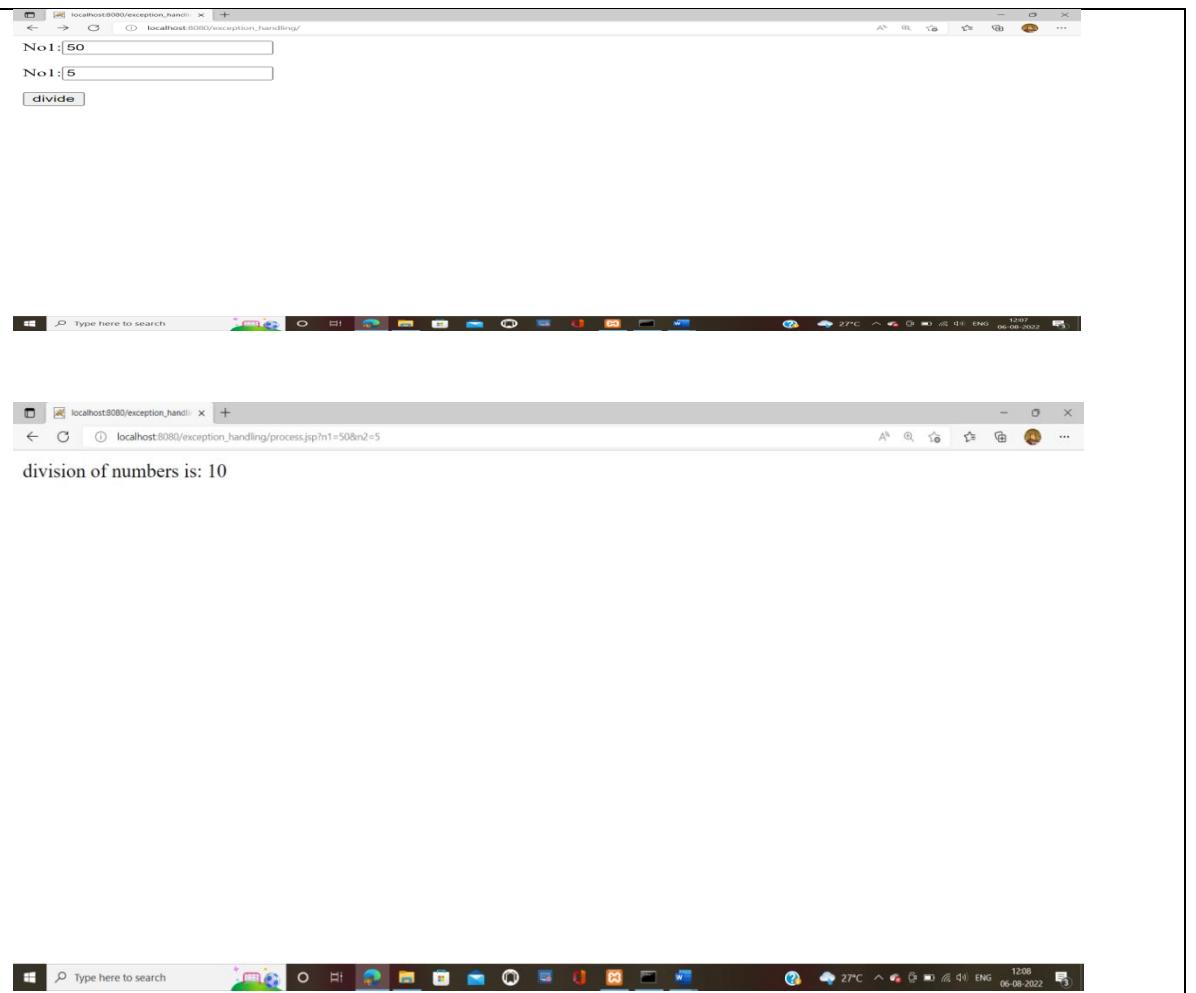
```
<%@ page isErrorPage="true" %>

<h3>Sorry an exception occurred!</h3>

Exception is: <%= exception %>
```

Output





9c. JSP Program to retrieve student data from database.

Program

```
<%@page import="java.sql.DriverManager"%>
<%@page import="java.sql.ResultSet"%>
<%@page import="java.sql.Statement"%>
<%@page import="java.sql.Connection"%>
<%
String id = request.getParameter("uname");
String driver = "com.mysql.jdbc.Driver";
String connectionUrl = "jdbc:mysql://localhost:3306/";
String database = "student";
String userid = "root";
String password = "";
try {
Class.forName(driver);
} catch (ClassNotFoundException e) {
e.printStackTrace();
}
Connection connection = null;
Statement statement = null;
```

```

ResultSet resultSet = null;

%>
<html>
<body>
<h1>Retrieve data from database in jsp</h1>
<table border="1">
<tr>
<th>username</th>
<th>password</th>
</tr>
<%
try{
connection = DriverManager.getConnection(connectionUrl+database, userid, password);
statement=connection.createStatement();
String sql ="select * from login";
resultSet = statement.executeQuery(sql);
while(resultSet.next()){
%>
<tr>
<td><%=resultSet.getString("uname") %></td>
<td><%=resultSet.getString("upass") %></td>
</tr>
<%
}connection.close();
} catch (Exception e) {
e.printStackTrace();
}
%></table></body></html>

```

Output

localhost:8080/database/db.jsp

Retrieve data from database in jsp

username	password
Vinayak	asgf123
ganesh	ganesh123
sudhir	sudhir123
siva	siva12345

Week-10

- (a) JSP Program to access a java bean component.
(b) JSP Program to authenticate the login details. If user is valid forward the control to success.html otherwise forward to fail.html

10a.	JSP Program to access a java bean component.
Program	<p>index.jsp</p> <pre><%@page contentType="text/html" pageEncoding="UTF-8"%> <!DOCTYPE html> <html> <head> <meta http-equiv="Content-Type" content="text/html; charset=UTF-8"> <title>useBean, getProperty and setProperty example</title> </head> <body> <form action="userdetails.jsp" method="post"> User Name: <input type="text" name="username">
 User Password: <input type="password" name="password">
 User Age: <input type="text" name="age">
 <input type="submit" value="register"> </form> </body></html></pre> <p>Userdetails.jsp</p> <pre><%@page contentType="text/html" pageEncoding="UTF-8"%> <!DOCTYPE html> <jsp:useBean id="userinfo" class="ganesh.Details"></jsp:useBean> <jsp:setProperty property="*" name="userinfo"/> You have entered below details:
 Your Name: <jsp:getProperty property="username" name="userinfo"/>
 Your Password: <jsp:getProperty property="password" name="userinfo"/>
 Your Age: <jsp:getProperty property="age" name="userinfo" />
</pre> <p><u>JavaBean class: Details.java</u></p> <pre>package ganesh; public class Details { public Details() {} private String username; private int age;</pre>

```

private String password;

    public String getUsername() {
        return username;
    }

    public void setUsername(String username) {
        this.username = username;
    }

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;
    }

    public String getPassword() {
        return password;
    }

    public void setPassword(String password) {
        this.password = password;
    }
}

```

Output

User Name:

User Password:

User Age:



You have entered below details:

Your Name: Ganesh

Your Password: ganesh123

Your Age: 34



10b.	JSP Program to authenticate the login details. If user is valid forward the control to success.html otherwise forward to fail.html
------	---

Program

```

index.jsp
<%@ page import="java.sql.*" %>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Home</title>
</head>
<body>
<%
Connection con= null;
PreparedStatementps = null;
ResultSet rs = null;
String driverName = "com.mysql.jdbc.Driver";
String url = "jdbc:mysql://localhost:3306/student";
String user = "root";
String password = "";
String sql = "select usertype from login";
try {
Class.forName(driverName);
con = DriverManager.getConnection(url, user, password);
ps = con.prepareStatement(sql);
rs = ps.executeQuery();
%>
<form method="post" action="login.jsp">
<center><h2 style="color:green">JSP Login Example</h2></center>
<table border="1" align="center">
<tr>
<td>Enter Your Name :</td>
<td><input type="text" name="name"/></td>
</tr>
<tr>
<td>Enter Your Password :</td>
<td><input type="password" name="password"/></td>
</tr>
<tr>
<td>Select UserType</td>
<td><select name="usertype">
<option value="select">select</option>
<%
while(rs.next())
{
String usertype = rs.getString("usertype");
%>
<option value=<%=usertype%>><%=usertype%></option>
<%
}
}
catch(SQLExceptionsqe)
{
out.println("home"+sqe);
}

```

```

%>
</select>
</td>
</tr>
<tr>
<td></td>
<td><input type="submit" value="submit"/></td>
</table>
</form>
</body>
</html>

```

Login.jsp

```

<%@page import="java.sql.SQLException"%>
<%@page import="java.sql.DriverManager"%>
<%@page import="java.sql.ResultSet"%>
<%@page import="java.sql.PreparedStatement"%>
<%@page import="java.sql.Connection"%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Login</title>
</head>
<body>
<%! String userdbName;
String userdbPsw;
String dbUsertype;
%>
<%
Connection con= null;
PreparedStatementps = null;
ResultSet rs = null;
String driverName = "com.mysql.jdbc.Driver";
String url = "jdbc:mysql://localhost:3306/student";
String user = "root";
String dbpsw = "";
String sql = "select * from login where uname=? and upass=? and usertype=?";
String name = request.getParameter("name");
String password = request.getParameter("password");
String usertype = request.getParameter("usertype");
if(!(name.equals(null) || name.equals("")) && !(password.equals(null) || password.equals("")) && !usertype.equals("select"))
{
try{
Class.forName(driverName);
con = DriverManager.getConnection(url, user, dbpsw);
ps = con.prepareStatement(sql);
ps.setString(1, name);
ps.setString(2, password);
ps.setString(3, usertype);
rs = ps.executeQuery();
if(rs.next())
{
userdbName = rs.getString("uname");
}
}
}
}

```

```

userdbPsw = rs.getString("upass");
dbUsertype = rs.getString("usertype");
if(name.equals(userdbName) && password.equals(userdbPsw) && usertype.equals(dbUsertype))
{
    session.setAttribute("name",userdbName);
    session.setAttribute("usertype", dbUsertype);
    response.sendRedirect("welcome.jsp");
}
}
else
{
    response.sendRedirect("error.jsp");
    rs.close();
    ps.close();
}
catch(SQLExceptionsqe)
{
    out.println(sqe);
}
}
else
{
%>
<center><p style="color:red">Error In Login</p></center>
<%
getServletContext().getRequestDispatcher("index.jsp").include(request,
response);
%
%>
</body>
</html>

```

Welcome.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Welcome</title>
</head>
<body>
<p>Welcome, <%=session.getAttribute("name")%></p>
<p><a href="logout.jsp">Logout</a>
</body>
</html>

```

Error.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Login Error</title>
</head>
<body>
<center><p style="color:red">Sorry, your record is not available.</p></center>
<%
getServletContext().getRequestDispatcher("/index.jsp").include(request, response);

```

```

%>
</body>
</html>
Logout.jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Logout</title>
</head>
<body>
<% session.invalidate(); %>
<p>You have been successfully logout</p>
</body>
</html>

```

Output



JSP Login Example

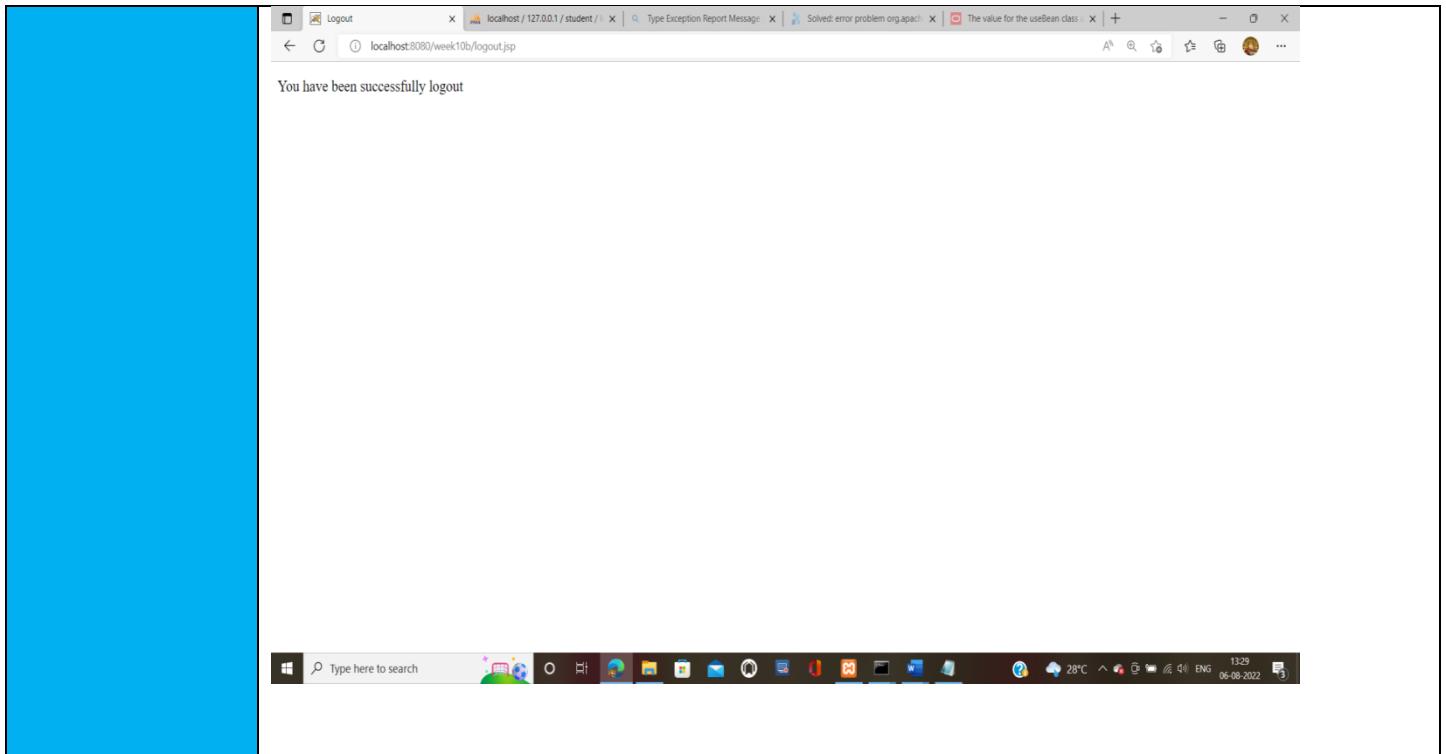
Enter Your Name :	<input type="text" value="ganesh"/>
Enter Your Password :	<input type="password" value="medhu@1234"/>
Select UserType	<input type="text" value="admin"/>
<input type="button" value="submit"/>	



Welcome, ganesh

[Logout](#)





Post-Lab Questions

- 1. Write the syntax to import a java package**
- 2. Write the syntax and usage of following tags**
 - Scriptlet
 - Directive
 - Declaration
 - Expression
 - Action
 - Comment
- 3. How do we navigate between pages in JSP?**
- 4. How to set session in JSP Bean Components?**
- 5. How to create a Bean Class? Explain**
- 6. Write a JSP script to handle exception using try and catch?**
- 7. Which implicit object is used to retrieve form elements data?**
- 8. Which implicit object is used to send the response to the client?**
- 9. How to create a session in JSP?**
- 10. How many types of scope we have in JSP?**

Week-11	(a) PHP program to work with numeric and associative arrays. (b) PHP program to find factorial using Recursion. (c) PHP Program to handle form Data.
----------------	---

Pre-Lab Questions	<ol style="list-style-type: none"> 1. Write the syntax for a PHP page? 2. Abbreviate PHP? 3. Is PHP Server Side or Client-Side programming? 4. How to declare and access a variable in PHP? 5. List out the data types supported by PHP? 6. List out the operators supported by PHP? 7. How many types of arrays we have in PHP? 8. Can we include more than one PHP component in an HTML page? 9. Does PHP support Session and Cookie Concept? 10. What are the ways to connect a Front-end application to database using PHP? 11. How to declare a function in PHP?
------------------------------	--

11a. Program	<p>PHP program to work with numeric and associative arrays.</p> <pre style="color: red;"><!-- PHP program to Sum of Array Elements --> <html> <head><title> Array Sum </title> </head> <body> <?php \$arr = array(1,2,3,4,5,6); \$sum =0; for(\$i=0 ; \$i < count(\$arr) ; \$i++) \$sum = \$sum + \$arr[\$i]; echo "The sum of array elements is " . \$sum; ?> </body> </html></pre> <p><!-- PHP program to find Product of Array Elements --></p> <pre style="color: red;"><html> <head><title> Array Product </title> </head> <body></pre>
-------------------------	--

```

<?php
    $arr = array(1,2,3,4,5,6);
    $prod =1;
    for( $i=0 ; $i < count($arr) ; $i++)
        $prod = $prod * $arr[$i];
    echo "The product of array elements is " . $prod;
?
</body>
</html>

<!-- PHP program to sort Array Elements -->
<html>
<head><title> Array Sort </title>
</head>
<body>
<?php
$arr = array(7,6,5,4,32,44,9,17);
echo "The Array Before Sort is <br>" ;
print_r ($arr);
for( $i=0 ; $i < count($arr) ; $i++) {
    for($j=$i+1; $j < count($arr); $j++) {
        if($arr[$i] > $arr[$j]){
            $temp = $arr[$i] ;
            $arr[$i]= $arr[$j];
            $arr[$j] = $temp;
        } } }
echo "<br>";
echo "The Array After Sort is <br>" ;
print_r ($arr);      //display each element
echo "<br>";
foreach($arr as $x){
echo $x;
echo "<br>";
}
$arr1 = array(17,16,15,14,132,144,19,117); /* Sorting using built in functions */

```

```
echo "<br>";
echo "The Array After Sort is <br>" ;
sort($arr1);
print_r ($arr1); ?>
</body>
</html>

<!-- PHP program to sort Array Elements in Reverse order -->

<html>
<head><title> Array Reverse Sort </title>
</head>
<body>
<?php

$arr = array(7,6,5,4,32,44,9,17);
echo "The Array Before Sort is <br>" ;
print_r ($arr);

for( $i=0 ; $i < count($arr) ; $i++) {
    for($j=$i+1; $j < count($arr); $j++) {
        if($arr[$i] < $arr[$j]) {
            $temp = $arr[$i] ;
            $arr[$i]= $arr[$j];
            $arr[$j] = $temp;
        }
    }
}
echo "<br>";
echo "The Array After Sort is <br>" ;
print_r ($arr); //display each element
echo "<br>";
foreach($arr as $x){
    echo $x;
    echo "<br>";
}
/* Reverse Sorting using built in functions */
$arr1 = array(17,16,15,14,132,144,19,117);
echo "<br>";
echo "The Array After Sort is <br>" ;
rsort($arr1);
```

```

print_r ($arr1); ?>
</body>
</html>
<!--PHP program to demonstrate Associative arrays -->
<html>
<body>
<?php
$emps = array("Aryan"=> 452563 , "Bhanu" => 526458 ,
              "vivek"=>42563,"Amit"=>75642);
print_r($emps);
echo "<br>";
//for - each loop
foreach($emps as $key1 => $val1) {
echo $key1 . " : " . $val1; echo "<br>";
}
//to display individual elements - accessed using key.
echo $emps["vivek"];
$emps["vivek"] = 75698;
echo "<br>";
echo $emps["vivek"];
echo "<br>";
//Multi Dimensional Arrays -> Associative array in Numeric Array
$students = array( array( 501 => "Ramesh" , 502 => "Suresh" ,503=>"Ganesh"),
array(1201 => "Aneesh" , 1202=> "Rishik"),    array(401 => "Shreyan", 402=> "Rithik",
403=>"Tanvi")      );
foreach($students as $branch) {
foreach($branch as $key => $val) {
echo $key. "-> " . $val; echo "<br>";
}
}
print_r($students);
echo "<br>";
//Multi Dimensional Arrays -> Associative array in Associative Array
$states = array( "telangana" => array("hyd" =>34 , "krmn"=>35 , "niz"=>38),
"ap" =>      array("hyd" =>34 , "krmn"=>35 , "niz"=>38),

```

```
"chennai" => array("hyd" =>34 , "krmn"=>35 , "niz"=>38));  
//using print_r  
  
echo print_r($states);  
  
echo "<br>"; //using for-each  
  
foreach ($states as $key1 => $val1) {  
  
foreach($val1 as $key2=>$val2) {  
  
echo $key2 . "--->". $val2; echo "<br>";  
}  
}  
  
//particular row  
  
print_r($states["ap"]); ?>  
</body></html>
```

Output



```
Array elements are:Array ( [0] => 1 [1] => 2 [2] => 3 [3] => 4 [4] => 5 [5] => 6 )  
The sum of array elements is 21
```

```
Array elements are:Array ( [0] => 1 [1] => 2 [2] => 3 [3] => 4 [4] => 5 [5] => 6 )  
The product of array elements is 720
```

```
The Array Before Sort is
Array ( [0] => 7 [1] => 6 [2] => 5 [3] => 4 [4] => 32 [5] => 44 [6] => 9 [7] => 17 )
The Array After Sort is
Array ( [0] => 4 [1] => 5 [2] => 6 [3] => 7 [4] => 9 [5] => 17 [6] => 32 [7] => 44 )
Traversing array using foreach loop
4 5 6 7 9 17 32 44
The Array Before Sort is
Array ( [0] => 17 [1] => 16 [2] => 15 [3] => 14 [4] => 132 [5] => 144 [6] => 19 [7] => 117 )
The Array After Sort is
Array ( [0] => 14 [1] => 15 [2] => 16 [3] => 17 [4] => 19 [5] => 117 [6] => 132 [7] => 144 )
```

```
The Array Before Sort is
Array ( [0] => 7 [1] => 6 [2] => 5 [3] => 4 [4] => 32 [5] => 44 [6] => 9 [7] => 17 )
The Array After Sort is
Array ( [0] => 44 [1] => 32 [2] => 17 [3] => 9 [4] => 7 [5] => 6 [6] => 5 [7] => 4 )
Traversing array using foreach loop
44 32 17 9 7 6 5 4
The Array Before Sort is
Array ( [0] => 17 [1] => 16 [2] => 15 [3] => 14 [4] => 132 [5] => 144 [6] => 19 [7] => 117 )
The Array After Sort is
Array ( [0] => 144 [1] => 132 [2] => 117 [3] => 19 [4] => 17 [5] => 16 [6] => 15 [7] => 14 )
```

```
Displaying Associative Array Using foreach loop
Aryan : 452563
Bhanu : 526458
vivek : 42563
Amit : 75642
-----
To display individual elements - accessed using key vivek is:42563
-----
Displaying Multidimensional Array using foreach
501->Ramesh
502->Suresh
503->Ganesh
1201->Aneesh
1202->Rishik
401->Shreyan
402->Rithik
403->Tanvi
-----
hyd-->34
krmn-->35
niz-->38
hyd-->34
krmn-->35
niz-->38
hyd-->34
krmn-->35
niz-->38
-----
Displaying particular row in multidimensional array
Array ( [hyd] => 34 [krmn] => 35 [niz] => 38 )
```



11b.	PHP program to find factorial using Recursion.
Program	<pre> <html> <head> <title> Factorial Using Recursion </title> </head> <body> <?php function fact(\$n=4) { if (\$n == 1) return 1; else return (\$n * fact(\$n-1)); } \$x = 5; //global variable \$y = fact(\$x); echo "The factorial of the number ".\$x. " is " . \$y; echo "
"; \$y = fact(); echo "The factorial of the default parameter is " . \$y; ?> </body> </html></pre>
11c.	PHP Program to handle form Data.
Program	<pre> <!-- form submission using get method --> <u>form handling get.php</u> <html> <body> <form name="f1" method="get" action="getread.php"> User Name : <input type="text" name="uname">
 Mobile No : <input type="text" name="no">
 Department : <Select name="s1"> <option value="CSE" > CSE </option> <option value="ECE" > ECE </option> <option value="EEE" > EEE </option> </select> <input type="submit" name="send" value="SUBMIT"></pre>

```

</form>
</body>
getread.php
<html>
<body>
<br><br> Welcome : <?php echo $_GET["uname"]; ?><br>
Your Number is : <?php echo $_GET["no"]; ?><br>
Branch selected : <?php echo $_GET["s1"]; ?>
</body></html>
<!--form submission using post method -->
form handling post.php
<html>
<body>
<form name="f1" method="post" action="postread.php">
User Name : <input type="text" name="uname"><br>
Mobile No : <input type="text" name="no"><br>
Department :
<Select name="s1">
<option value="CSE" > CSE </option>
<option value="ECE" > ECE </option>
<option value="EEE" > EEE </option>
</select><br>
<input type="submit" name="send" value="SUBMIT">
</form>
</body>
</html>
<!-- retrieving data from form using $_POST method -->
postread.php
<html>
<body>
<br><br> Welcome : <?php echo $_POST["uname"]; ?><br>
Your Number is : <?php echo $_POST["no"]; ?><br>
Branch selected : <?php echo $_POST["s1"]; ?>
</body></html>
<!-- retrieving data from form using $_REQUEST for both get and post requests -->

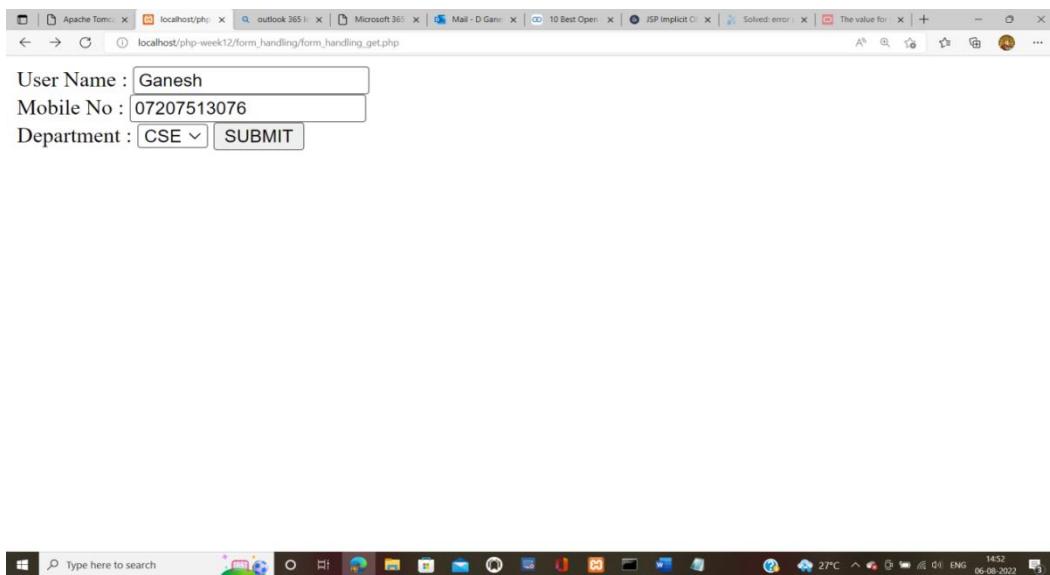
```

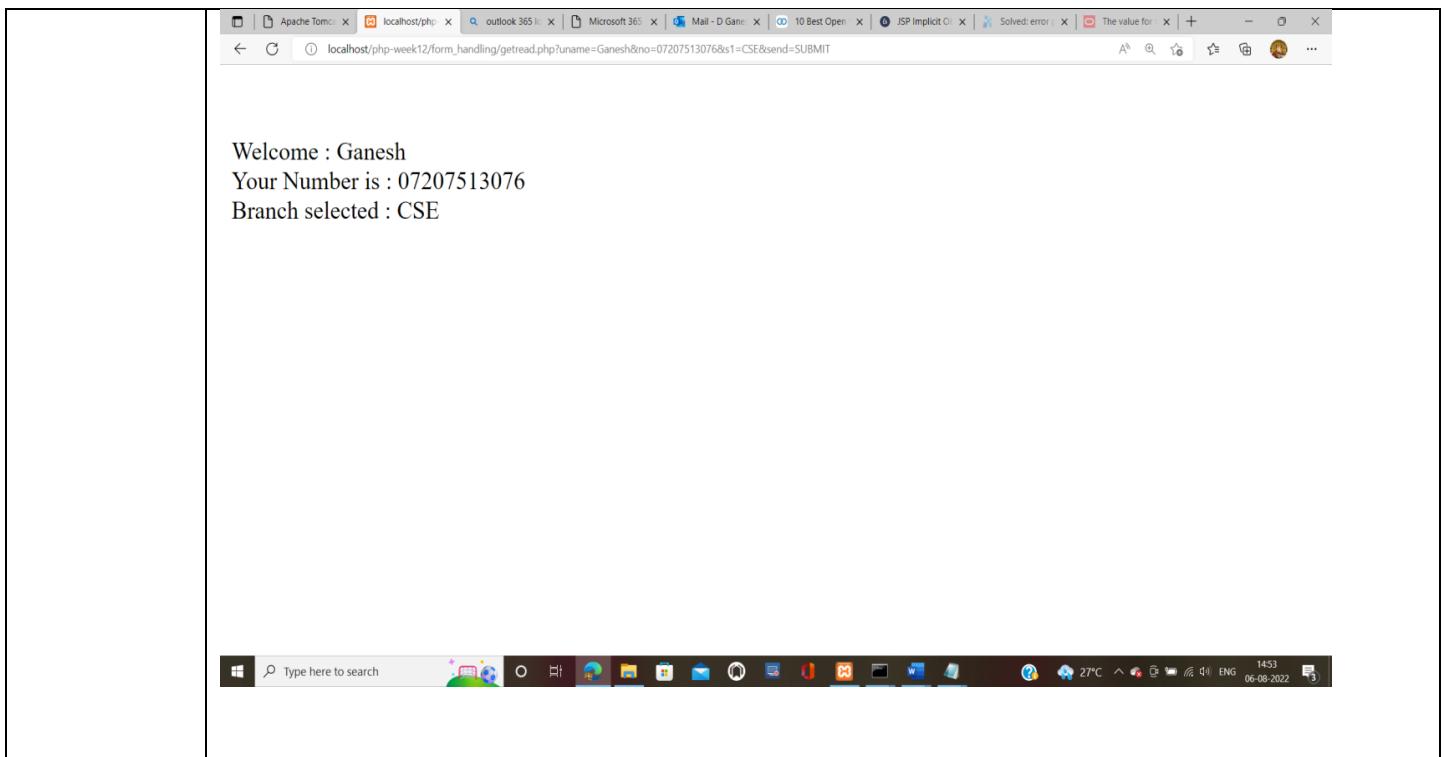
form handling request.php

```
<html>
<body>
<form name="f1" method="post" action="reqread.php">
User Name : <input type="text" name="uname"><br>
Mobile No : <input type="text" name="no"><br>
Department :
<Select name="s1">
<option value="CSE" > CSE </option>
<option value="ECE" > ECE </option>
<option value="EEE" > EEE </option>
</select></br>
<input type="submit" name="send" value="SUBMIT">
</form>
</body>
</html>
```

reqread.php

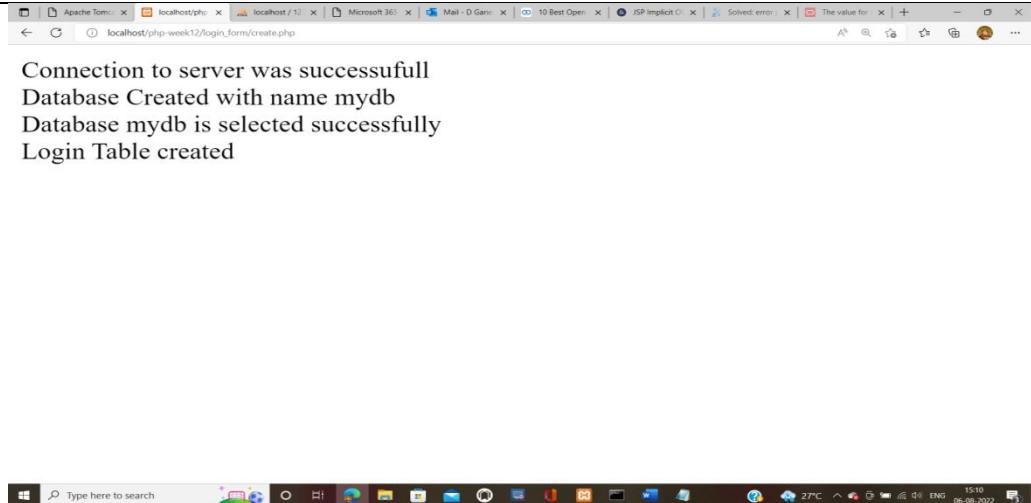
```
<html>
<body>
<br><br> Welcome : <?php echo $_REQUEST["uname"]; ?>
<br> Your Number is : <?php echo $_REQUEST["no"]; ?><br>
Branch selected : <?php echo $_REQUEST["s1"]; ?>
</body>
</html>
```

Output



Week-12**PHP Program to perform database operations create, insert, update, delete and retrieve on employee data.****Program**

```
create.php
<html>
<body>
<?php
$con = mysqli_connect('localhost','root','');
if(!$con){
    die('Error in Connection'.mysqli_error());
} else {
echo "Connection to server was successfull";
}
$dbname = "mydb";
$qry = "CREATE DATABASE $dbname";
mysqli_query($con , $qry);
echo "<br> Database Created with name $dbname ";
//selecting data base
$sel = mysqli_select_db($con , $dbname);
if($sel)
echo "<br> Database $dbname is selected successfully";
else
echo " <br> Database $dbname not selected";
$qry1 = "CREATE TABLE login2 ( uname varchar(40) NOT NULL , pword varchar(20) NOT
NULL)";
$tab = mysqli_query($con , $qry1);
if($tab)
echo "<br> Login Table created";
else
echo "<br> Login Table Not created";
mysqli_close($con); ?>
</body>
</html>
```

Output

Program

login.php

```
<html>
<body>
<form name="f2" method="post" action="insertuser.php">
<center>
<table border="2" >
<caption style="color:red"> Register Window </caption>
<tr><td> User Name :</td><td><input type="text" name="un" size=30 ></td></tr>
<tr><td> Password :</td><td><input type="password" name="pw" size=30 ></td></tr>
<tr><td align="left" ><input type="Submit" value="Insert User Details">&nbsp;&nbsp;
<td>
<a href="displayusers.php"> Display Users </a>
<a style="color:red" href="verifyuser.php">&nbsp;
Existing User Verify </a></td></td></tr>
<tr><td><a href="updateform.php"> Update Password </td>
<td><a href="deleteform.php"> Delete User </a></td></tr>
<tr><td align="right"><input type="reset" value="Clear"></td><td></td></tr>
</table>
</center>
</form>
</body>
</html>
```

Output



Register Window

User Name :	<input type="text"/>
Password :	<input type="password"/>
<input type="button" value="Insert User Details"/>	Display Users Existing User Verify
Update Password	Delete User
<input type="button" value="Clear"/>	



Register Window

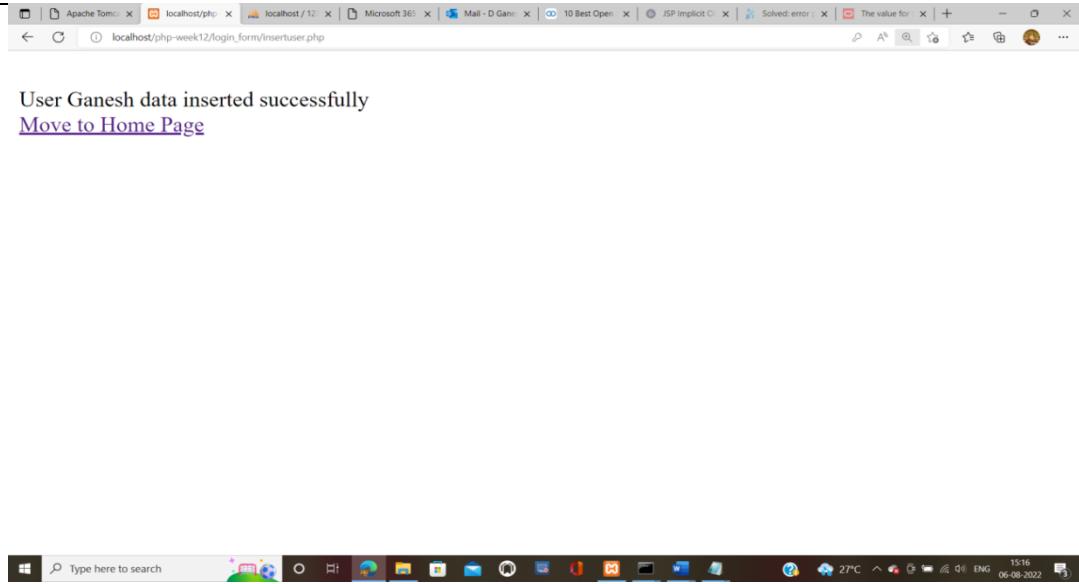
User Name :	Ganesh
Password :
<input type="button" value="Insert User Details"/>	Display Users Existing User Verify
Update Password	Delete User
<input type="button" value="Clear"/>	



Program

```
insertuser.php
<html>
<body>
<?php $con = mysqli_connect('localhost','root','','mydb');
if(!$con)
{
die('Error in Connection'.mysqli_error());
}
$sel = mysqli_select_db($con , 'mydb');
if(!$sel)
{
echo "<br> Database not selected";
}
$name = $_POST['un'];
$pwd = $_POST['pw'];
$qry2 = "INSERT INTO login2(uname,pword) VALUES('$name' , '$pwd')";
$ins = mysqli_query($con , $qry2);
if(!$ins)
echo "<br> Login data Not inserted successfully";
echo "<br> User $name data inserted successfully";
echo"<br><a href='login.php'>Move to Home Page </a>";
mysqli_close($con);
?>
</body>
</html>
```

Output



Program

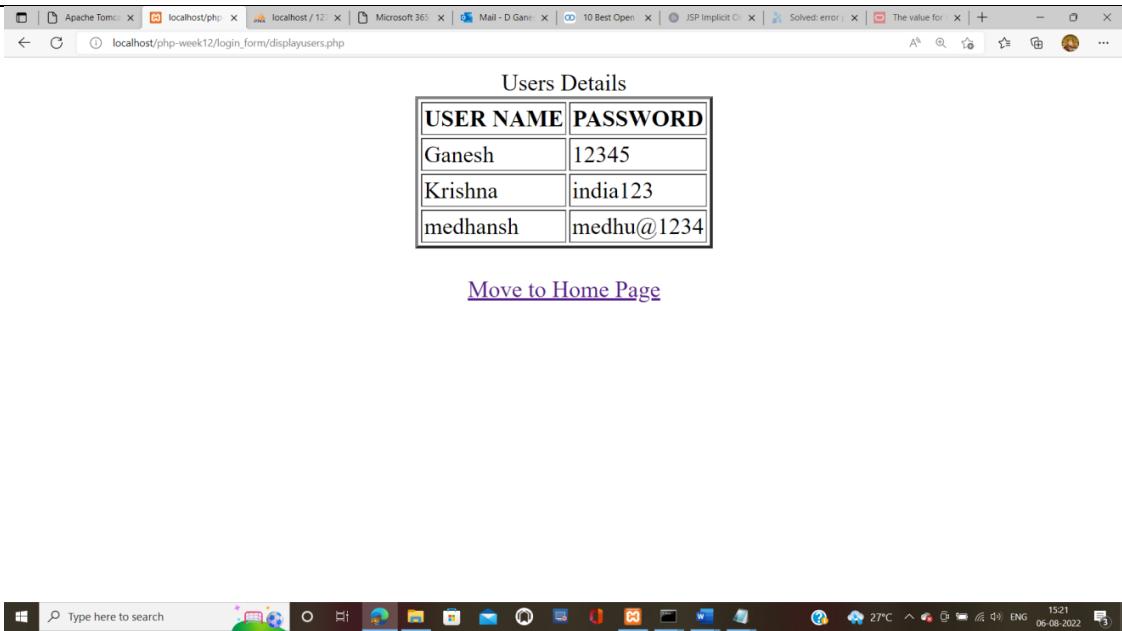
```
displayusers.php
<html>
<body>
<?php $con = mysqli_connect('localhost','root','','mydb');
if(!$con)
{
die('Error in Connection'.mysqli_error());
}
$sel = mysqli_select_db($con , 'mydb');
```

```

if(!$sel)
echo "<br> Database not selected";
$res = mysqli_query($con , "SELECT * From login2");
echo "<center>";
echo "<table border=2>";
echo "<caption> Users Details </caption>";
echo "<tr><th> USER NAME </th><th> PASSWORD </th></tr> ";
while($row = mysqli_fetch_array($res))
{
echo "<tr><td> ";
echo $row['uname'];
echo "</td>";
echo " <td> ";
echo $row['pword'];
echo "</td></tr>";
}
echo "</table>";
echo "</ceneter>";
echo "<br><a href='login.php'>Move to Home Page </a>";
mysqli_close($con); ?>
</body>
</html>

```

Output



Program

[updateform.php](#)

```

<html>
<body>
<form name="f2" method="post" action="update.php">
<center>
<table border="2" >
<caption style="color:red"> Register Window </caption>
<tr><td> User Name :</td><td><input type="text" name="unn" size=30 ></td></tr>

```

```

<tr><td> Old Password :</td><td><input type="password" name="opw" size=30
></td></tr><tr><td> New Password :</td><td><input type="password" name="npw"
size=30 ></td></tr>
<tr><td></td><td align="left" ><input type="Submit" value="UPDATE">&nbsp;&nbsp;
<input type="reset" value="Clear"></td></tr>
</table>
</center>
</form>
</body>
</html>

```

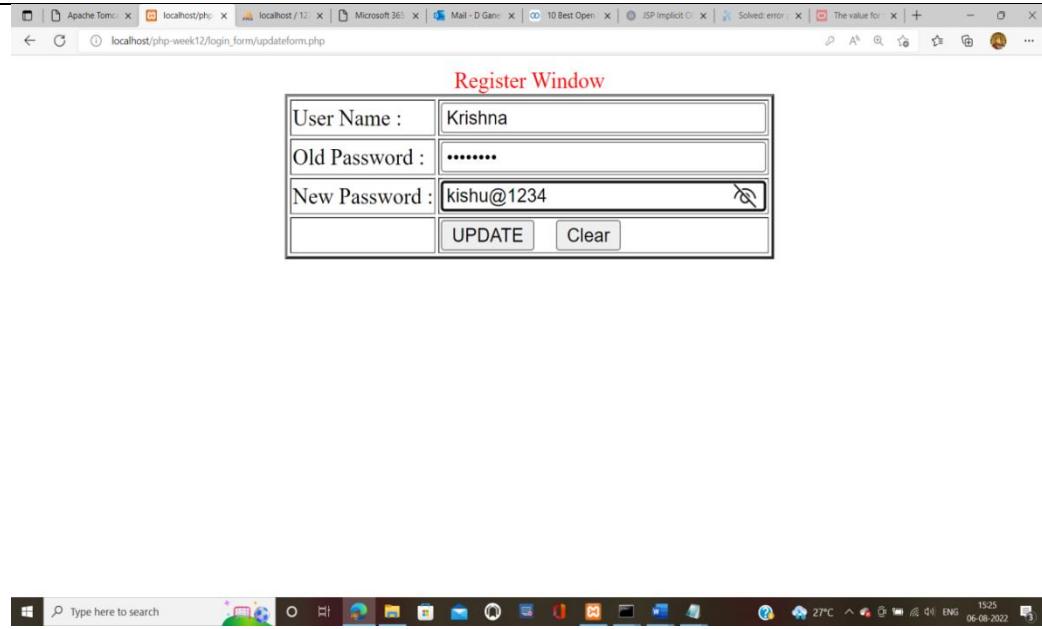
update.php

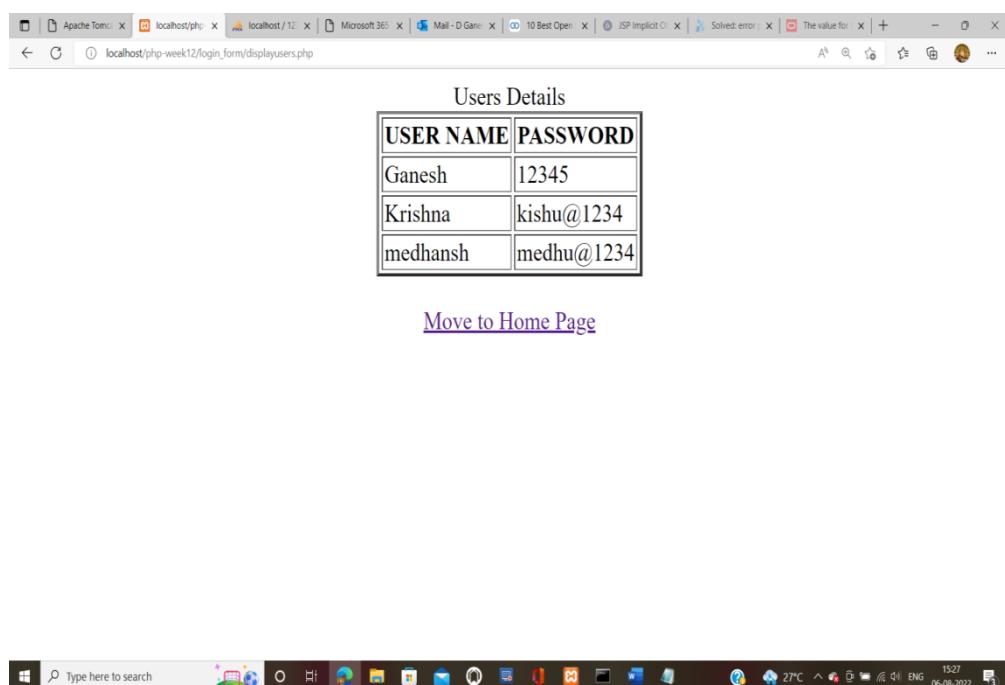
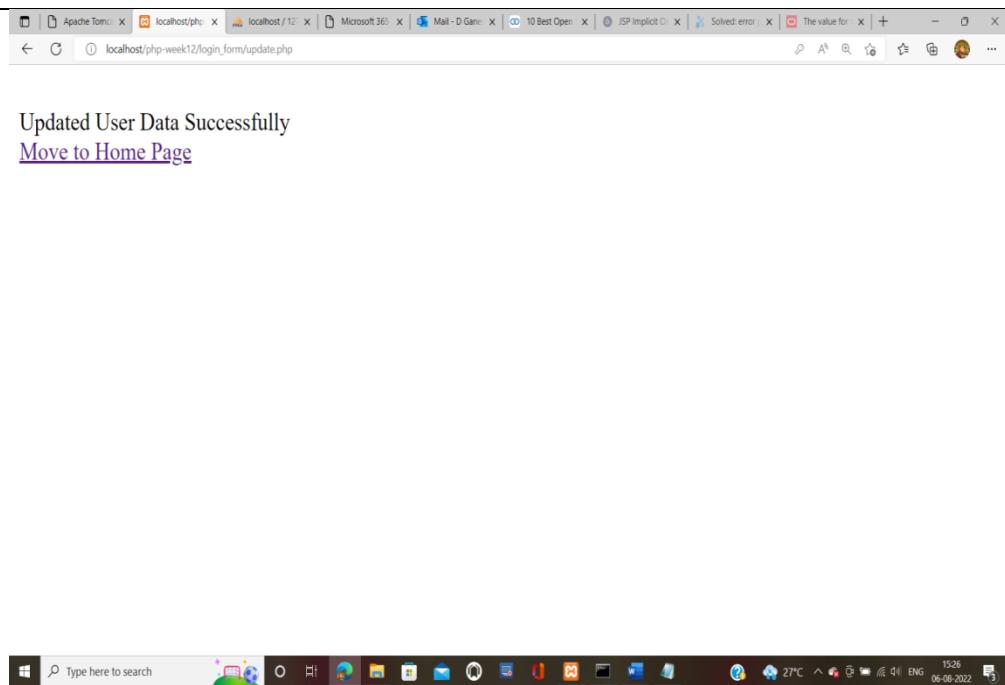
```

<html>
<body>
<?php
$con = mysqli_connect('localhost','root','','mydb');
if(!$con) {
die('Error in Connection'.mysqli_error());
}
$sel = mysqli_select_db($con , 'mydb');
if(!$sel)
echo "<br> Database is selected successfully"; //Getting form Data
$un = $_POST['unn'];
$old = $_POST['opw'];
$ne = $_POST['npw'];
mysqli_query($con , "UPDATE login2 SET pword='$ne' WHERE pword='$old'");
echo "<br>Updated User Data Successfully";
echo "<br><a href='login.php'>Move to Home Page </a>";
mysqli_close($con); ?>
</body>
</html>

```

Output





Program

deleteform.php

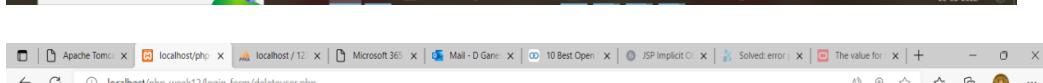
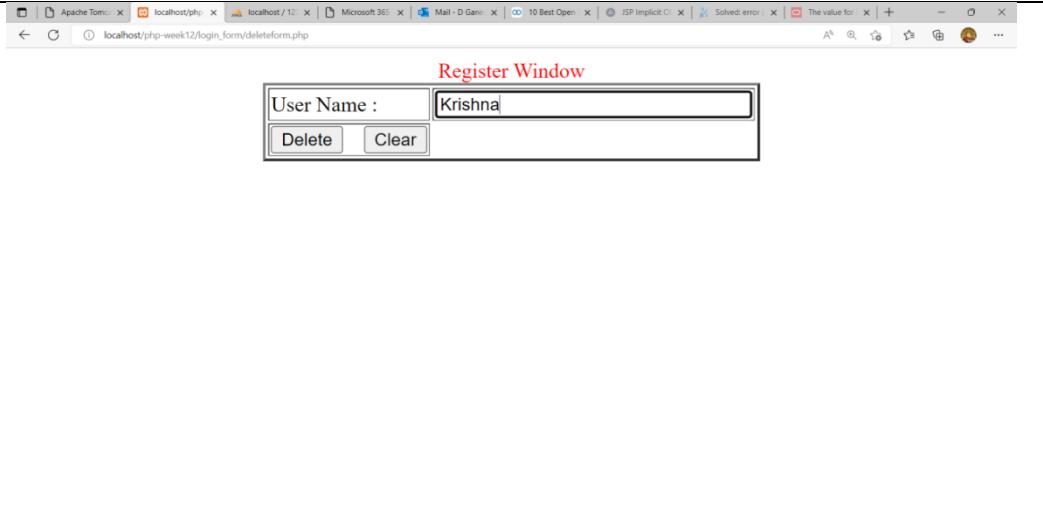
```
<html><body>
<form name="f2" method="post" action="deleteuser.php"><center>
<table border="2" ><caption style="color:red"> Register Window </caption>
<tr><td> User Name :</td><td><input type="text" name="user" size=30 ></td></tr>
<tr><td align="left" ><input type="Submit" value="Delete">&nbsp;&nbsp;
<input type="reset" value="Clear"></td></tr>
</table>
</center>
</form>
</body>
</html>
```

```

deleteuser.php
<html>
<body>
<?php
$con = mysqli_connect('localhost','root','','mydb');
if(!$con)
{
die('Error in Connection'.mysqli_error());
}
$sel = mysqli_select_db($con , 'mydb');
if(!$sel)
echo "<br> Database not selected";
$name = $_POST['user'];
mysqli_query($con , "DELETE FROM login2 WHERE uname='".$name"'");
echo "<br> Deleted User Data Successfully ";
echo"<br><a href='login.php'>Move to Home Page </a>"; mysqli_close($con); ?>
</body>
</html>

```

Output



Deleted User Data Successfully
[Move to Home Page](#)

Move to Home Page

Program

verifyuser.php

```
<html>
<body>
<form name="f2" method="post" action="verify.php">
<center><table border="2" ><caption style="color:red"> verify user </caption>
<tr><td> User Name :</td><td><input type="text" name="un" size=30
required="required"></td></tr>
<tr><td> Password :</td><td><input type="password" name="pw" size=30
required="required"></td></tr>
<tr><td align="left" colspan=2><input type="Submit" value="verify me"></td>
</tr>
</table>
</center>
</form>
</body>
</html>
```

verify.php

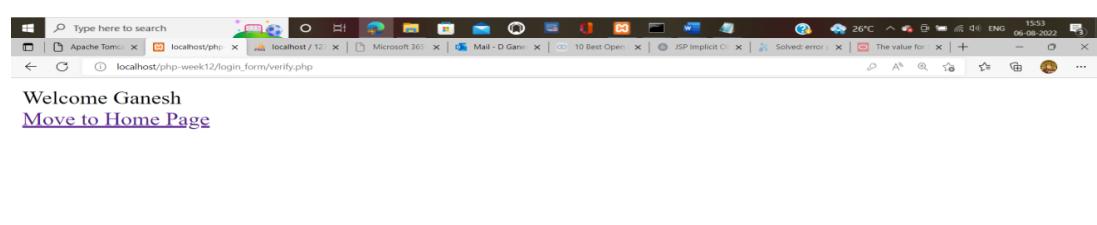
```
<html>
<body>
<?php
$name=$_POST['un'];
$pwd=$_POST['pw'];
$con = mysqli_connect('localhost','root','','mydb');
if(!$con)
{
die('Error in Connection'.mysqli_error());
}
$sel = mysqli_select_db($con , 'mydb');
if(!$sel)
echo " <br> Database not selected";
$res = mysqli_query($con , "SELECT * From login2");
while($row = mysqli_fetch_array($res))
{
if(strcmp($row['uname'],$name)==0 && strcmp($row['pword'],$pwd)==0)
```

```

{
echo "Welcome $name";
break;
}
echo"<br><a href='login.php'>Move to Home Page </a>"; mysqli_close($con); ?>
</body>
</html>

```

Output


Post-Lab Questions

- How failures in execution are handled with include() and require() functions?
- How can we display information of a variable and readable by a human with PHP?
- What does the PHP error ‘Parse error in PHP – unexpected T_variable at line x’ means?
- How can we connect to a MySQL database from a PHP script?
- How be the result set of Mysql handled in PHP?
- How is it possible to know the number of rows returned in the result set?
- What is the difference between mysqli_fetch_object() and mysqli_fetch_array()?
- How can we access the data sent through the URL with the GET method?
- How can we check the value of a given variable is a number?
- What does the unset() function mean?
- How is a constant defined in a PHP script?
- How to initiate a session in PHP?
- What does \$GLOBALS mean?
- what is the difference between for and foreach?