Department of Information of Technology

Web Technologies Lab Manual

III B. Tech-II Semester

(Academic Year 2018-19)

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G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE
(FOR WOMEN)

DEPARTMENT OF INFORMATION TECHNOLOGY

Web Technologies Lab

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Class: III B.Tech – II Semester

S.NO	EXERCISES
1	Install the following on the local machine • Apache Web Server (if not installed) • Tomcat Application Server locally • Install MySQL (if not installed) • Install PHP and configure it to work with Apache web server and MySQL (if not already configured)
2	Write an HTML page including javascript that takes a given set of integer numbers and shows them after sorting in descending order.
3	Write an HTML page including any required Javascript that takes a number from one text field in the range of 0 to 999 and shows it in another text field in words. If the number is out of range, it should show "out of range" and if it is not a number, it should show "not a number" message in the result box.
4	Write an HTML page that has one input, which can take multi-line text and a submit button. Once the user clicks the submit button, it should show the number of characters, words and lines in the text entered using an alert message. Words are separated with white space and lines are separated with new line character
5	Write an HTML page that contains a selection box with a list of 5 countries. When the user selects a country, its capital should be printed next to the list. Add CSS to customize the properties of the font of the capital (color, bold and font size).
6	Create an XML document that contains 10 users information. Write a Java program, which takes User Id as input and returns the user details by taking the user information from the XML document using (a) DOM Parser and (b) SAX parser

G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE
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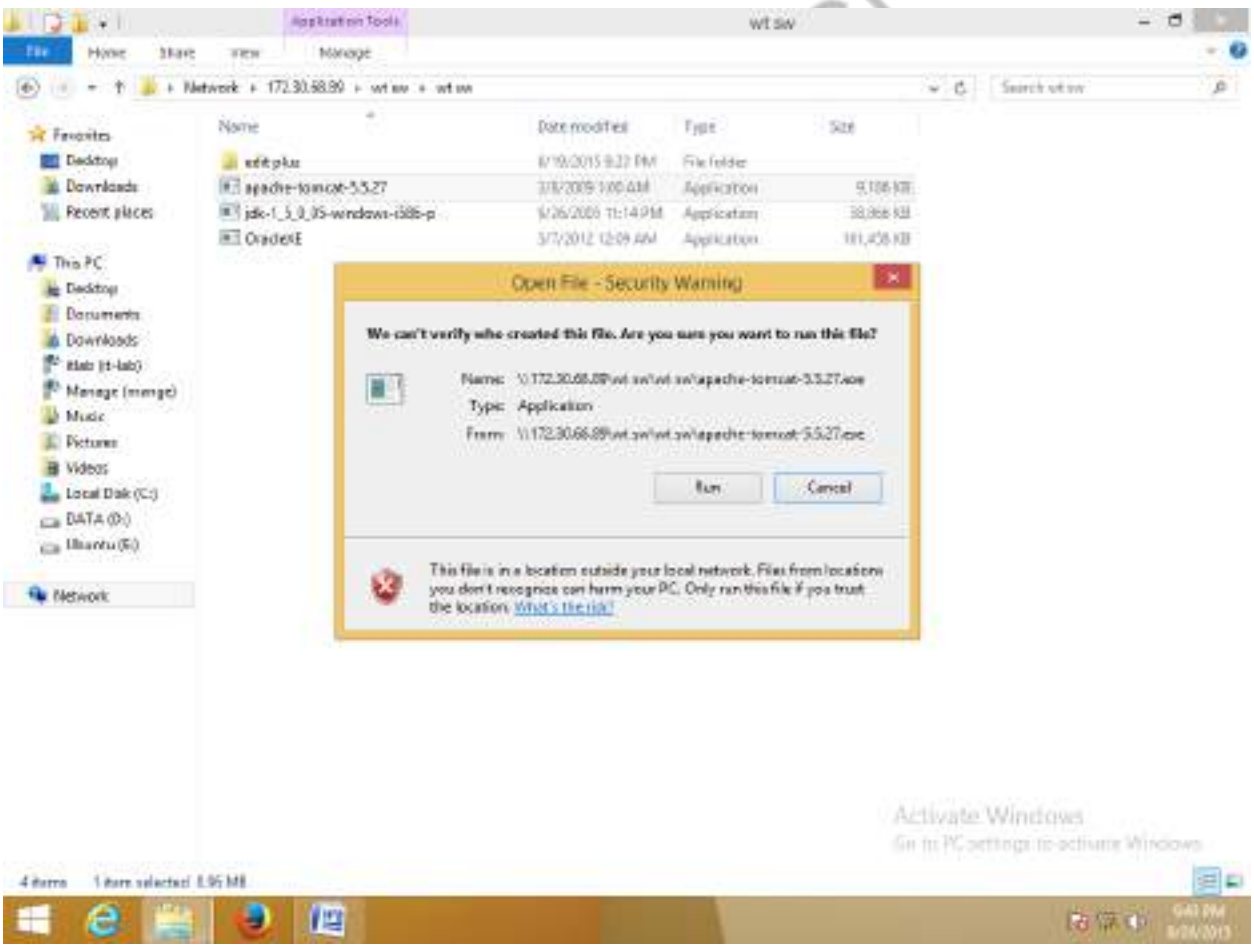
S.NO	EXERCISES
7	Implement the following web applications using (a) PHP, (b) Servlets and (c) JSP: i. A user validation web application, where the user submits the login name and password to the server. The name and password are checked against the data already available in Database and if the data matches, a successful login page is returned. Otherwise a failure message is shown to the user. ii. Modify the above program to use an xml file instead of database. iii. Modify the above program to use AJAX to show the result on the same page below the submit button. iv. A simple calculator web application that takes two numbers and an operator (+, -, /, * and %) from an HTML page and returns the result page with the operation performed on the operands. v. Modify the above program such that it stores each query in a database and checks the database first for the result. If the query is already available in the DB, it returns the value that was previously computed (from DB) or it computes the result and returns it after storing the new query and result in DB. vi. A web application takes a name as input and on submit it shows a hello <name> page where<name> is taken from the request. It shows the start time at the right top corner of the page and provides a logout button. On clicking this button, it should show a logout page with Thank You <name> message with the duration of usage (hint: Use session to store name and time). vii. A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with "Hello <name>, you are not authorized to visit this site" message, where <name> should be replaced with the entered name. Otherwise it should send "Welcome <name> to this site" message. viii. A web application for implementation: The user is first served a login page which takes user's name and password. After submitting the details the server checks these values against the data from a database and takes the following decisions. If name and password matches, serves a welcome page with user's full name. If name matches and password doesn't match, then serves "password mismatch" page If name is not found in the database, serves a registration page, where user's full name is asked and on submitting the full name, it stores, the login name, password and full name in the database (hint: use session for storing the submitted login name and password). ix. A web application that lists all cookies stored in the browser on clicking "List Cookies" button. Add cookies if necessary.

Apcahe Tomcat Installation and Testing

1. Install the JDK.Make sure JDK 1.4 or 1.5 is installed and your PATH is set so that both "java -version" and "javac -help" give a result.
2. Install the Apache Tomcat 5.5 by the following steps
3. Download the .exe installer from https://tomcat.apache.org/
4. Run the apache-tomcat-5.5.27 .exe file using following steps:

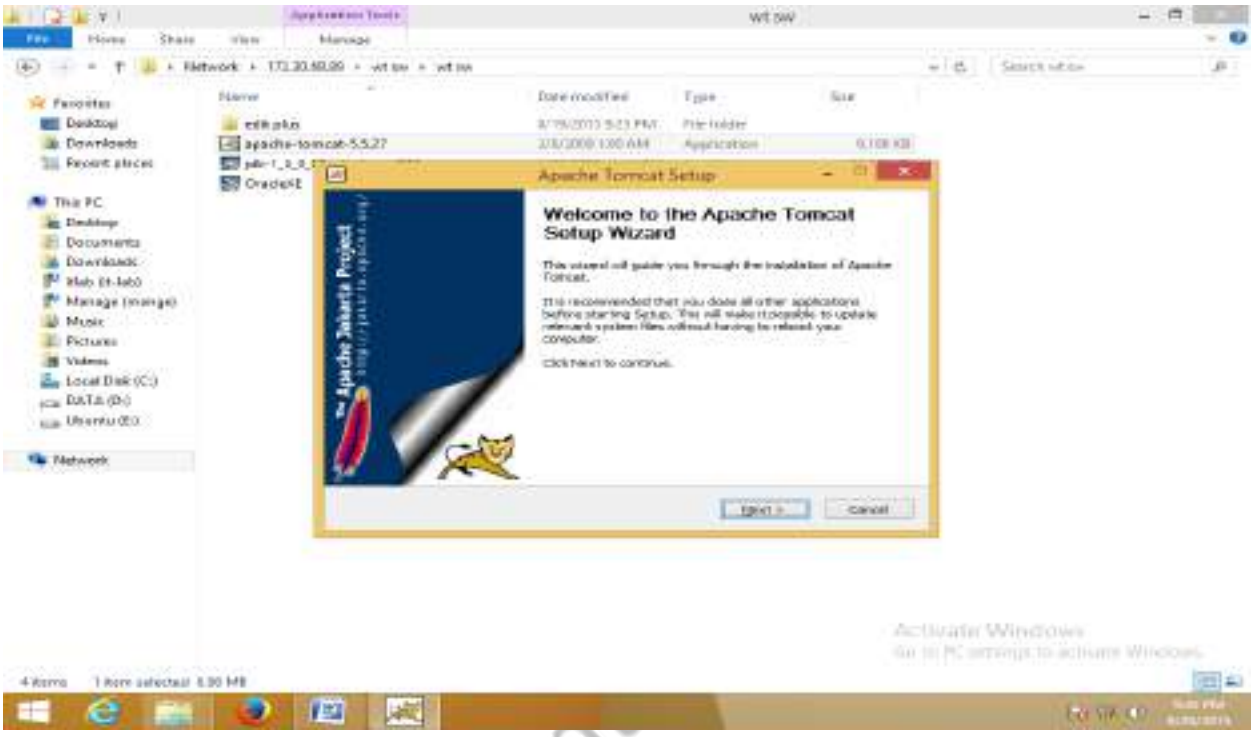
   Double click on the .exe file



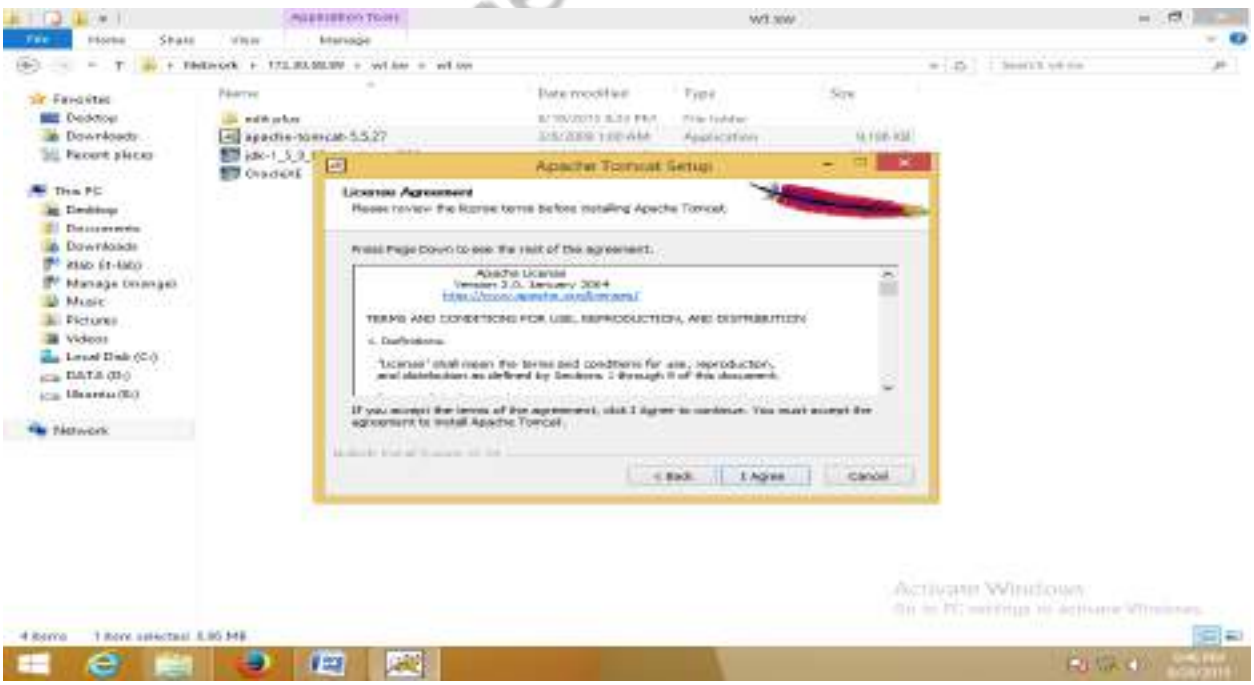
Click on Run

Opens a window with dialog box. Click on yes

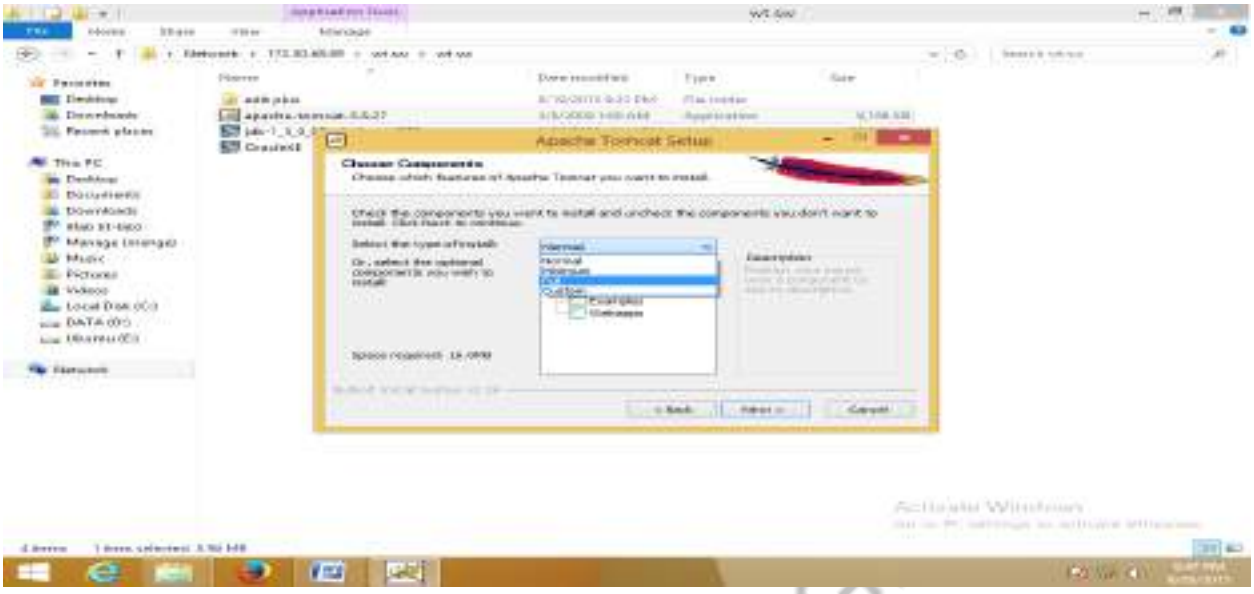
It opens a window as shown:



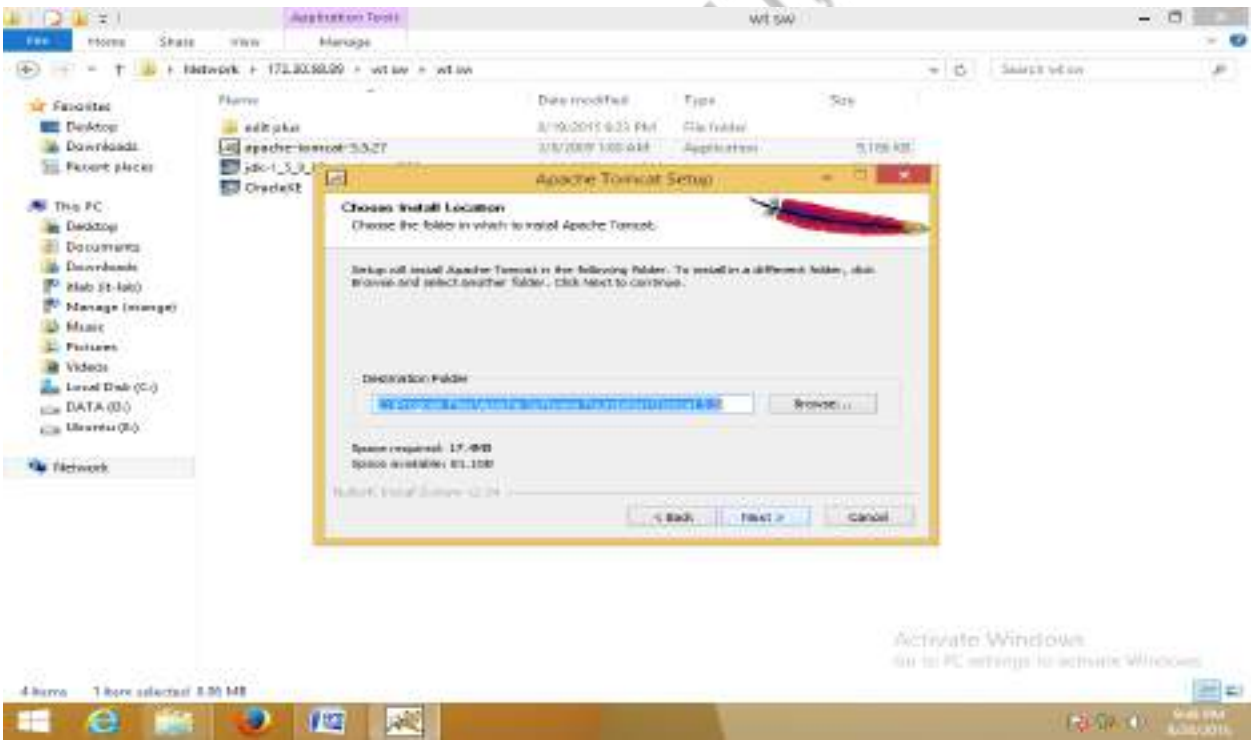
Click on Next



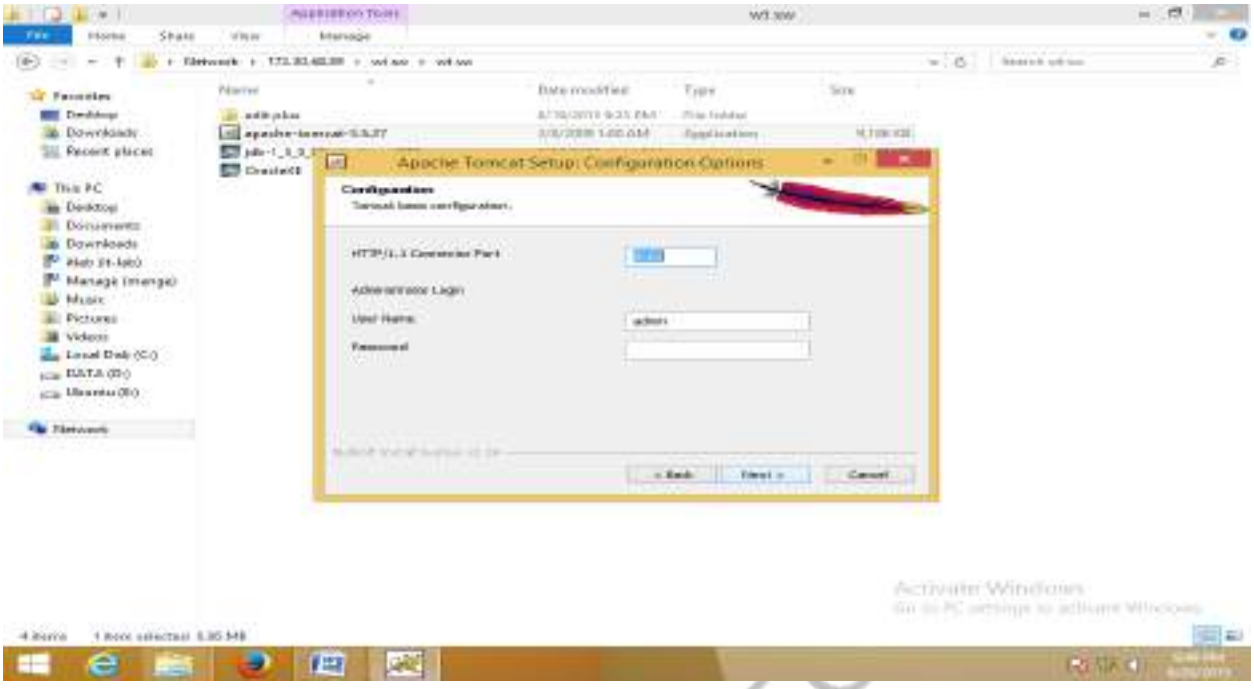
Click on “I Agree” button to accept the terms of Tomcat



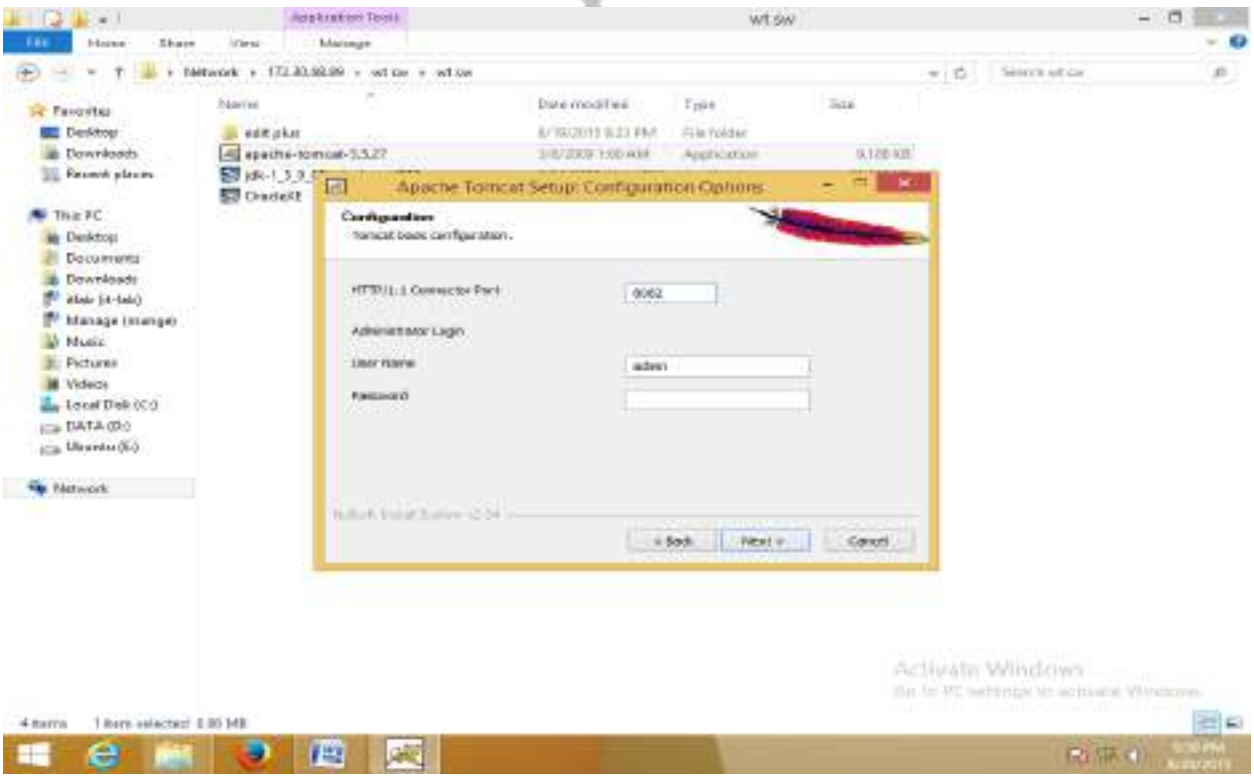
Select Full from drop down list as shown above and click on Next



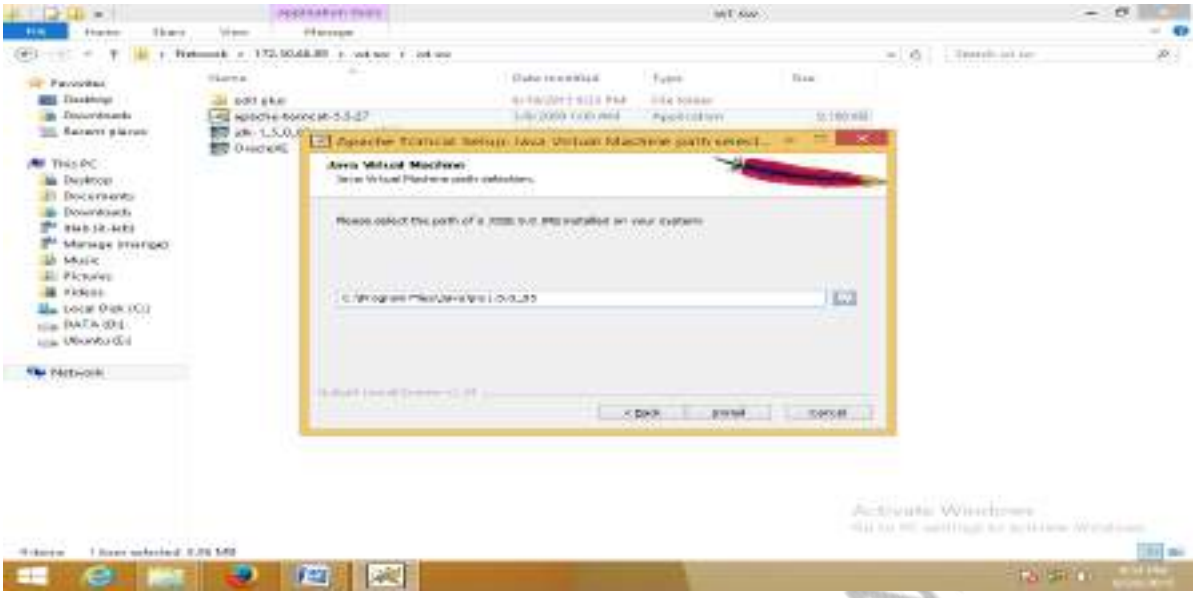
Provide the path to the destination folder and click on Next



The default port number is 8080 for Apache Tomcat server. Change the port number to 8082. Changing the port number is required if there is another server running on the same system with same port number. Suppose you have installed oracle, you need to change the port number of apache tomcat because both have the default port number 8080.



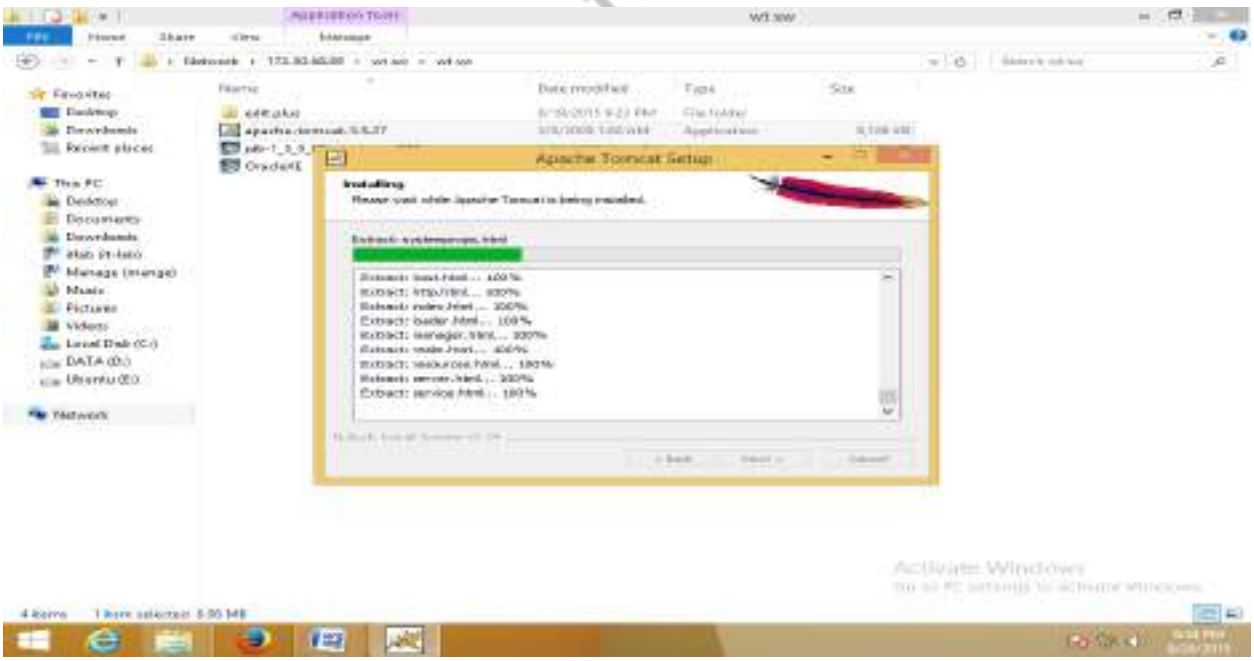
Click on Next

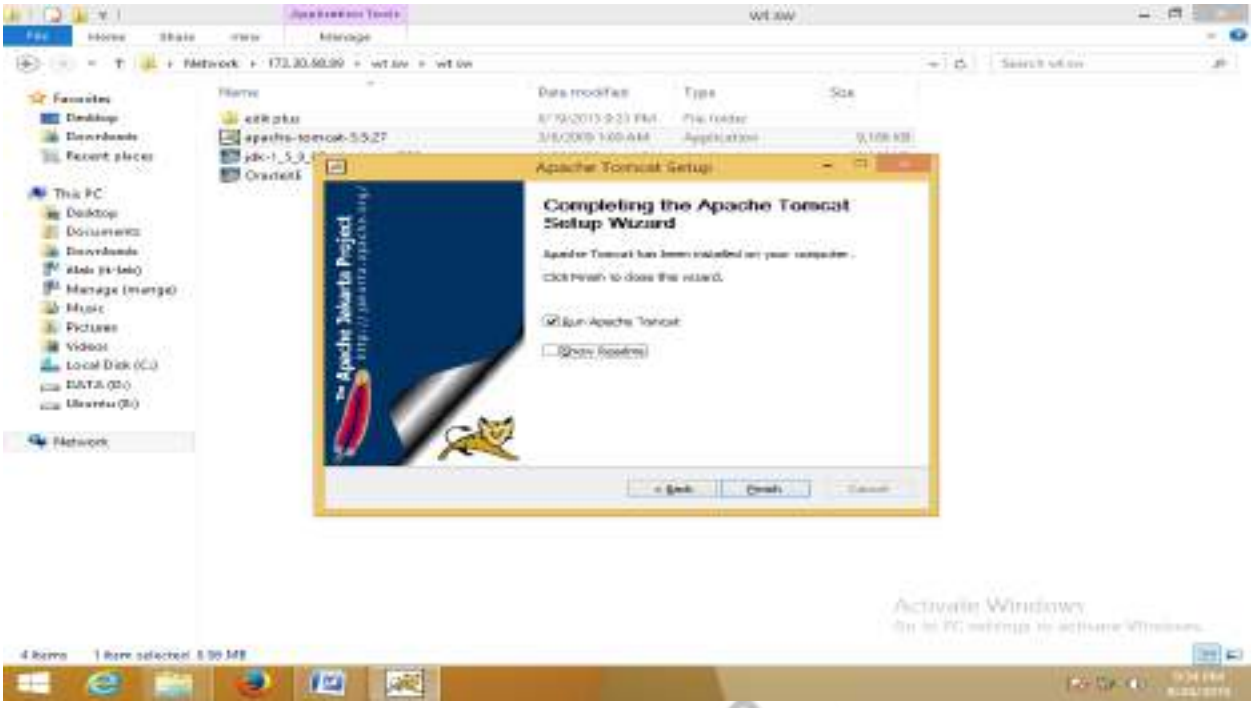


Select the path for the JRE version that is already installed on the system. Ensure that the provided JREor JDK version is the compatible version with Tomcat version and click on Install

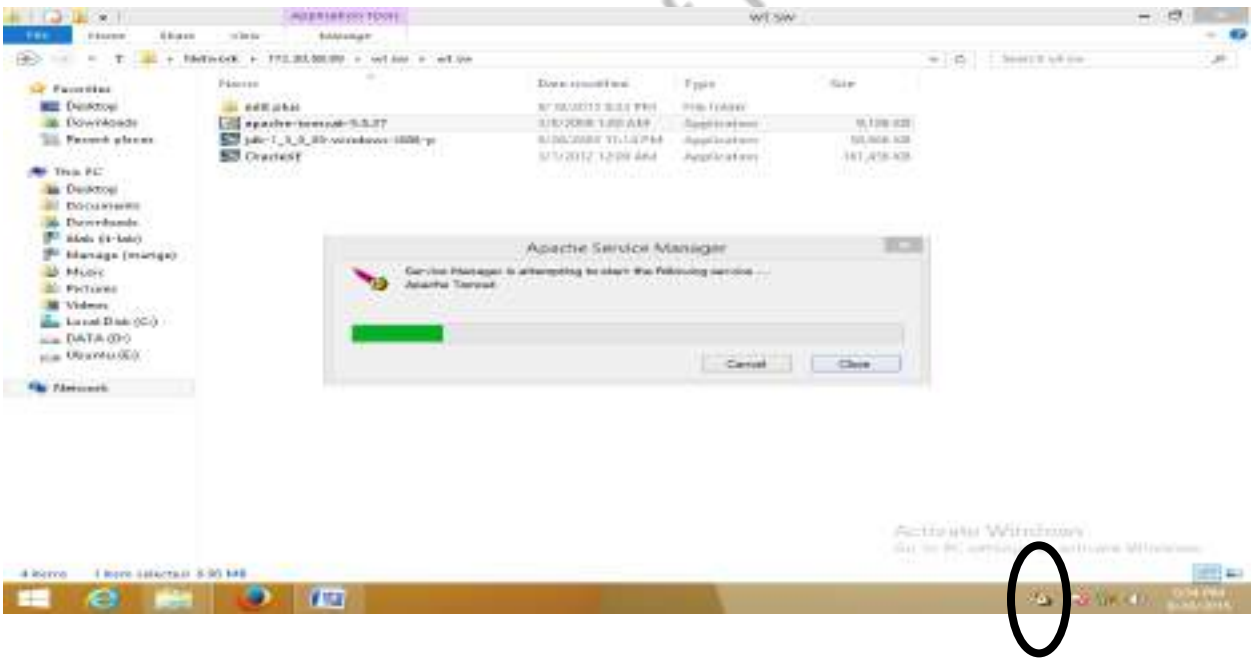
It will set JAVA_HOME variable to C:\Program Files\Java\Jre1.5.0_05\

Note: It can be Jdk1.5.0 also

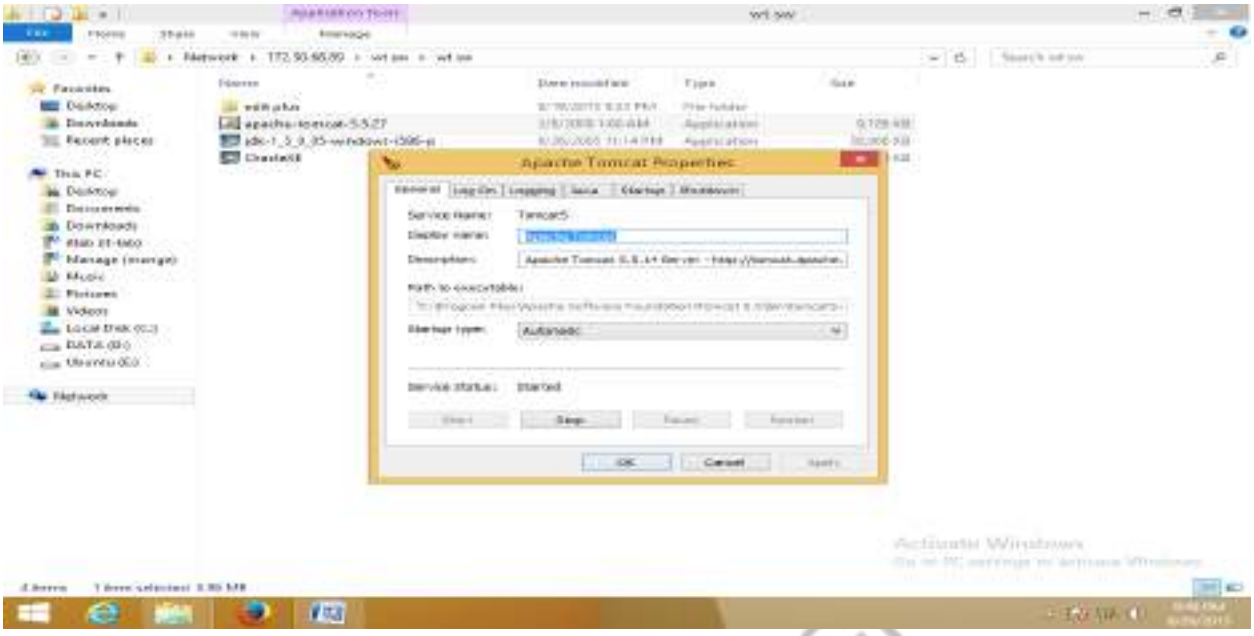




Click on Finish



Double click on the icon highlighted in the above screenshot



It indicates that the server is running. To stop the server, click on stop.

Testing

Open browser and type the url http://localhost:8082

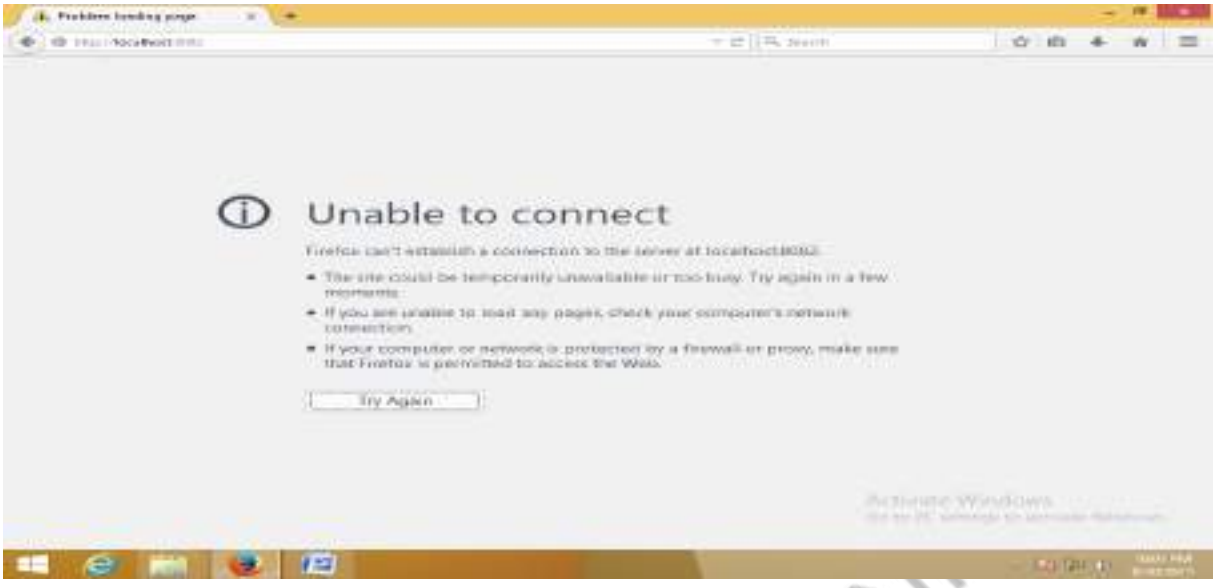
Opens a window as shown

Click on Tomcat Manager

Provide username as admin and click ok

Opens a window which shows the list of applications deployed on to server correctly and running status as true.

When the server is stopped and trying to run the server, it shows the following msg



Ensure that the server is started before running the application.

If any changes to the application are made, stop/shutdown the server and start the server… and then run the modified application and test.

There are two types of tomcat available:

1. Apache tomcat that needs to extract only (no need to install)
2. Apache tomcat that needs to install ---- procedure is explained above

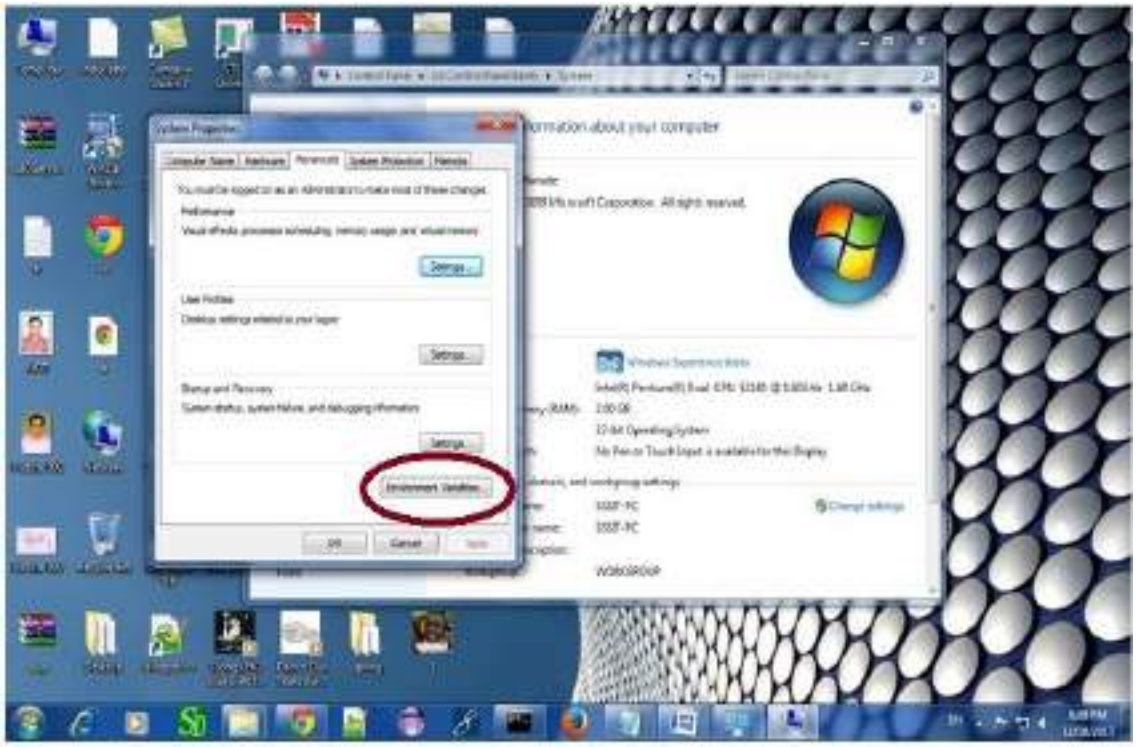
Apache tomcat that needs to extract only (no need to install) has the following steps:

1. Install the JDK.Make sure JDK 1.4 or 1.5 is installed and your PATH is set so that both "java -version" and "javac -help" give a result.
2. Download the software from https://tomcat.apache.org/
3. unpack the zip file for the current release build of Tomcat 5 or 6 or above
4. set the JAVA_HOME environment variable to tell Tomcat where to find Java

How to set JAVA_HOME in environment variable? Go to My Computer properties -> Click on advanced tab then environment variables -> Click on the new tab of user variable -> Write JAVA_HOME in variable name and paste the path of jdk folder in variable value -> ok -> ok -> ok.

Go to My Computer properties:

Click on advanced system settings tab then environment variables:

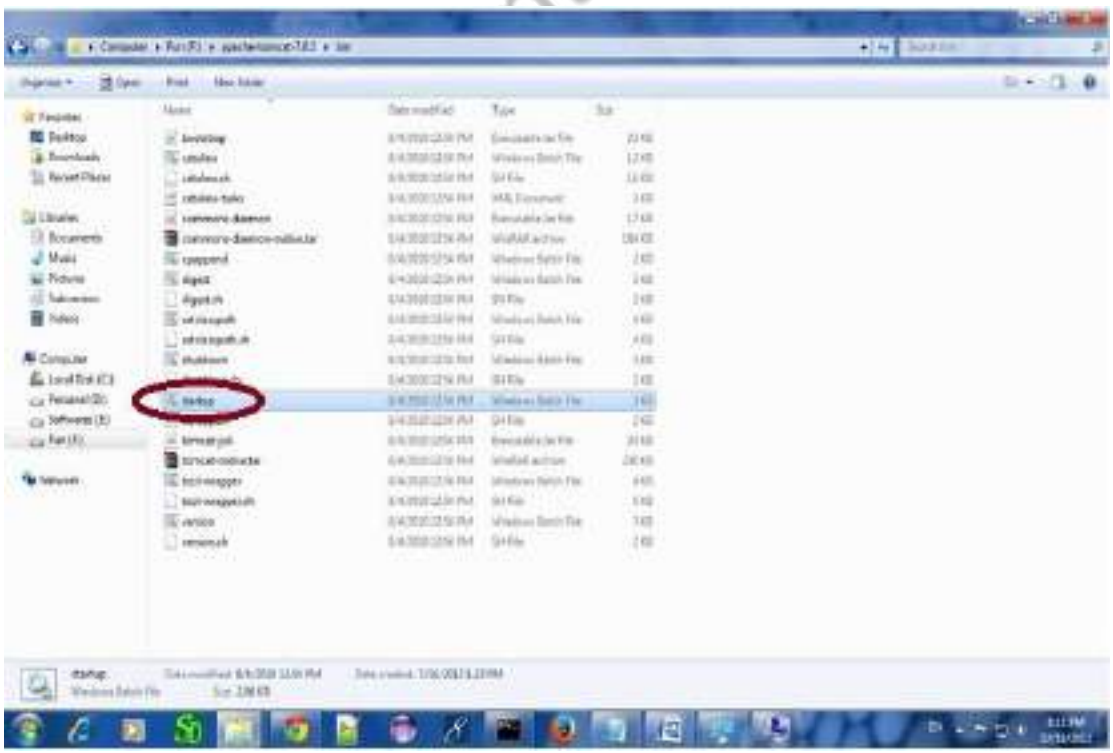


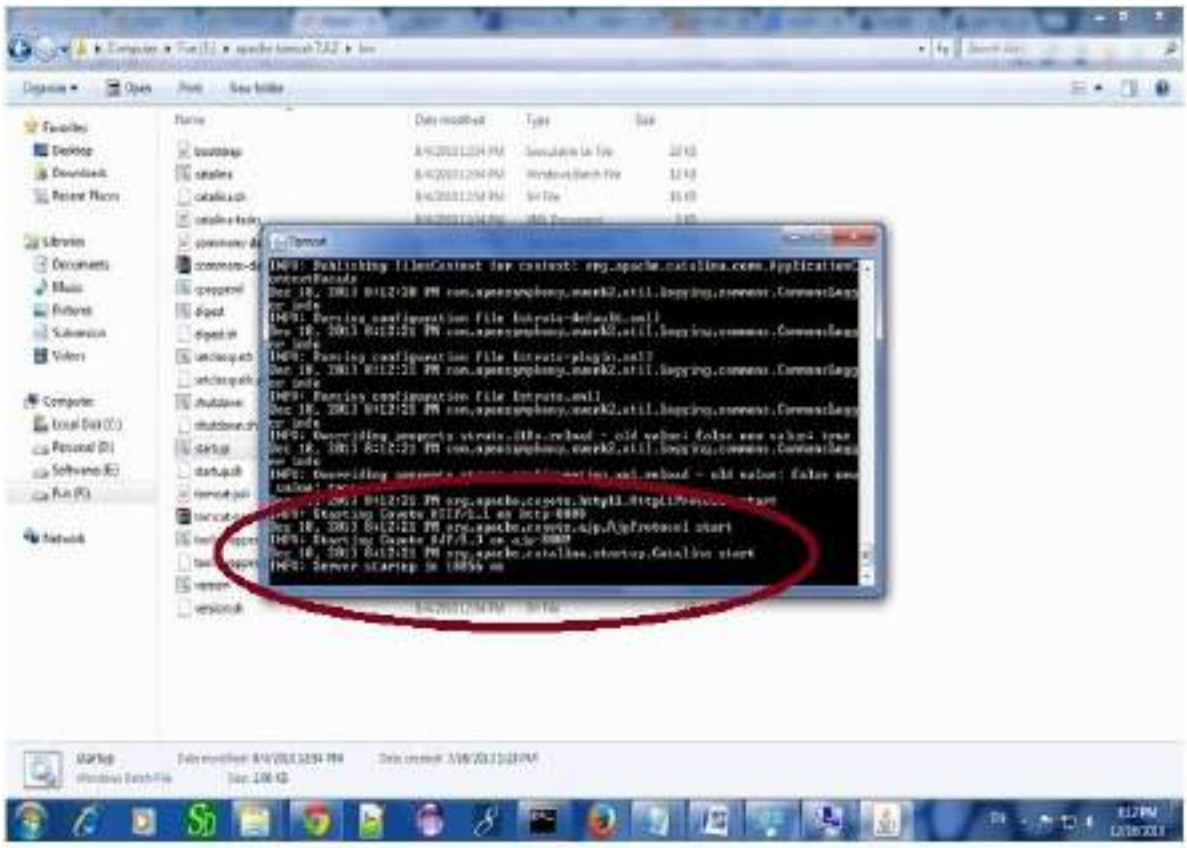
Click on the new tab of user variable or system variable:

Write JAVA_HOME in variable name and paste the path of jdk folder in variable value:

There must not be semicolon (;) at the end of the path.

5. After setting the JAVA_HOME double click on the startup.bat file in apache tomcat/bin.





Now server is started successfully.

6. Changing the port number is required if there is another server running on the same system with same port number. Suppose you have installed oracle, you need to change the port number of apache tomcat because both have the default port number 8080.

   Open **server.xml file** in notepad. It is located inside the **apache-tomcat/conf** directory . Change the Connector port = 8080 and replace 8080 by any four digit number instead of 8080. Let us replace it by 8082 and save this file.

AIM 2:

Write an HTML page including javascript that takes a given set of integer numbers and shows them after sorting in descending order.

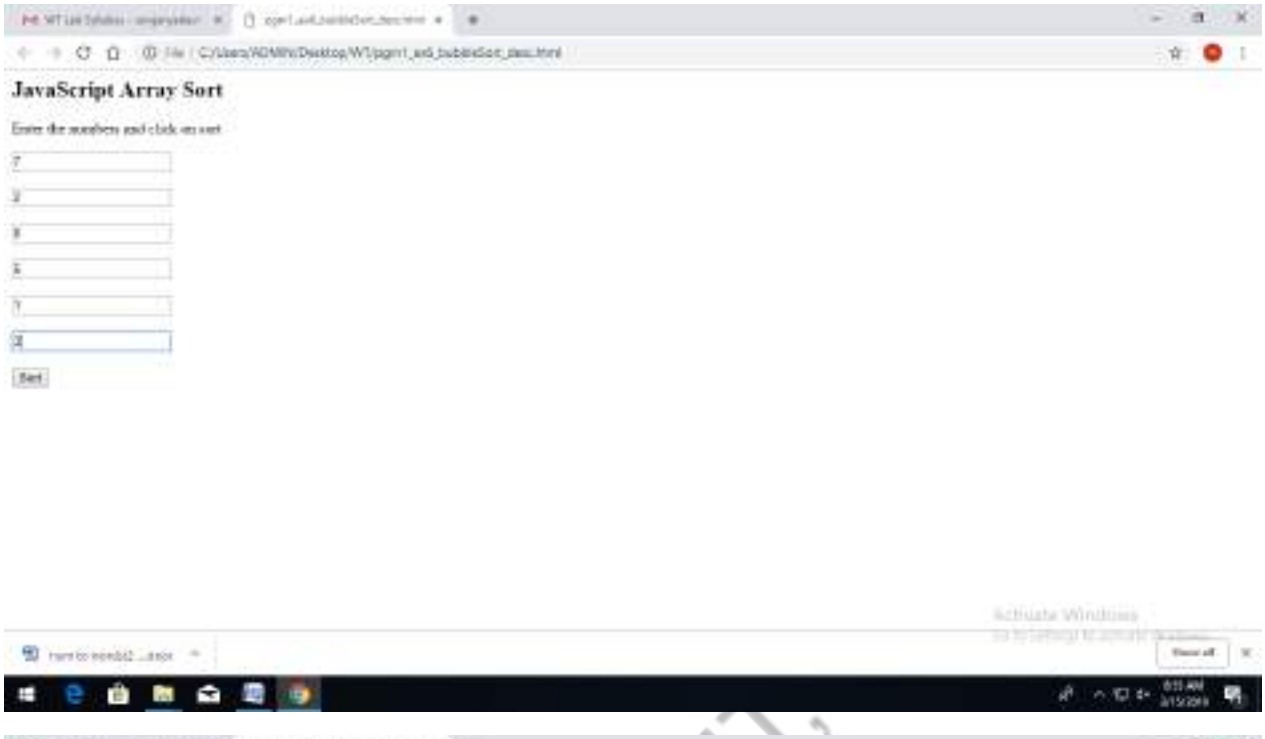
PROGRAM

```
<html>
<title></title>
<head>
 <script>
   var arr = [];
 function readValues() {

        arr[0]=parseInt(document.f1.n1.value);
        arr[1]=parseInt(document.f1.n2.value);
        arr[2]=parseInt(document.f1.n3.value);
        arr[3]=parseInt(document.f1.n4.value);
        arr[4]=parseInt(document.f1.n5.value);
        arr[5]=parseInt(document.f1.n6.value);
 }
  function bubbleSort()
        {
          readValues();
          document.getElementById("demo1").innerHTML = "Given Set of Integers : " +arr;
          var len = arr.length, i, j;

    for (i=0; i < len; i++)
          {
     for (j=0; j < len-i; j++)
                {
```

```
        if (arr[j] < arr[j+1])
                        {
            var temp = arr[j];
            arr[j] = arr[j+1];
            arr[j+1] = temp;
        }
      }
   }
        //return arr;
   document.getElementById("demo2").innerHTML = "After Numeric sort, Set of Integers : "
+arr;


  }
 </script>
</head>
<body>
  <h2>JavaScript Array Sort</h2>
  <p>Enter the numbers and click on sort</p>
<form name="f1">
  <input type="text" name="n1" value=""/>
  <br><br>
  <input type="text" name="n2" value=""/>
  <br><br>
  <input type="text" name="n3" value=""/>
  <br><br>
  <input type="text" name="n4" value=""/>
  <br><br>
  <input type="text" name="n5" value=""/>
  <br><br>
```

```
  <input type="text" name="n6" value=""/>
  <br><br>

  <input type="button" name="b1" value="Sort" onclick="bubbleSort()">
  <br><br>


  <p id="demo1"></p>
  <p id="demo2"></p>
</form>
</body>
</html>
```

OUTPUT


JavaScript Array Sort
Enter the numbers and click on sort
7
2
8
5
7
3
Sort


JavaScript Array Sort
Enter the numbers and click on sort
7
2
8
5
7
3
Sort
Given Set of Integers : 7,2,8,5,7,3
After Numeric sort, Set of Integers : 8,7,7,5,3,2

AIM 3:

Write an HTML page including any required Javascript that takes a number from one text field in the range of 0 to 999 and shows it in another text field in words. If the number is out of range, it should show "out of range" and if it is not a number, it should show "not a number" message in the result box.

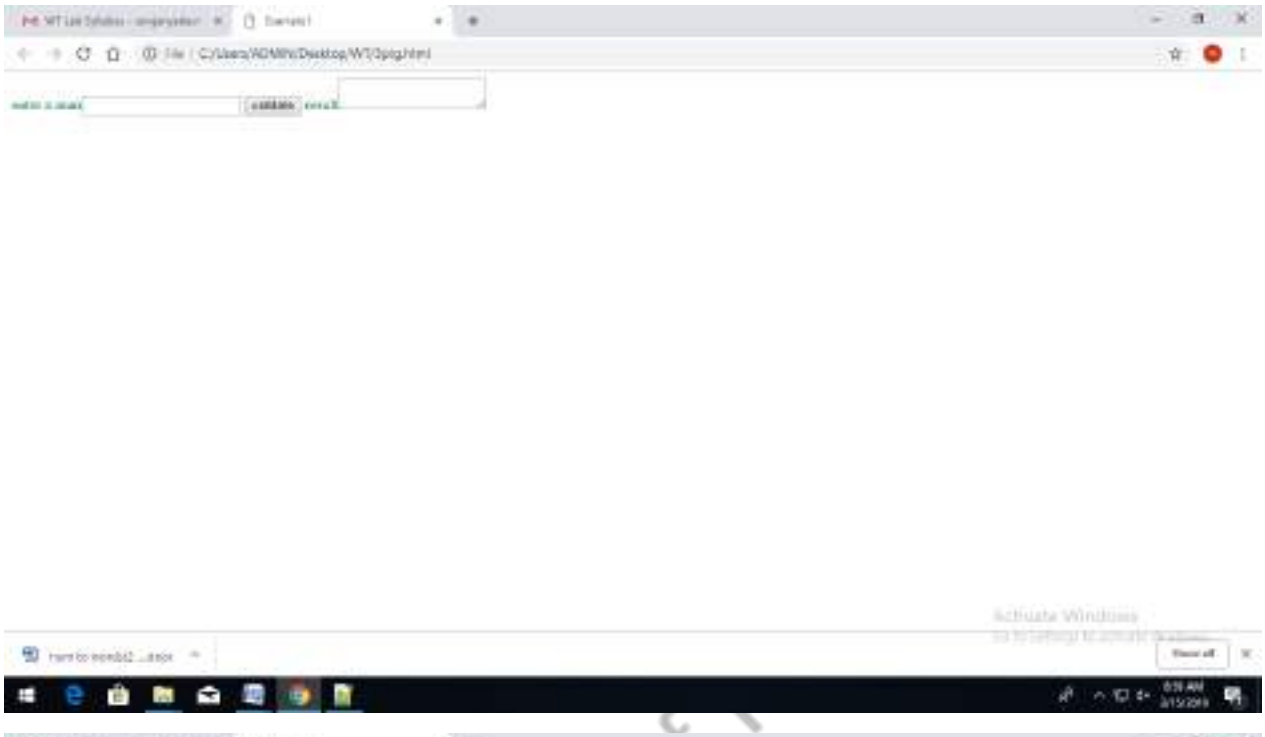
PROGRAM

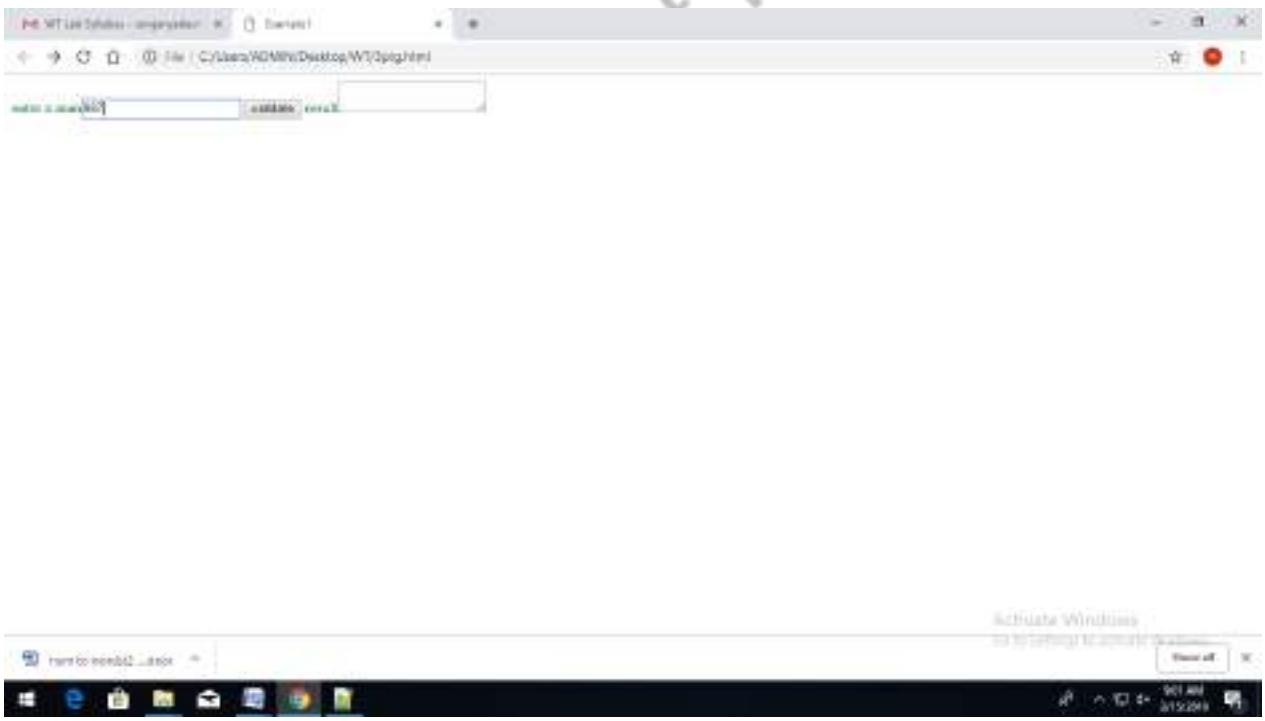
```
<html>
<head>
<title>Example1</title>
<script>
function checkfun()
{
var num = document.f1.num1.value;
var a= new RegExp("[0-9]");
if(!a.test(num))
alert("enter numbers only");
if(num.length>3)
alert("out of range");
var SingleDigits = new Array("Zero", "One", "Two", "Three", "Four", "Five", "Six", "Seven", "Eight", "Nine", "Ten", "Eleven", "Twelve", "Thirteen", "Fourteen", "Fifteen", "Sixteen", "Seventeen", "Eighteen", "Nineteen");
var DoubleDigits = new Array("Twenty", "Thirty", "Forty", "Fifty", "Sixty", "Seventy", "Eighty", "Ninety");
    var Words = "";
    var St;

    for (var i = 9; i >= 1; i--)
    {
        if (num >= i * 100)
        {
            Words += SingleDigits[i];
            St = 1;
```

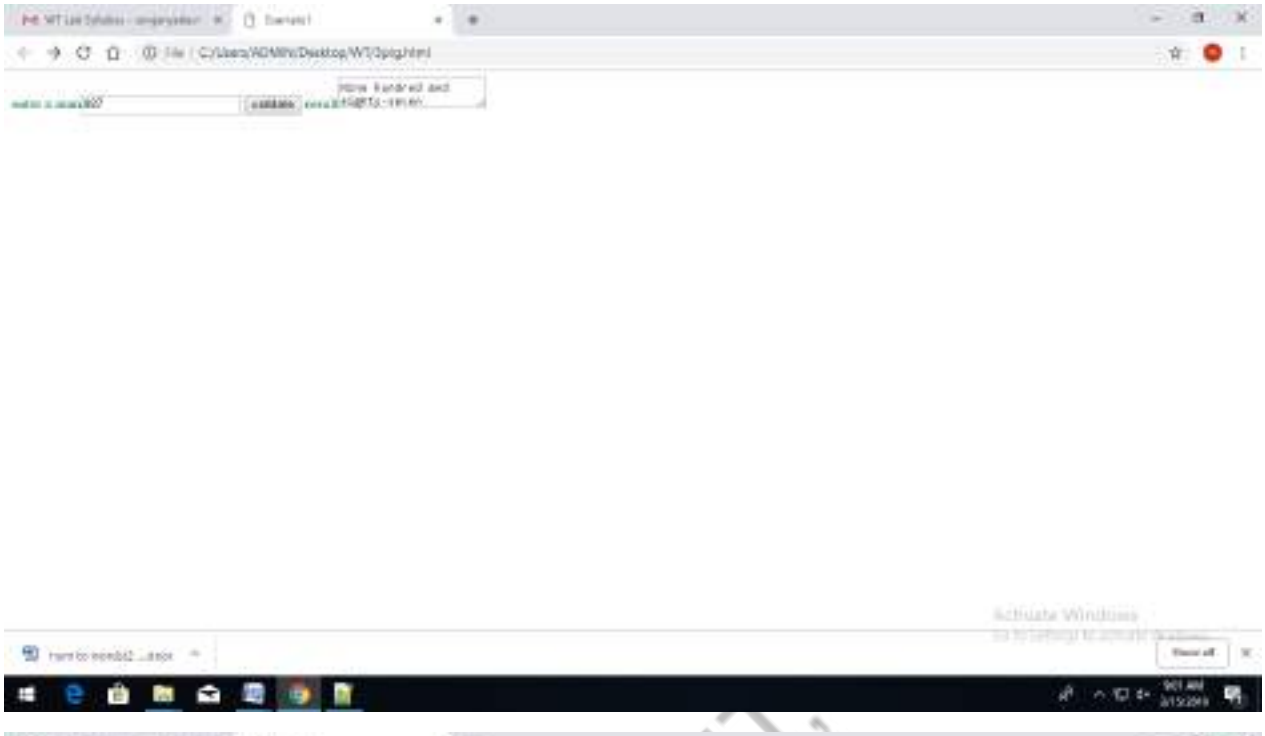
```
                Words += " hundred";
                if (num != i * 100) Words += " and ";
                {
                    num -= i*100;
                }
                i=0;
            }
        }
//alert(Words);

        for (var i = 9; i >= 2; i--)
        {
            if (num >= i * 10)
            {
                Words += (St?DoubleDigits[i-2].toLowerCase():DoubleDigits[i-2]);
                St = 1;
                if (num != i * 10) Words += "-";
                {
                    num -= i*10;
                }
                i=0;
            }
        }
//alert(Words);

        for (var i = 1; i < 20; i++)
        {
            if (num == i)
            {
                Words += (St?SingleDigits[i].toLowerCase():SingleDigits[i]);
            }
```

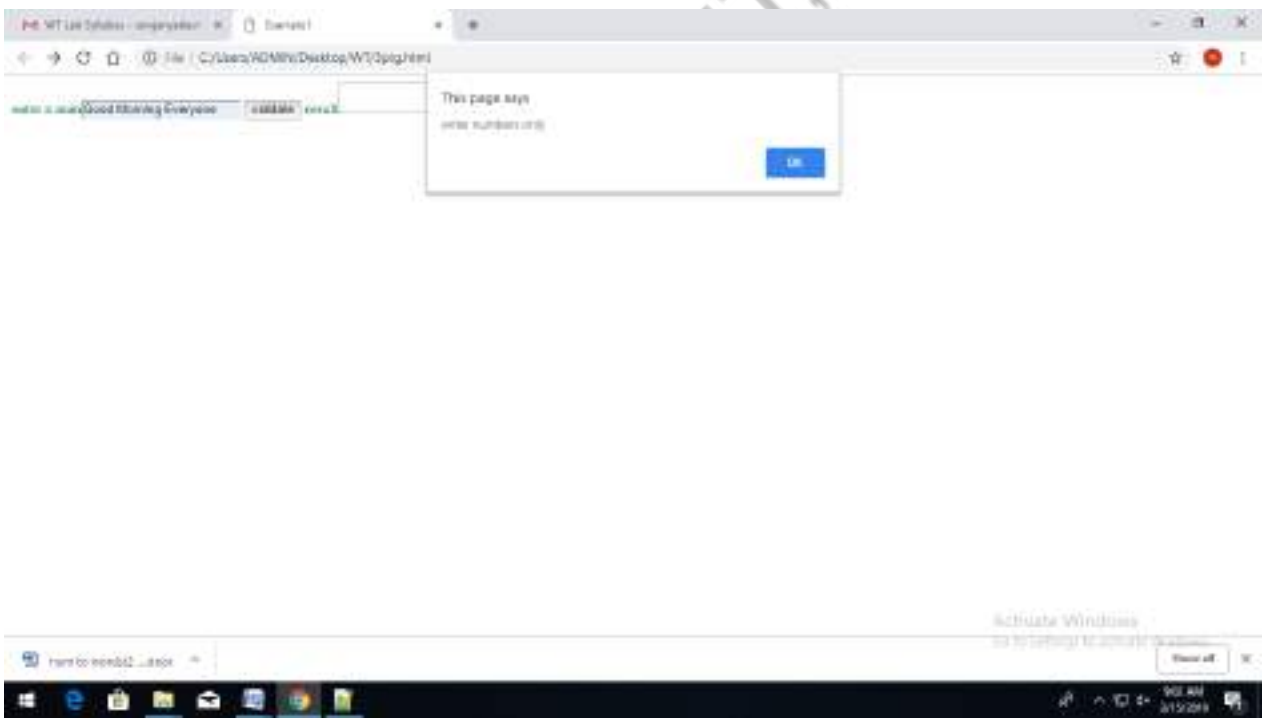
```
        }
//alert(Words);

f1.res.value = Words;
//document.f1.res.value =   Words;
}

</script>
</head>
<body>
<form name="f1">
<font background-color=pink color=green>
enter a num<input type=text name=num1>
<input type="button" value=validate onclick="checkfun()">
result<textarea name=res></textarea>
</font>
</form>
</body>
</html>
```

OUTPUT








This page says
OK

AIM 4:

Write an HTML page that has one input , which can take multi-line text and a submit button. Once the user clicks the submit button, it should show the number of characters, words and lines in the text entered using an alert message. Words are separated with white space and lines are separated with new line character.

HTML FILE

```
<html>
<body>
<center>
<form>
ENTER THE DATA:
<textarea id="ta" height="40" width="50" style="resize:none">
</textarea><br /><br/>
<input type="submit" id="b1" value="submit" onclick="disp()">
<script>
function disp()
{
        var x=document.getElementById('ta').value;
        var c=document.getElementById('ta').value.split("\n");
        var cl=c.length;
        var cc=document.getElementById('ta').value.length;
        var sp=x.split(" ");
        var cw=sp.length+cl-1;
        var cc=x.length;
        window.alert("no. of lines"+cl+"no. of words"+cw+"no. of characters"+cc);

}
```

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

OUTPUT

AIM 5:

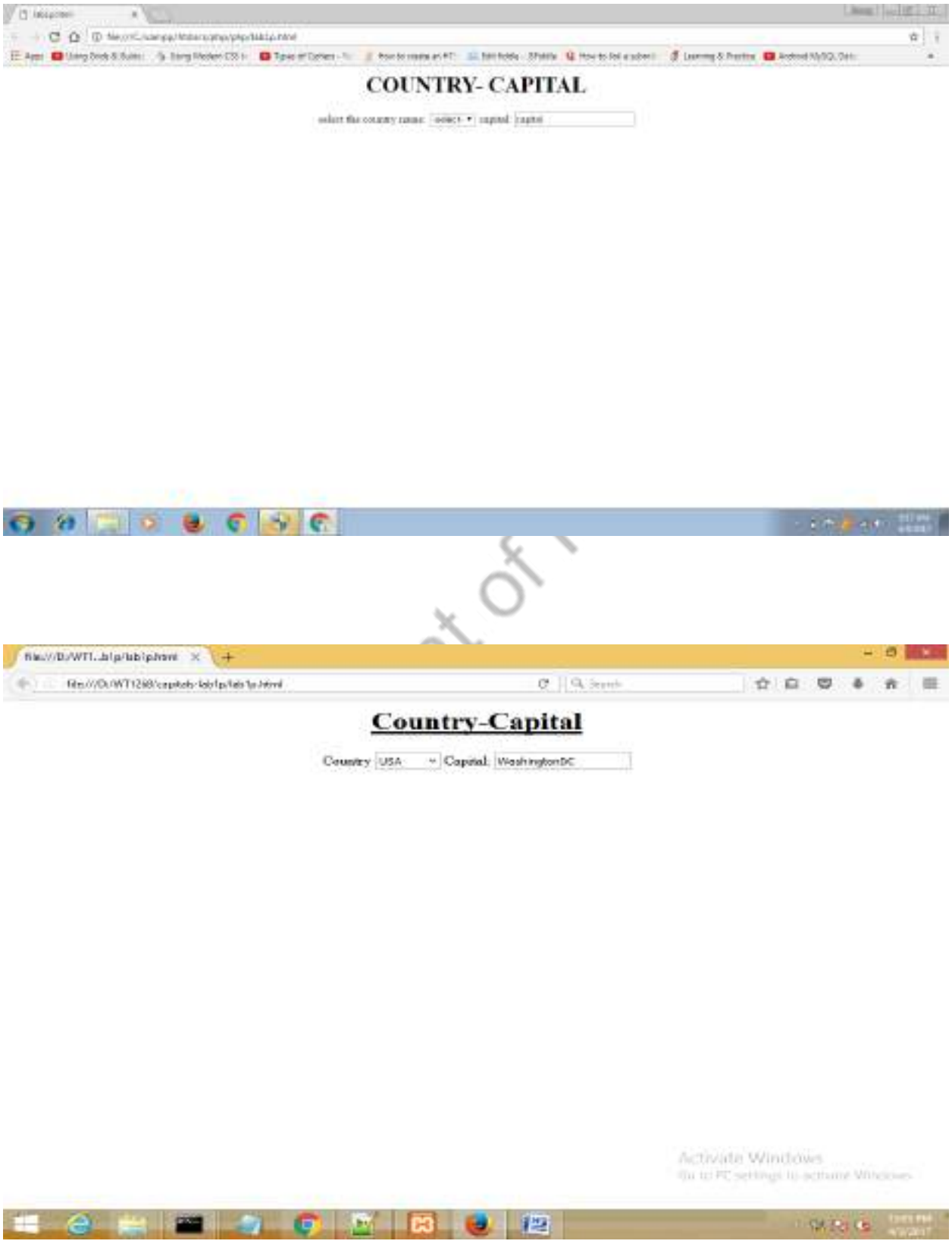
Write an HTML page that contains a selection box with a list of 5 countries. When the user selects a country, its capital should be printed next to the list. Add CSS to customize the properties of the font of the capital (color, bold and font size).

HTML FILE

```
<html>
<body>
<center><h1> COUNTRY- CAPITAL</h1></center>
<center>
<form>
select the country name:
<select id="list" onchange="disp()">
<option>-select-</option>
<option>INDIA</option>
<option>CHINA</option>
<option>JAPAN</option>
<option>USA</option>
</select>
capital:
<input type="text" id="cap" value="capital">
<script>
function disp()
{

        var x=document.getElementById('list').value;
        if(x=='-select-')
        {
```

```
            alert("select any country");
        }
        if(x=='INDIA')
        {
            document.getElementById('cap').value="DELHI";
        }
        else if(x=='CHINA')
        {
            document.getElementById('cap').value="BEIJING";
        }
        else if(x=='JAPAN')
        {
            document.getElementById('cap').value="TOKYO";
        }


        else if(x=='USA')
        {
            document.getElementById('cap').value="WASHINGTON";
        }

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

OUTPUT


COUNTRY- CAPITAL
Country-Capital
Country USA
Capital Washington DC

AIM 6:

Create an XML document that contains 10 users information. Write a Java program, which takes User Id as input and returns the user details by taking the user information from the XML document using (a) DOM Parser and (b) SAX parser

PROGRAM

(a) DOM Parser

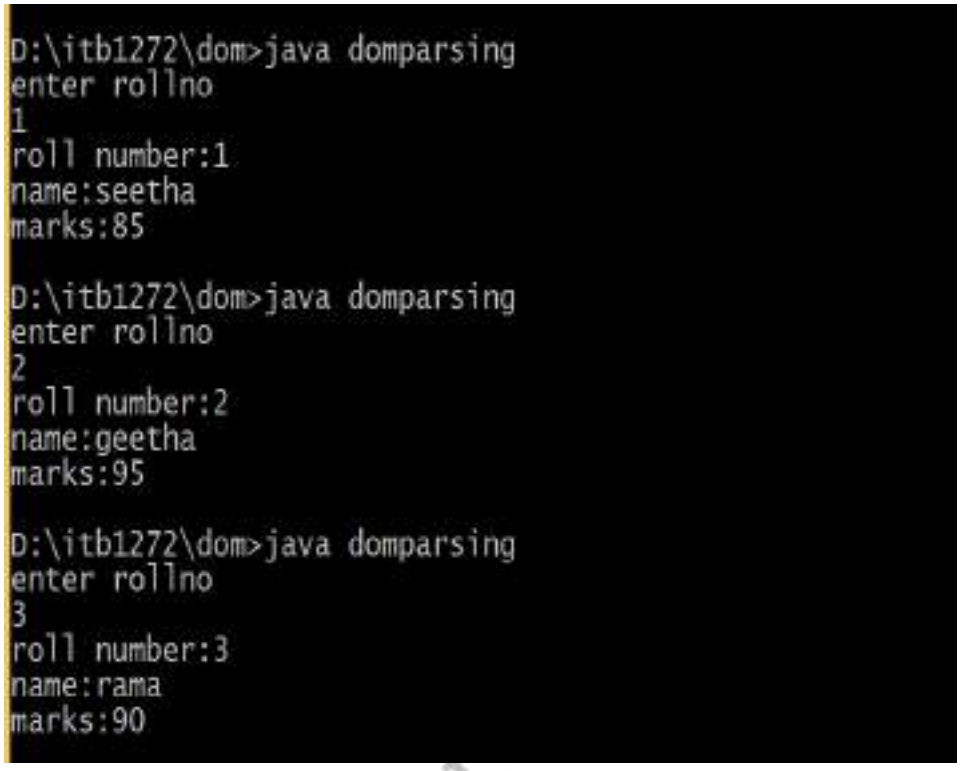
```
import org.w3c.dom.*;
import javax.xml.parsers.*;
import java.io.*;
public class domparsing
{
public static void main(String args[])
{
try {
        int found=0;
          InputStreamReader r=new InputStreamReader(System.in);
          BufferedReader br=new BufferedReader(r);
             DocumentBuilderFactory Factory = DocumentBuilderFactory.newInstance();
             DocumentBuilder parser = Factory.newDocumentBuilder();
             Document doc = parser.parse("D:\\itb1272\\dom\\samplexml.xml");
             Element root=doc.getDocumentElement();
             System.out.println("enter rollno");
                                    String rnumber=br.readLine();
             NodeList children = doc.getElementsByTagName("student");

             for (int temp = 0; temp < children.getLength(); temp++)
              {
```

```
            Node nNode = children.item(temp);
                                    Element eElement = (Element) nNode;
        if(rnumber.equals(
Element.getElementsByTagName("rollno").item(0).getTextContent()))
        {
                                                System.out.println("roll
number:"+eElement.getElementsByTagName("rollno").item(0).getTextContent());
        System.out.println("name:"+eElement.getElementsByTagName("name").item(0).getText
Content());
        System.out.println("marks:"+eElement.getElementsByTagName("marks").item(0).getTex
tContent());
                                                found=1;
        }

                }
                                if(found==0)
                                        System.out.println("element not found");
}
catch (Exception e) {
                        e.printStackTrace();
                    }
                }
}
```

Samplexml.xml

```
<?xml version="1.0"?>
<class>
<student>
<rollno>1</rollno>
<name>seetha</name>
<marks>85</marks>
</student>
<student>
<rollno>2</rollno>
<name>geetha</name>
<marks>95</marks>
</student>
<student>
<rollno>3</rollno>
<name>rama</name>
<marks>90</marks>
</student>
</class>
```

OUTPUT:



(b) SAX parser

PROGRAM

```
import java.io.*;
import java.lang.*;
import javax.xml.parsers.SAXParser;
import javax.xml.parsers.SAXParserFactory;
import org.xml.sax.Attributes;
import org.xml.sax.SAXException;
import org.xml.sax.helpers.DefaultHandler;

public class ReadXMLFile{
        ReadXMLFile handler  = null;
  public static void main(String argv[]) {

   try {

        SAXParserFactory factory = SAXParserFactory.newInstance();
        SAXParser saxParser = factory.newSAXParser();
        System.out.println("Start Element :" );
        //handler = new ReadXMLFile();

        DefaultHandler handler = new DefaultHandler() {
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
        String name= br.readLine();

        boolean bfname = false;
        boolean blname = false;
        boolean bnname = false;
        boolean bsalary = false;
   boolean ok=false;
```

```
    public void startElement(String uri, String localName,String qName,
      Attributes attributes) throws SAXException {

            //System.out.println("Start Element :" + qName);

            if (qName.equalsIgnoreCase("FIRSTNAME")) {
                    bfname = true;
            }
if(ok)
            {
                    if (qName.equalsIgnoreCase("LASTNAME")) {
                            blname = true;



                    }

                    if (qName.equalsIgnoreCase("NICKNAME")) {
                            bnname = true;
                    }

                    if (qName.equalsIgnoreCase("SALARY")) {
                            bsalary = true;

                    }

            }

    }

    public void endElement(String uri, String localName,
```

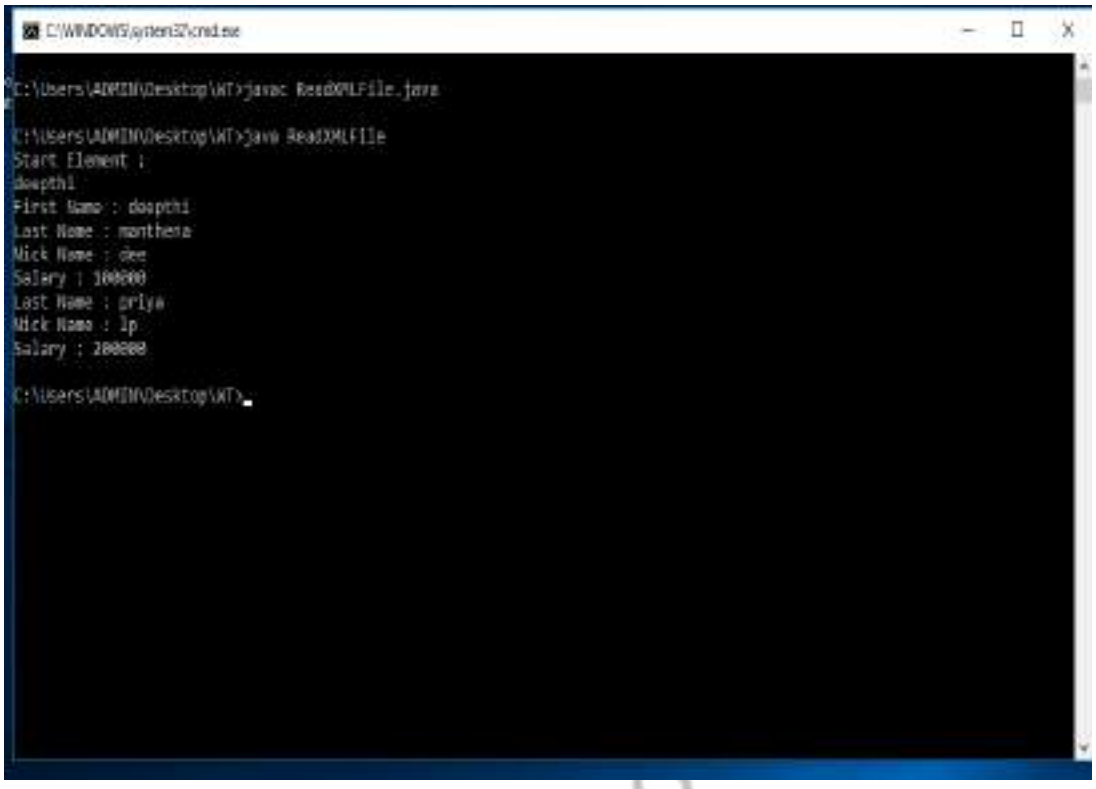
```
        String qName) throws SAXException {

        //System.out.println("End Element :" + qName);

}

public void characters(char ch[], int start, int length) throws SAXException {

        if (bfname) {
                if(name.equals(new String(ch, start, length)))
                {
                System.out.println("First Name : " + new String(ch, start, length));
                ok=true;
                }
                bfname = false;
        }

        if (blname) {
                System.out.println("Last Name : " + new String(ch, start, length));
                blname = false;
        }

        if (bnname) {
                System.out.println("Nick Name : " + new String(ch, start, length));
                bnname = false;
        }

        if (bsalary) {
                System.out.println("Salary : " + new String(ch, start, length));
                bsalary = false;
```

```
                }

            }
    };
    saxParser.parse("D:\\Deepthi\\samplexml.xml", handler);

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

    }

}
```

Samplexml.xml

```
<?xml version="1.0"?>
<company>
        <staff>
                <firstname>deepthi</firstname>
                <lastname>manthena</lastname>
                <nickname>dee</nickname>
                <salary>100000</salary>
        </staff>
        <staff>
                <firstname>lakshmi</firstname>
                <lastname>priya</lastname>
                <nickname>lp</nickname>
                <salary>200000</salary>
        </staff>
</company>
```

OUTPUT:



AIM 7(i) Using PHP:

A user validation web application , where the user submits the login name and password to the server. The name and password are checked against the data already available in Database and if the data matches , a successful login page is returned.Otherwise a failure message is shown to the user.

HOME PAGE

```
<html>
<body>
<center>
<form name="f1" action="lab3valid2.php" method="get">
<h1>LOGIN PAGE</h1>
LOGIN ID:<input type="text" name="l1">
<br>
<br>
PASSWORD:<input type="password" name="l2"><br><br>
<input type="submit" value="Login" >
</form>
</center>
</body>
</html>
```

LOGIN VALIDATION

```
<html>
<body><center>
<?php
$connect=mysql_connect('localhost','root','',true);
$connection=mysql_select_db("itb",$connect);
$v1=$_REQUEST["l1"];
$v2=$_REQUEST["l2"];
$query="select lid from student where lid='".$v1."'and pwd='".$v2."';";
$res=mysql_query($query);
$res1=mysql_num_rows($res);
if($res1==0)
{
        $q2="select lid from student where lid='".$v1."';";
        $r2=mysql_query($q2);
        $rs1=mysql_num_rows($r2);
        if($rs1==0)
        {
                echo "Invalid LoginId";
        }
        else
        {
                echo "invalid pwd";
        }
}
else
{
        echo "<h1>succesfully logged in</h1>";
```

```
        echo "<h1>welcome </h1>"."<h1>".$v1."</h1>";
}
?></center>
</body>
</html>
```

OUTPUT


LOGIN PAGE


successfully loggedin
welcome
vidya


LOGIN PAGE

AIM 7(ii) **Using PHP:**

Modify the above program to use an xml file instead of database.

Program

```
<html>
<head>
<title>HOME</title>
</head>
<body>
 <form method="get" action="xmlphp_26feb.php">
 <input type="text" name="user" placeholder="enter name"/><br>
 <input type="password" name="password" placeholder="enter password"/><br>
 <input type="submit" name="login" value="login">
 </form>
</body>
</html>
```

```
<?php
$xml=simplexml_load_file("phpxmldata_26feb.xml");
        $candidate=$xml->people;

        foreach($candidate as $i)
        {

            if(isset($_REQUEST["login"]))
      {
              if($_REQUEST["user"]==($i->username))
```

```
                {
                        if($_REQUEST["password"]==($i->psw))
                        {
                                echo "welcome";
                        }
                        else
                        {
                                echo "incorrect password";
                                break;
                        }
                }
        }
  }
?>

<?xml version="1.0"?>
<person>
   <people>
      <username>one</username>
                <psw>one</psw>
   </people>
   <people>
      <username>two</username>
                <psw>two</psw>
   </people>
      <people>
      <username>three</username>
                <psw>three</psw>
```

```
    </people>
        <people>
      <username>four</username>
                <psw>four</psw>
    </people>
</person>
```

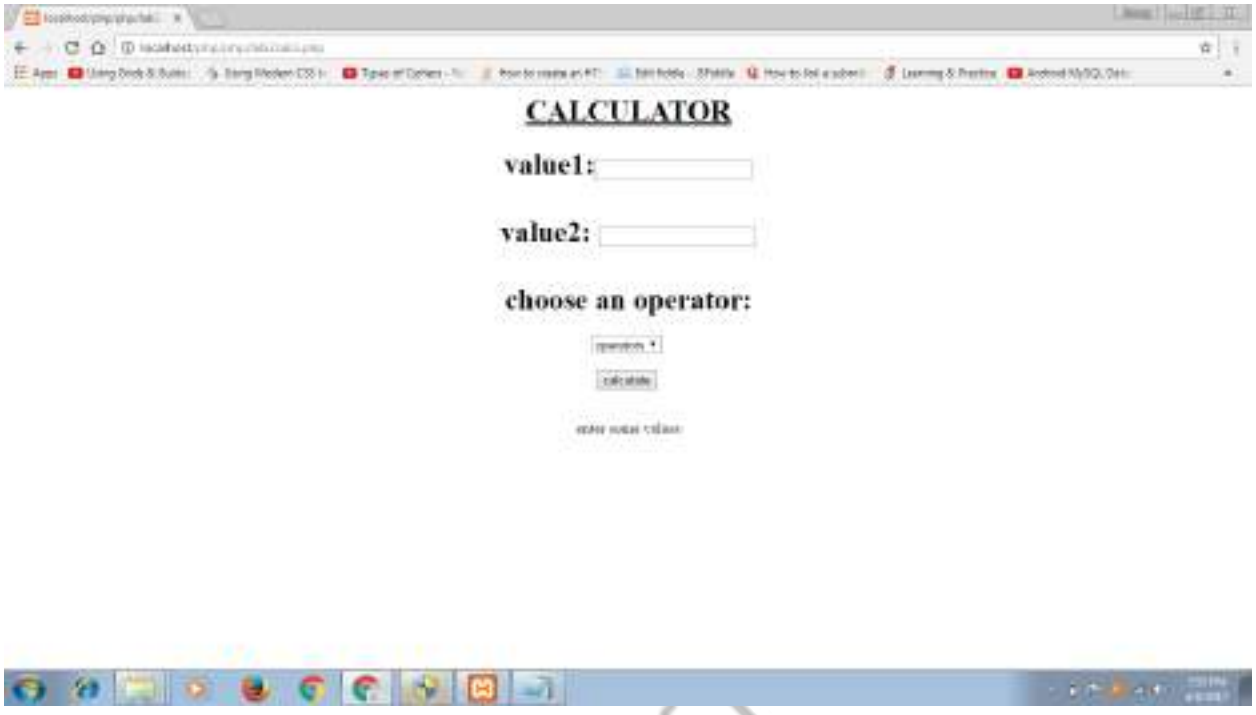
AIM 7(iv) Using PHP:

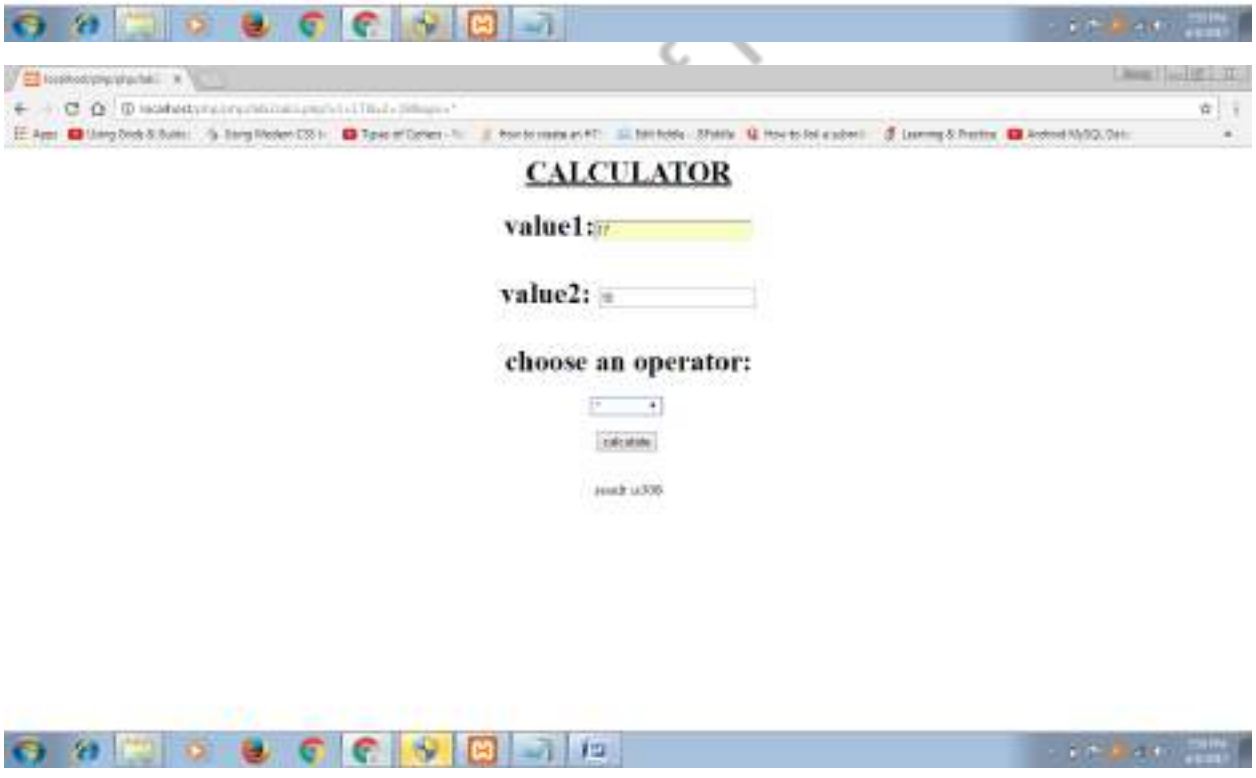
A simple calculator web application that takes two numbers and an operator(+,-,/,* and %) from an HTML page & returns the result page with the operation performed on the operands.

```
<html>
<body><center><h1><u>CALCULATOR</u></h1>
<form name="f1"><h1>
value1:<input type="text" name="v1"><br /><br />
value2:<input type="text" name="v2"><br /><br />
choose an operator:</h1>
<select name="ops">
        <option >operators</option>
        <option >*</option>
        <option >/</option>
        <option >+</option>
        <option >-</option>
        <option >%</option>
</select><br /><br />
<input type="submit" value="calculate">
<br /><br /></form></body>
<body>
<?php
        if((isset($_REQUEST["v1"]))&&(isset($_REQUEST["v2"])) &&$_REQUEST["v1"]!=""
&&$_REQUEST["v2"]!="")
        {
                if(is_numeric($_REQUEST["v1"])&&is_numeric($_REQUEST["v2"]))
                {
                        $op1=$_REQUEST["v1"];
                        $op2=$_REQUEST["v2"];
```

```
                $op3=$_REQUEST["ops"];
                switch($op3)
                {
                        case "+":$res=$op1+$op2;break;
                        case "/":$res=$op1/$op2;break;
                        case "-":$res=$op1-$op2;break;
                        case "%":$res=$op1%$op2;break;
                        case "*":$res=$op1*$op2;break;
                        case "operators":echo"select any operator";break;
                }
                echo "result is";
                echo $res;
        }
        else
        {
                echo "enter numeric values";
        }
    }
    else
        echo "enter some values";
?>
</body></html>
```

OUTPUT


CALCULATOR
value1:
value2:
choose an operator:


CALCULATOR
value1:
value2:
choose an operator:

AIM 7(v) Using PHP:

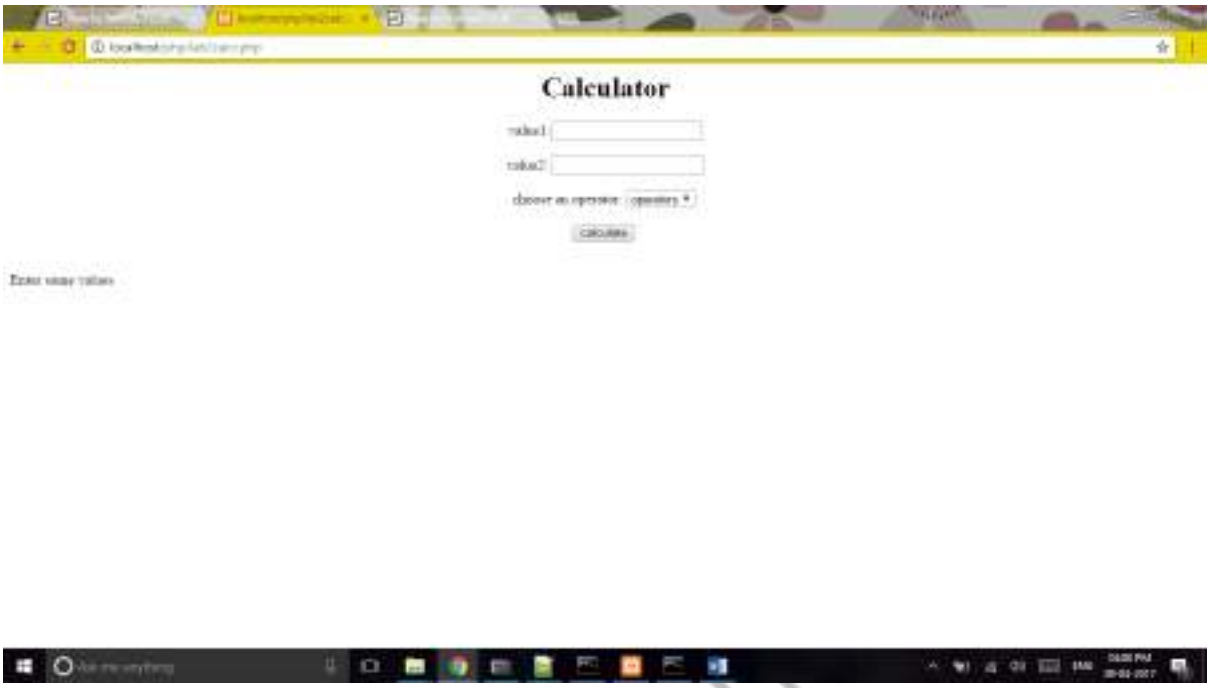
Modify the above program such that it stores each query in a database and checks the database first for the result. If the query is already available in the DB, it returns the value that was previously computed or it computes the result and returns it after storing the new query and result in DB

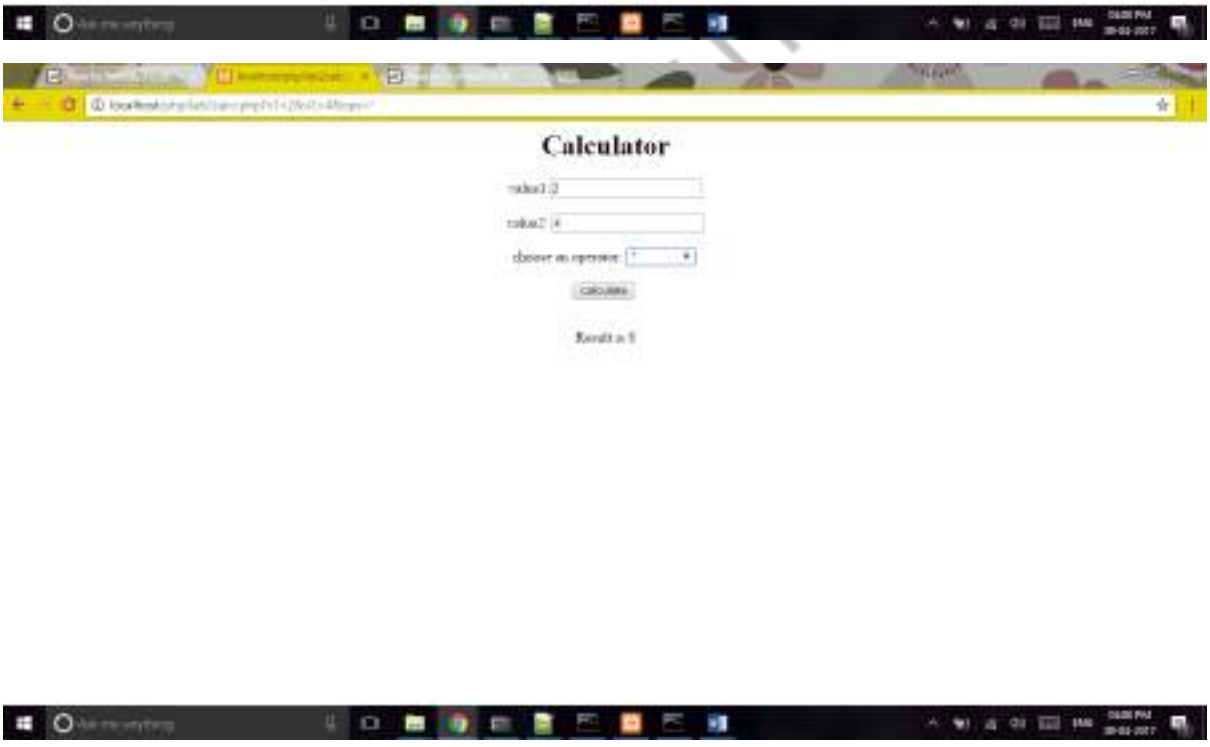
```
<html>
<body>
<form name="f1">
<center>
<h1>Calculator</h1>
value1:<input type="text" name="v1"><br /><br />
value2:
<input type="text" name="v2"><br /><br />
choose an operator:
<select name="ops">
        <option >operators</option>
        <option >*</option>
        <option >/</option>
        <option >+</option>
        <option >-</option>
        <option >%</option>
</select>
<br />
<br />
<input type="submit" value="calculate">
<br />
<br />
</center>
```

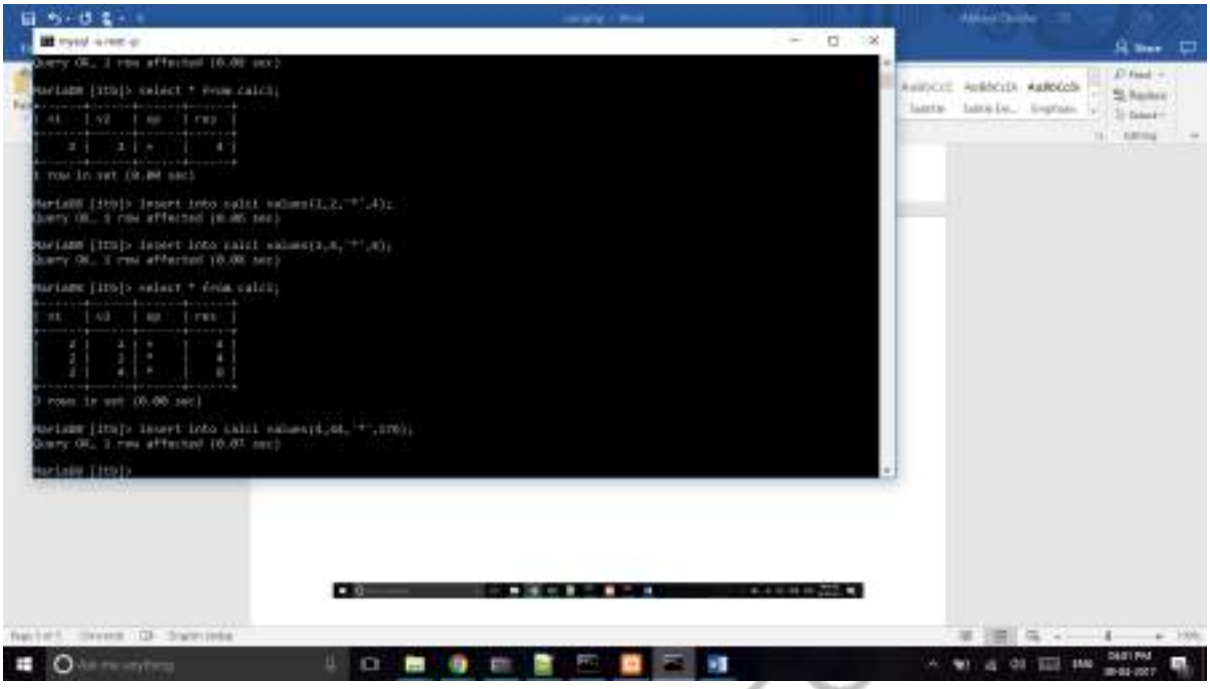
```
</form>
</body>
<body>
<?php
	if((isset($_REQUEST["v1"]))&&(isset($_REQUEST["v2"])) &&$_REQUEST["v1"]!="" &&$_REQUEST["v2"]!="")
	{

		if(is_numeric($_REQUEST["v1"])&&is_numeric($_REQUEST["v2"]))
		{
			$connect=mysql_connect('localhost','root','',true);
			$connection=mysql_select_db("itb",$connect);
			$op1=$_REQUEST["v1"];
			$op2=$_REQUEST["v2"];
			$op3=$_REQUEST["ops"];
			switch($op3)
			{
				case "+":$res=$op1+$op2;break;
				case "/":$res=$op1/$op2;break;
				case "-":$res=$op1-$op2;break;
				case "%":$res=$op1%$op2;break;
				case "*":$res=$op1*$op2;break;
				case "operators":echo"select any operator";break;
			}
		$q2="select * from calci where v1=".$op1." and v2=".$op2." and op='".$op3."';";
			$r2=mysql_query($q2);
			$rs1=mysql_num_rows($r2);
			if($rs1==0)
			{
```

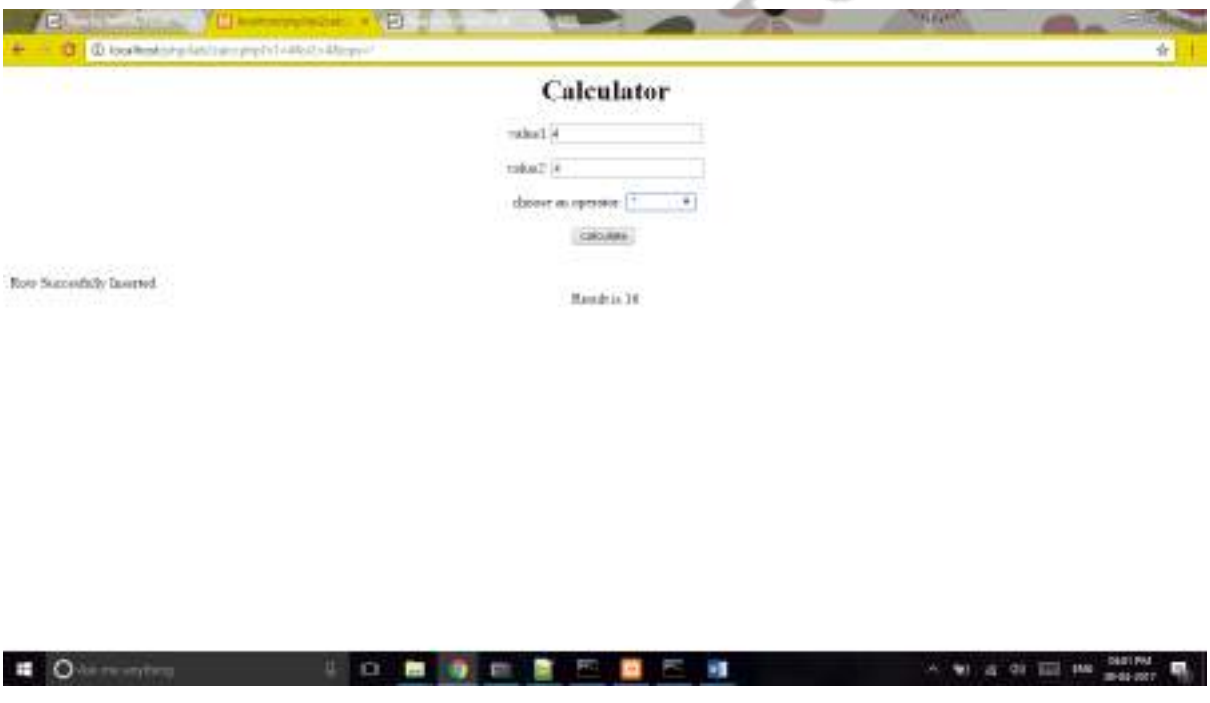
```
                        $q3="insert into calci values(".$op1.",".$op2.","'.$op3.'",".$res.");";
                        $rs5=mysql_query($q3);
                        echo "Row Succesfully Inserted";
                }
                else
                {
                        $rows=mysql_fetch_row($r2);
                        $res= $rows[3];
                }
                echo "<center>Result is ";
                echo $res."</center>";
        }
        else
        {
                echo "Enter numeric values";
        }
}
else
{
        echo "Enter some values";
}
?>
</body>
</html>
```

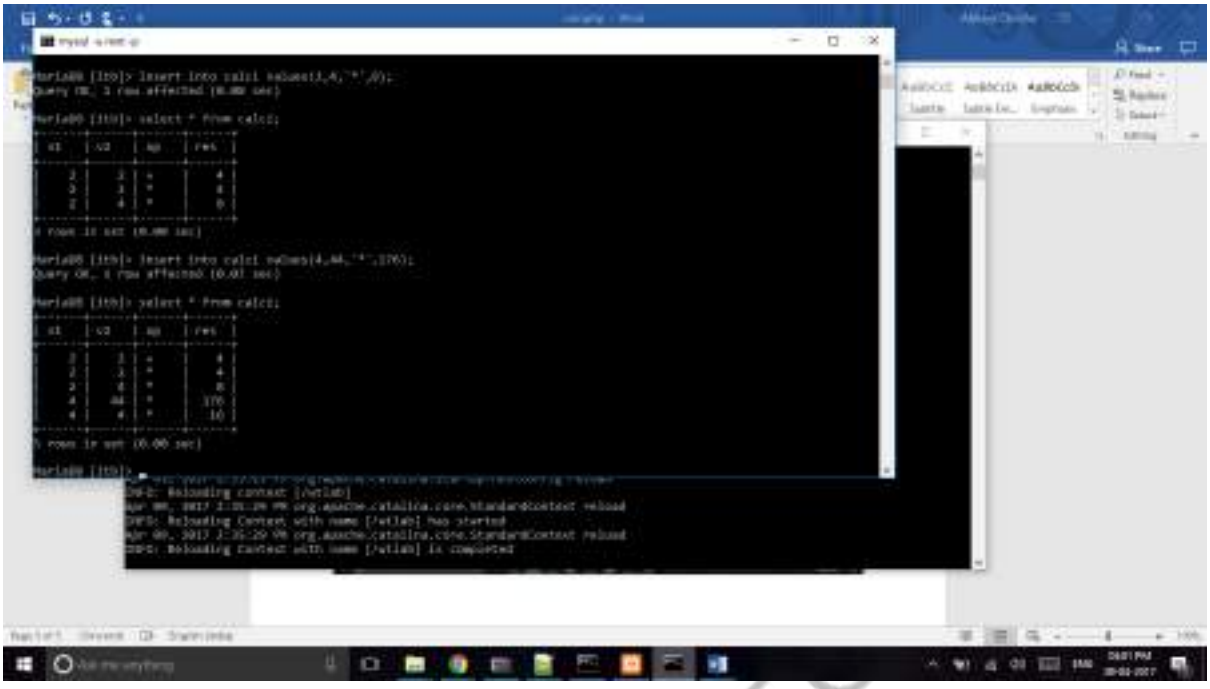
OUTPUT


Calculator
value1
value2
choose an operator
calculate


Calculator
value1 2
value2 4
choose an operator
calculate
Result is 8


Query OK, 1 row affected (0.00 sec)
MariaDB [ttb]> select * from calci;
| n1 | n2 | op | res |
| 2 | 3 | * | 6 |
1 row in set (0.00 sec)
MariaDB [ttb]> insert into calci values(1,2,'*',4);
Query OK, 1 row affected (0.00 sec)
MariaDB [ttb]> insert into calci values(3,6,'*',8);
Query OK, 1 row affected (0.00 sec)
MariaDB [ttb]> select * from calci;
n1	n2	op	res
2	3	*	6
1	2	*	4
3	6	*	8
3 rows in set (0.00 sec)
MariaDB [ttb]> insert into calci values(4,66,'*',276);
Query OK, 1 row affected (0.07 sec)
MariaDB [ttb]>


Calculator
value1 4
value2 4
choose an operator *
calculate
Row Succesfully Inserted
Result is 16



AIM 7(vi) Using PHP:

A web application takes a name as input and on submit it shows a hello<name>page where <name> is taken from the request. It shows the start time at the right top corner of the page and provides a logout button. On clicking this button, it should show a logout page with Thank You <name> mesaage with the duration of usage(hint;use session to store name and time).

HOME PAGE

```
<html>
<body><center>
<h1>LOGIN PAGE</h1><br />
<h2> Please enter your name:</h2><br/>
<form action="lab4cookies2.php" method="post">
<input type="text" name="uname"><br /></br />
<input type="submit" name="s1" value="submit">
</form>
</center>
</body>
</html>
```

LOGIN PAGE

```
<html>
<body>
<form action="lab4cookies3.php" method="post">
<p align="right">
<input type="submit" name="s2" value="LOGOUT"></p>
<center>
<?php
        $name=$_REQUEST["uname"];
        echo "<h1>Hello!!!...<h1>".$name;
        date_default_timezone_set("Asia/kolkata");
        $d1=date('m/d/y h:i:s a',time());
        echo "<br />your login time is :<br />".$d1;
        setcookie("u1",$name);
        setcookie("d1",$d1);
?></center>
</body>
</html>
```

LOGOUT PAGE

```
<html>
<body>
<form >
<center>
<h1>THANK YOU</h1>
<?php
        date_default_timezone_set("Asia/kolkata");
        $d2=date('m/d/y h:i:s a',time());
        echo "<br />".$_COOKIE['u1']."<br />";
        echo "your login time is ";
        $dt=$_COOKIE['d1'];
        echo $_COOKIE['d1'];
        echo "<br />your logout time is ".$d2;
        $dt1=date_create($dt);
        $dt2=date_create($d2);
        $dd=date_diff($dt1,$dt2);
        echo "<br />your login session is :";
        echo $dd->format('%h hours, %i mins ,%s seconds');
?>
</center>
</form>
</body>
</html>
```

OUTPUTS


LOGIN PAGE
Please enter your name:
submit


Hello!!..
vidya
your login time is :
04/08/17 10:36:05 am
THANK YOU

AIM 7(vii) Using PHP:

A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with "Hello <name>,you are not authorized to visit this site" message, where <name> should be replaced with the entered name. Otherwise it should send "Welcome <name> to this site" message.

LOGIN PAGE

```
<html>
<body><center>
<h1>LOGIN PAGE</h1><br />
<h2> Please enter your name and age:</h2><br/>
<form action="lab4age2.php" method="post">
NAME:<input type="text" name="unam"><br /><br />
AGE:    <input type="text" name="a1"><br /></br />
<input type="submit" name="s1" value="submit">
</form>
</center>
</body>
</html>
```

VALIDATION

```
<html>
<body><center>
<?php
if( (strcmp($_REQUEST['unam'],"")==0)|| (strcmp($_REQUEST['a1'],"")==0))
 {
        echo "Please Enter all values!!...";
 }
 else
 {
        if($_REQUEST['a1']>18)
        {
                echo "<h1>WELCOME!!!...</h1><br />";
            echo $_REQUEST['unam']."<br />you are an authorised user:" ;
        }
        else
        {
            echo "you are an unauthorised user";
        }

 }
 ?></center>
</body>
</html>
```

OUTPUT


LOGIN PAGE
Please enter your name and age:


WELCOME!!!....


LOGIN PAGE
Please enter your name and age:

AIM 7(viii) Using PHP:

A web application for implementation:

The user is first served a login page which takes user's name and password. After submitting the details the server checks these values against the data from a database and takes the following decisions.

If the name and password matches, serves a welcome page with user's full name.

If name is not found in database, serves a registration page, where user's full name is asked and on submitting the full name, it stores, the login name, password and full name in the database (use sessions for storing the submitted login name and password).

HOME PAGE

```
<html>
<body>
<center>
<form name="f1" action="lab3valid2.php" method="get">
<h1>LOGIN PAGE</h1>
LOGIN ID:<input type="text" name="l1">
<br>
<br>
PASSWORD:<input type="password" name="l2"><br><br>
<input type="submit" value="Login" >
</form>
</center>
</body>
</html>
```

LOGIN VALIDATION

```
<html>
<body><center>
<?php
$connect=mysql_connect('localhost','root','',true);
$connection=mysql_select_db("itb",$connect);
$v1=$_REQUEST["l1"];
$v2=$_REQUEST["l2"];
$query="select lid from student where lid='".$v1."'and pwd='".$v2."';";
$res=mysql_query($query);
$res1=mysql_num_rows($res);
if($res1==0)
{
        $q2="select lid from student where lid='".$v1."';";
        $r2=mysql_query($q2);
        $rs1=mysql_num_rows($r2);
        if($rs1==0)
        {
                echo "<html><body>Please register...<form action='lab3valid3.php'
method='post'><input type='submit' value='submit'>";
        }
        else
        {
                echo "invalid pwd";
        }
}
else
{
```

```
        echo "<h1>succesfully logged in</h1>";
        echo "<h1>welcome </h1>"."<h1>".$v1."</h1>";
}
?>
</center>
</body>
</html>
```

REGISTRATION PAGE

```
<html>
<body>
<center>
<form name="f1"  method="get">
<h1>REGISTRATION PAGE</h1>
LOGIN ID:<input type="text" name="r1">
<br>
<br>
PASSWORD:<input type="password" name="r2"><br><br>
<input type="submit" value="submit" >
</form>
</center>
</body>
<body>
<?php
if(isset($_REQUEST['r1']) && isset($_REQUEST['r2']))
{
        $connect=mysql_connect('localhost','root','',true);
        $connection=mysql_select_db("itb",$connect);
        $v1=$_REQUEST['r1'];
        $v2=$_REQUEST['r2'];
        $query="insert into student values('".$v1."','".$v2."');";
        $res=mysql_query($query);
        if($res<0)
        {
                echo "unsuccesful";
        }
```

```
        else
        {
                echo "you have successfully registered";
        }
}
else
{
        echo "please enter loginid and pwd";
}
?>
</body>
</html>
```

OUTPUT


LOGIN PAGE


successfully logged in
welcome
vidya


LOGIN PAGE


REGISTRATION PAGE


REGISTRATION PAGE


LOGIN PAGE

AIM 7(ix) Using PHP:

A web application that lists all cookies stored in the browser on clicking“ list cookies” button. Add cookies if necessary.

SETTING COOKIES

```
<html>
<body><center>
<form action="cookie.php" method="get">
<h1>Cookie</h1>
<input type="submit" value="List Cookies" name="btn">
</center>
</body>
</html>
<?php
        setcookie("c1","IT");
        setcookie("c2","CSE");
        setcookie("c3","EEE");
        setcookie("c4","ECE");
        setcookie("c5","ETM");
?>
```

RETRIEVING COOKIES

```
<html>
<body><center><h1><u>List of cookies are:</u></br>
<?php
$c1=$_COOKIE['c1'];
$c2=$_COOKIE['c2'];
$c3=$_COOKIE['c3'];
$c4=$_COOKIE['c4'];
$c5=$_COOKIE['c5'];
echo $c1."<br>";
echo $c2."<br>";
echo $c3."</br>";
echo $c4."</br>";
echo $c5."</br>";
$counter = 0;
foreach($_COOKIE as $value)
{
  if($value)
  {
     ++$counter;
  }
}
echo "cookie count is".$counter;
?></h1></center>
</body></html>
```

OUTPUT


Cookie
List Cookies


List of cookies are:
IT
CSE
EEE
ECE
ETM
cookie count is5

AIM 7(i) Using Servlets:

A user validation web application , where the user submits the login name and password to the server. The name and password are checked against the data already available in Database and if the data matches , a successful login page is returned.Otherwise a failure message is shown to the user.

HTML FILE

```
<html>
<body>
<center>
<form name="f1" action="/wtlab/abc2" method="get">
<h1>Login Page</h1>
Login ID<input type="text" name="l1">
<span name="s1">
</br>
</br>
Password<input type="password" name="l2">
</br>
</br>
<input type="submit" value="Login">
</form>
</center>
</body>
</html>
```

JAVA FILE

```
import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class slab1jvalid extends HttpServlet
{
	Connection c;
	public void init()
	{
		try
		{
			Class.forName("com.mysql.jdbc.Driver");
			c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
		}
		catch(Exception e)
		{
			System.out.println(e);
		}
	}
	public void doGet(HttpServletRequest req,HttpServletResponse res) throws
IOException,ServletException
	{
		try{
		PrintWriter out=res.getWriter();
		Statement s = c.createStatement();
		res.setContentType("text/html");
		String n1=req.getParameter("l1");
		String n2=req.getParameter("l2");
```

```
                String q="select lid from student where lid='"+n1+"' and pwd='"+n2+"';";
                ResultSet r=s.executeQuery(q);
                if(r.next())
                {
                out.println("<html><body bgcolor='pink'><center><h1>welcome
"+n1+"</h1></center></boby></html>");
                }
                }
                else
                {
                        out.println("Dear "+n1+"you are not a validated user");
                catch(Exception e)
                {
                        System.out.println(e);
                }
        }
}
```

XML FILE

```
<servlet>
        <servlet-name>abcd</servlet-name>
        <servlet-class>slab1jvalid</servlet-class>
</servlet>
<servlet-mapping>
        <servlet-name>abcd</servlet-name>
        <url-pattern>/abc2</url-pattern>
</servlet-mapping>
```

OUTPUT


Login Page
Login ID
Password
Login


Login Page
Login ID abc
Password
Login


welcome abc


Login Page


Dear abcdd, you are not a validated user

AIM 7(ii) Using Servlets:

Modify the user validation web application to use an XML file instead of Database.

HTML FILE

```
<html>
<body>
<center>
<form action="/wtlab/xmlaccess" name="f1">
<h1>LOGIN PAGE</h1>
LOGIN ID:<input type="text" name="t1">
<br>
<br>
PASSWORD:<input type="password" name="t2"><br><br>
<input type="submit" value="Login" name="b1">
</form>
</center>
</body>
</html>
```

JAVA FILE

```
import org.w3c.dom.*;
import javax.xml.parsers.*;
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
 public class xmlAccess extends HttpServlet
{
   public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException
  {
 try {
                        int found=0;
                        PrintWriter out = response.getWriter();
                        DocumentBuilderFactory Factory =
DocumentBuilderFactory.newInstance();
        DocumentBuilder parser = Factory.newDocumentBuilder();
        Document doc = parser.parse("C:\\xampp\\tomcat\\webapps\\wtlab\\domxml.xml");
        Element root=doc.getDocumentElement();
                        String uname=request.getParameter("t1");
                        String pwd=request.getParameter("t2");
        NodeList children = doc.getElementsByTagName("student");
                                out.println("<html><body>");
           for (int temp = 0; temp < children.getLength(); temp++)
            {
              Node nNode = children.item(temp);
                  Element eElement = (Element) nNode;
```

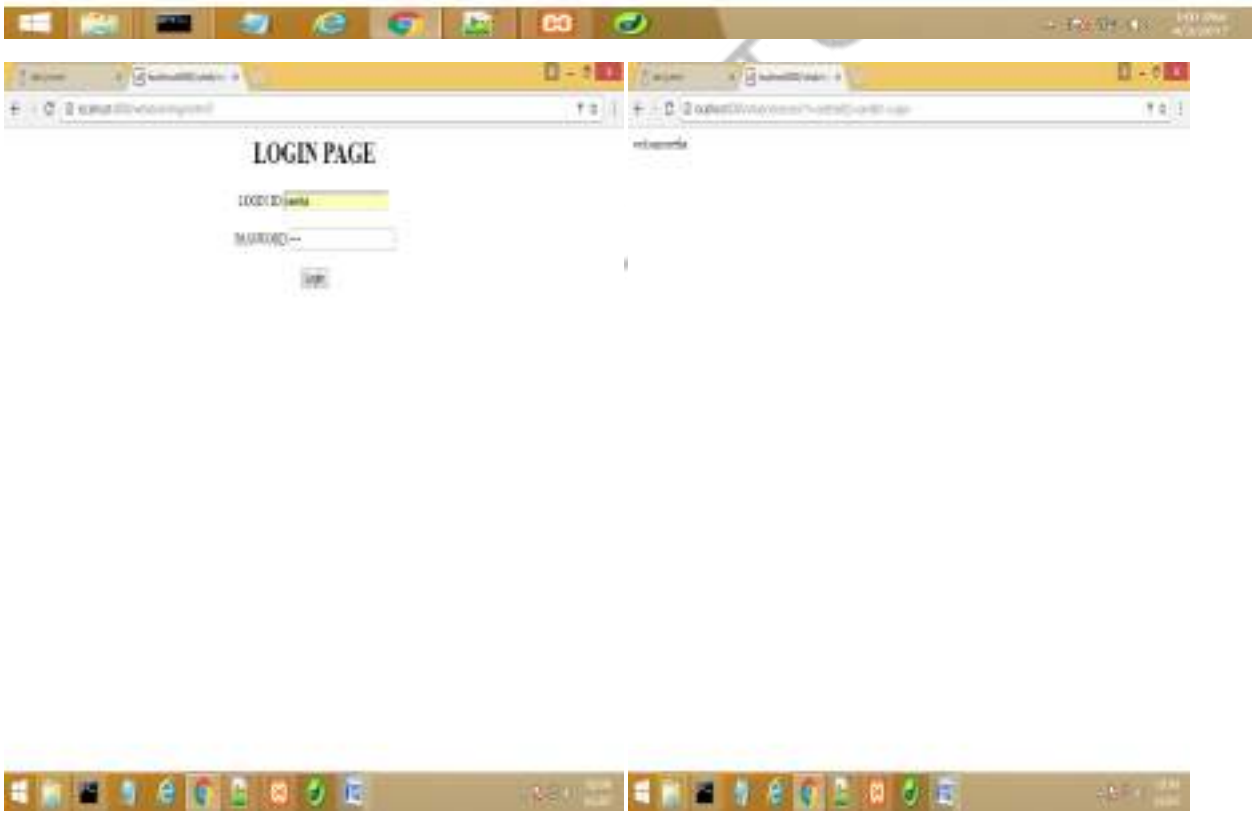
```
        if(uname.equals( eElement.getElementsByTagName("name").item(0).getTextContent()))
{
if(pwd.equals( eElement.getElementsByTagName("pwd").item(0).getTextContent()))
{
//out.println("roll
number:"+eElement.getElementsByTagName("rollno").item(0).getTextContent());

        //out.println("name:"+eElement.getElementsByTagName("name").item(0).getTextContent
());

        //out.println("marks:"+eElement.getElementsByTagName("marks").item(0).getTextConte
nt());
                                                out.println("welcome"+uname);
                                                found=1;
}
}
 }
 if(found==0)
          out.println("Invalid user");
         out.println("</body></html>");
}
catch (Exception e) {
       e.printStackTrace();
     }
}
}
```

XML FILE

```
<?xml version="1.0"?>
<class>
<student>
<rollno>1</rollno>
<name>seetha</name>
        <pwd>ram</pwd>
<marks>85</marks>
</student>
<student>
<rollno>2</rollno>
<name>geetha</name>
        <pwd>ram</pwd>
<marks>95</marks>
</student>
<student>
<rollno>3</rollno>
<name>rama</name>
        <pwd>ram</pwd>
<marks>90</marks>
</student>
</class>

<servlet>
<servlet-name>HelloServlet3</servlet-name>
<servlet-class>xmlAccess</servlet-class>
</servlet>
```

```
<servlet-mapping>
<servlet-name>HelloServlet3</servlet-name>
<url-pattern>/xmlaccess</url-pattern>
</servlet-mapping>
```

OUTPUT



Invalid user

AIM 7(iv) Using Servlets:

A simple calculator web application that takes two numbers and an operator(+,-,/,* and %) from an HTML page & returns the result page with the operation performed on the operands.

HTML FILE

```
<html>
<body><center><h1><u>CALCULATOR</u><br>
<form name="f1" action="/wtlab/abc6" method="get">
value1:<input type="text" name="v1"><br /><br />
value2:
<input type="text" name="v2"><br /><br />
choose an operator:
<select name="ops">
        <option >operators</option>
        <option >*</option>
        <option >/</option>
        <option >+</option>
        <option >-</option>
        <option >%</option>
</select>
<br />
<br />
<input type="submit" value="calculate">
<br />
<br />
</form></h1></center>
</body>
</html>
```

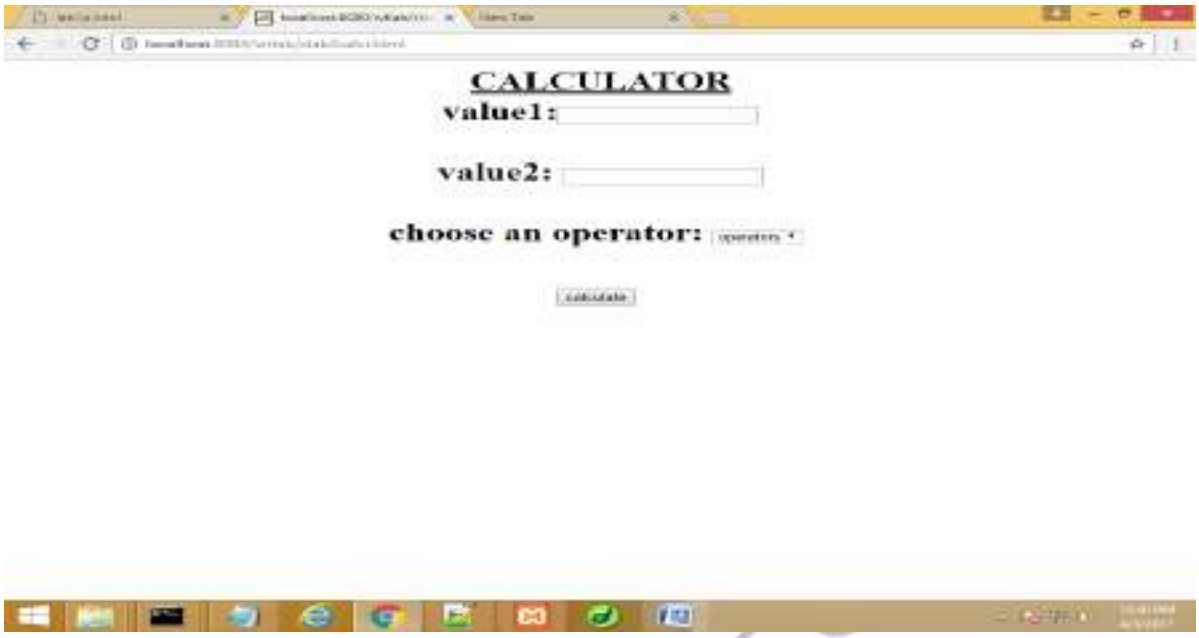
JAVA FILE

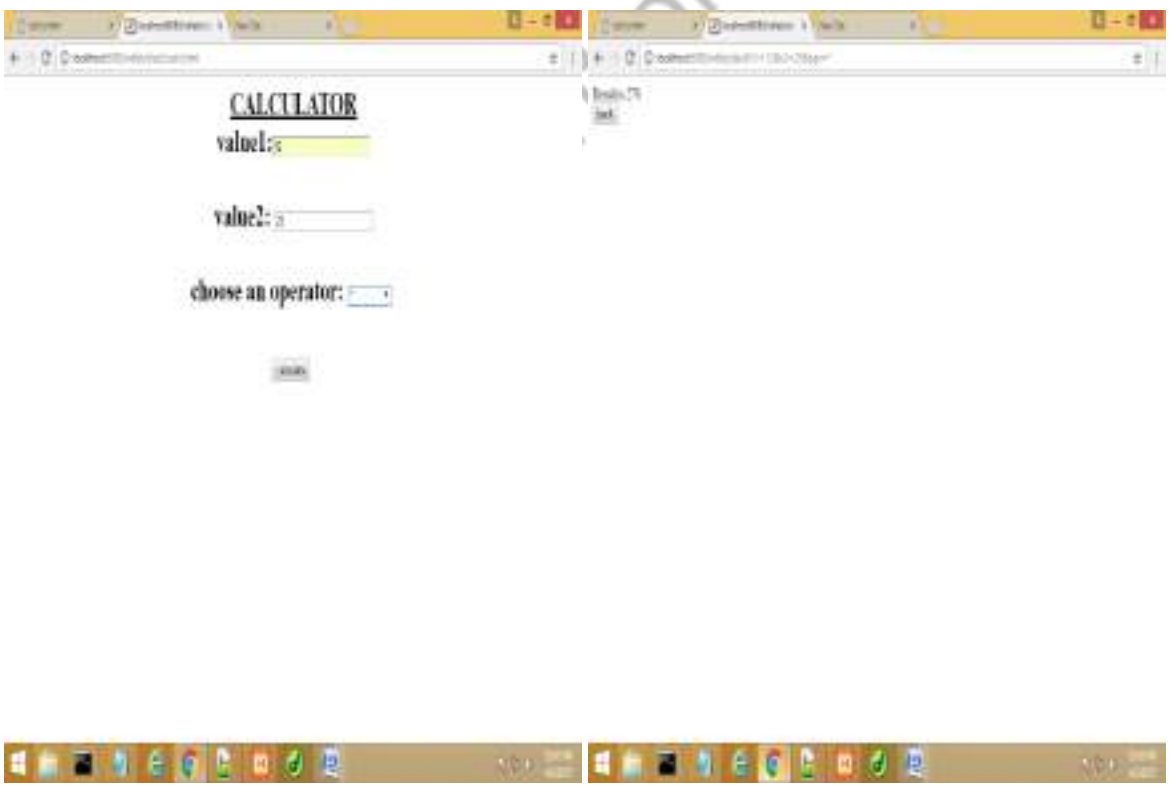
```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.text.*;
public class slab2jcalci extends HttpServlet{
        public void doGet(HttpServletRequest req,HttpServletResponse res) throws
ServletException,IOException        {
                String o1=req.getParameter("v1");
                String o2=req.getParameter("v2");
                String o3=req.getParameter("ops");
                char o4=o3.charAt(0);
                int n1=Integer.parseInt(o1);
                int n2=Integer.parseInt(o2);
                PrintWriter out=res.getWriter();
                int r=0;
                switch(o4){
                        case '+' :r=n1+n2;break;
                        case '%' :r=n1%n2;break;
                        case '-' :r=n1-n2;break;
                        case '*' :r=n1*n2;break;
                        case '/' :r=n1/n2;break;
                }
                out.println("<html><body>Result is "+r);
                out.println("<form action='/wtlab/slab2calci.html' method='get' ><input
type='submit' value='back'>");
                        }
}
```

XML FILE

```
<servlet>
        <servlet-name>sl4</servlet-name>
        <servlet-class>slab2jcalci</servlet-class>
</servlet>
<servlet-mapping>
        <servlet-name>sl4</servlet-name>
        <url-pattern>/abc6</url-pattern>
</servlet-mapping>
```

OUTPUT


CALCULATOR
value1:
value2:
choose an operator:


CALCULATOR
value1:
value2:
choose an operator:

AIM 7(v) Using Servlets:

Modify the above program such that it stores each query in a database and checks the database first for the result. If the query is already available in the DB ,it returns the value that was previously computed or it computes the result and returns it after storing the new query and result in DB

HTML FILE

```
<html>
<body>
<form name="f1" action="/wtlab/abc6" method="get">
<center>
<h1>Calculator</h1>
value1:<input type="text" name="val1"><br /><br />
value2:
<input type="text" name="val2"><br /><br />
choose an operator:
<select name="op">
        <option >operators</option>
        <option >*</option>
        <option >/</option>
        <option >+</option>
        <option >-</option>
        <option >%</option>
</select>
<br />
<br />
<input type="submit" value="calculate">
<br />
```

```
<br />
</center>
</form>
</body>
<html>
```

JAVAFILE

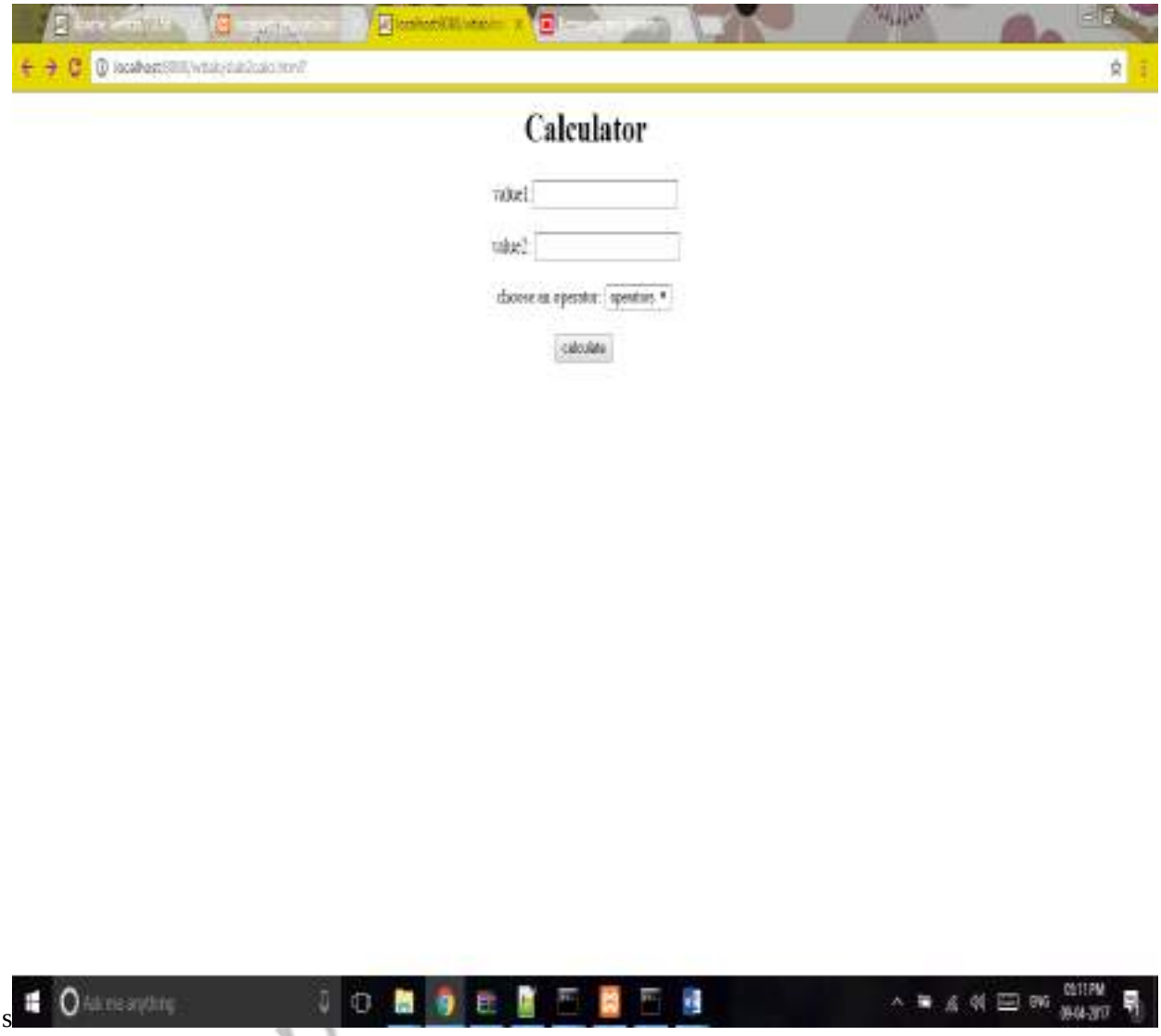
```
import java.io.*;
import java.sql.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;


public class slab2jcalci extends HttpServlet
{
        public void doGet(HttpServletRequest request, HttpServletResponse res) throws
ServletException, IOException{
                Connection c;
                try{
                        Class.forName("com.mysql.jdbc.Driver");
                        c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
                        PrintWriter out=res.getWriter();
                        Statement s = c.createStatement();
                res.setContentType("text/html");
                String v1= request.getParameter("val1");
                String v2= request.getParameter("val2");
                String o= request.getParameter("op");
                char op= o.charAt(0);
                int n1= Integer.parseInt(v1);
                int n2= Integer.parseInt(v2);
                int r=0;
                switch(op){
                        case '+' :      r = n1 + n2 ; break;
                        case '-' :      r = n1 - n2 ; break;
                        case '%' :      r = n1 % n2 ; break;
```

```
                case '/' :          r = n1 / n2 ; break;
                case '*' :          r = n1 * n2 ; break;
            }

            String q="select * from calci where v1="+n1+" and v2="+n2+" and op='"+op+"';";
            ResultSetrss=s.executeQuery(q);
            String resultt="";
             if(rss.next()) {
resultt = rss.getString(4);
            }
            else
            {

                String q2="insert into calci values("+n1+","+n2+",'"+op+"',"+r+");";
                out.println(q2);
                ResultSet rs2=s.executeQuery(q2);
                resultt=Integer.toString(r);


            }
            out.println("<html><body><center>Result is : "+resultt+" </br>");
            out.println("<form action='/wtlab/slab2calci.html' method='get'><input
type='submit' value='Go Back' ></form></center></body></html>");
            }
            catch(Exception e)
            {
                System.out.println(e);
            }
        }
}
```

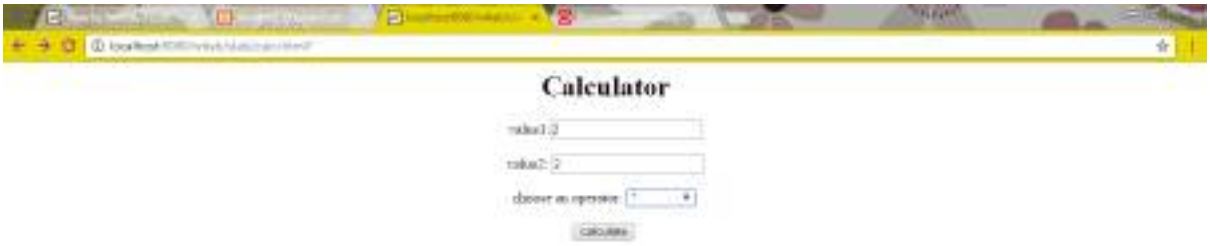
XML FILE

```
<servlet>
        <servlet-name>sl2calci</servlet-name>
        <servlet-class>slab2jcalci</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>sl2calci</servlet-name>
        <url-pattern>/abc6</url-pattern>
    </servlet-mapping>
```

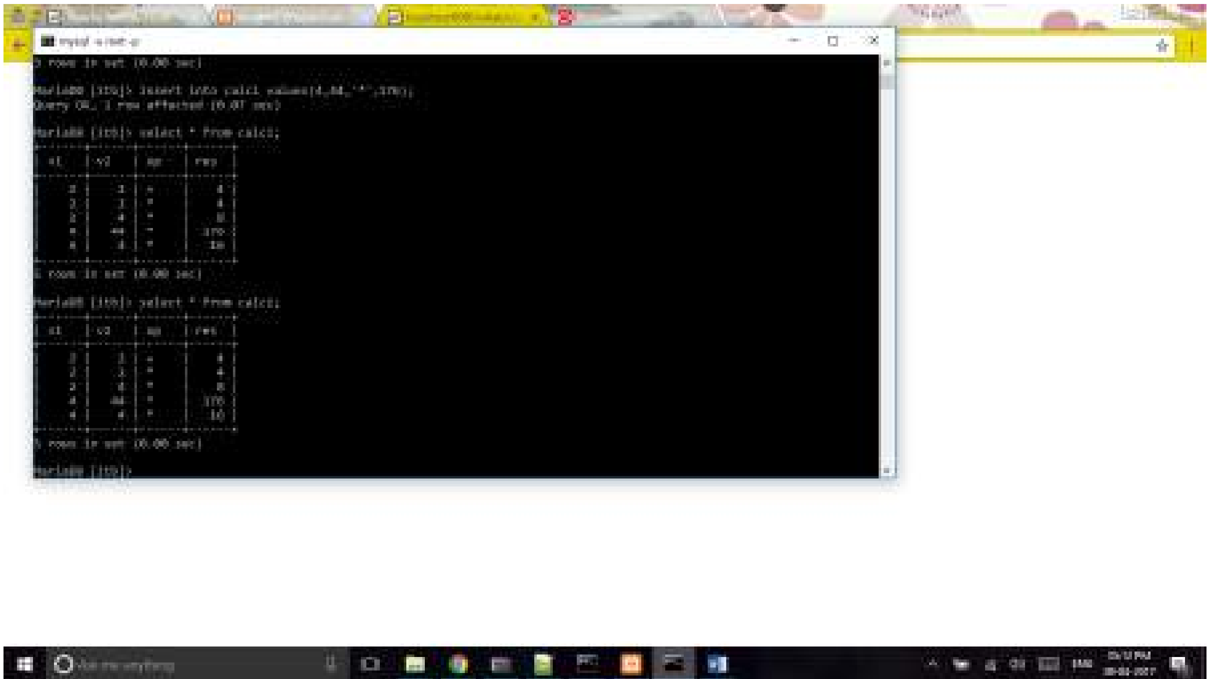
OUTPUT

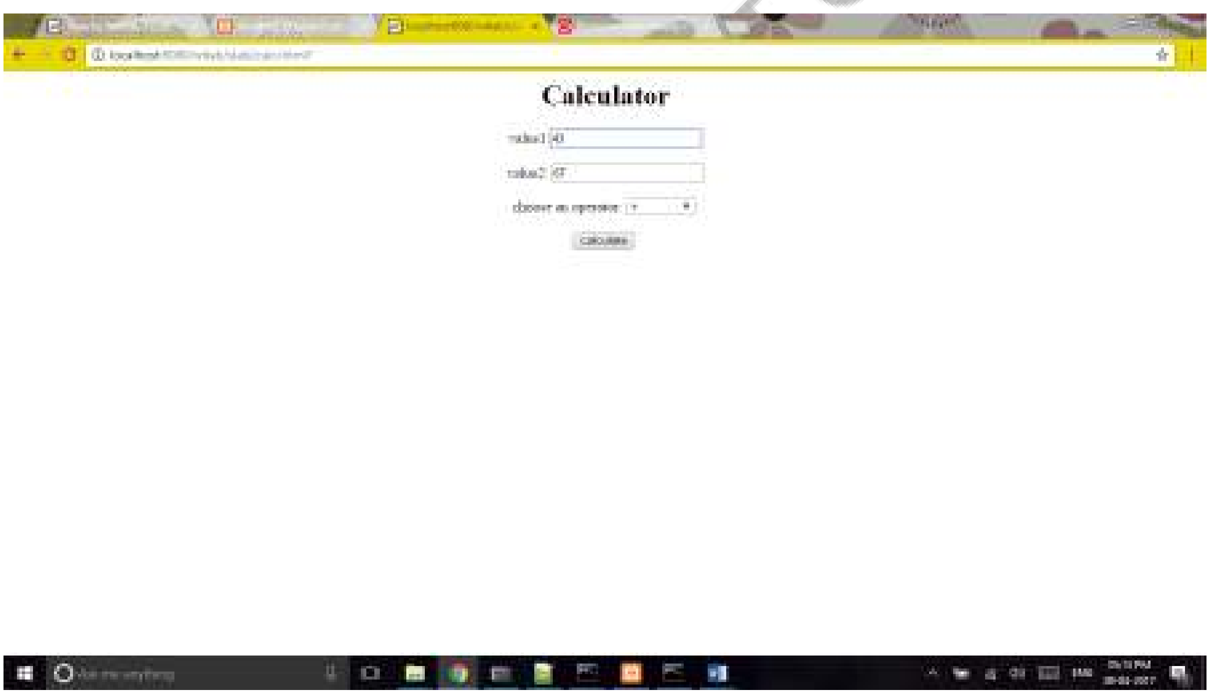

Calculator
value1:
value2:
choose an operator: operators *
calculate

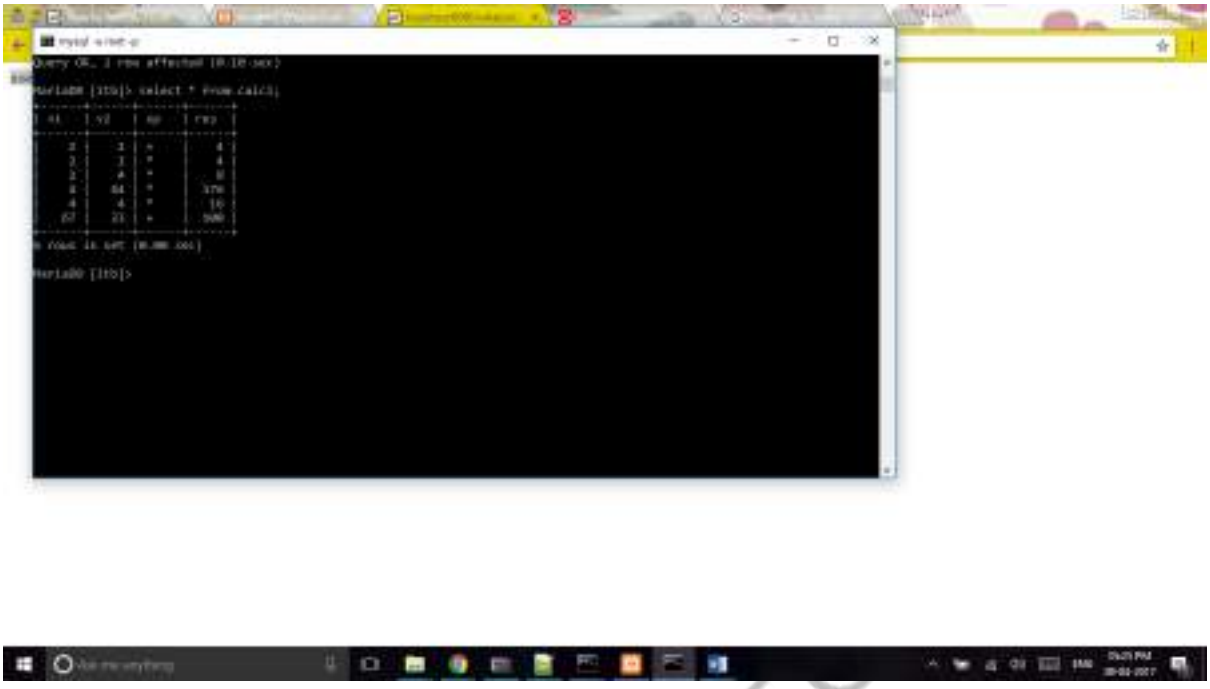
S


Calculator
value1:2
value2:2
choose an operator: *
calculate


Result is : 4
Go Back




Calculator



AIM 7(vi) Using Servlets:

A web application takes a name as input and on submit it shows a hello<name>page where <name> is taken from the request. It shows the start time at the right top corner of the page and provides a logout button. On clicking this button, it should show a logout page with Thank You <name> mesaage with the duration of usage(hint;use session to store name and time).

HTML FILE

```
<html>
<body>
<center>
<form name="f1" action="/wtlab/abc3" method="get">
<h1>Login Page</h1>
Login ID<input type="text" name="l1">
<span name="s1">
</br>
</br>
Password<input type="password" name="l2">
</br>
</br>
<input type="submit" value="Login">
</form>
</center>
</body>
</html>
```

JAVA LOGIN FILE

```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.text.*;
public class slab2jlogin extends HttpServlet
{
	public void doGet(HttpServletRequest request, HttpServletResponse res) throws ServletException, IOException
	{
		String uname = request.getParameter("l1");
		Date d1 = new Date();
		DateFormat df= new SimpleDateFormat("dd/MM/yyyy HH:mm:ss");
		String formatted= df.format(d1);
		Cookie c1 = new Cookie("name",uname);
		Cookie c2= new Cookie("logintime",formatted);
		PrintWriter out= res.getWriter();
		res.addCookie(c1);
		res.addCookie(c2);
		out.println("<html><body><form action='/wtlab/abc4' name='f2' method='get'> Welcome " +uname);
		out.println("<br><br> You Logged in at : "+d1+" <br><input type='submit' value='Logout'></form></body></html>");
	}
}
```

JAVA LOGOUT FILE

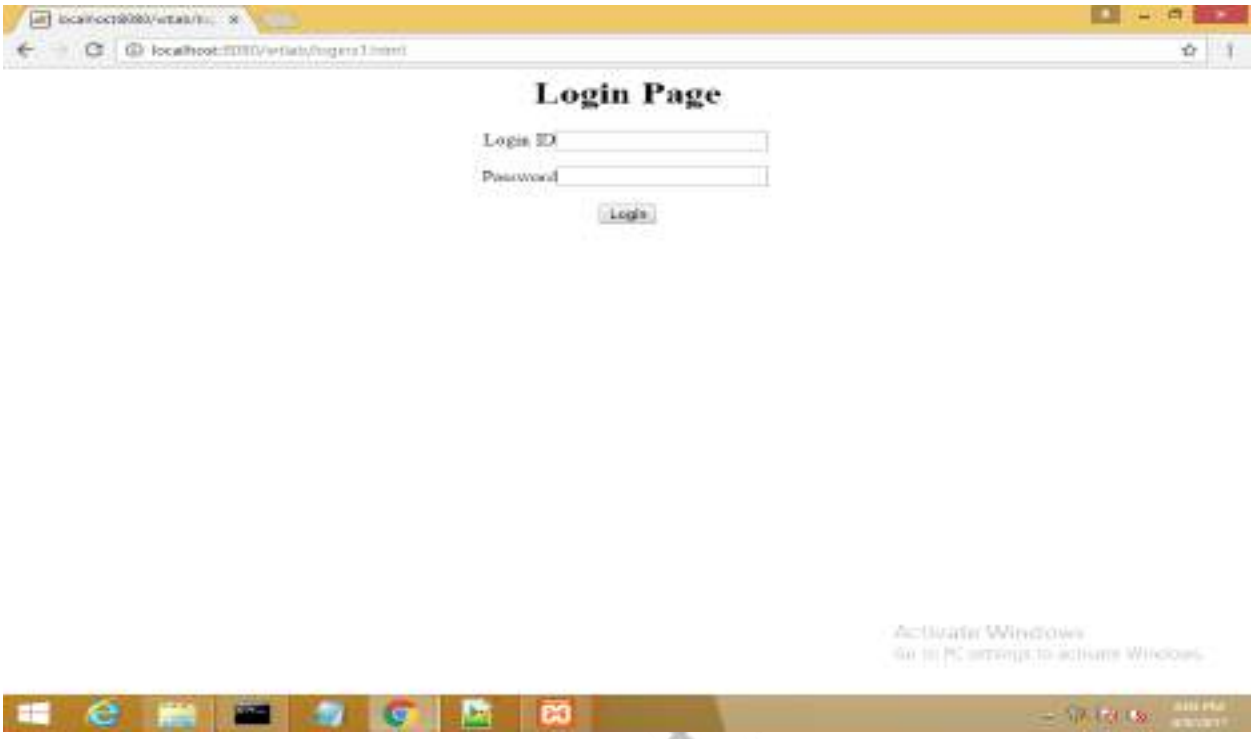
```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.text.*;


public class slab2jlogout extends HttpServlet
{
        public void doGet(HttpServletRequest request, HttpServletResponse res) throws
ServletException, IOException
        {
                Date loginTime= null;
                PrintWriter out = null;
                try
                {
                        out= res.getWriter();
                        Cookie ck[] = request.getCookies();
                        String uname= ck[0].getValue();
                        String dst= ck[1].getValue();
                        Date logoutTime = new Date();
                        System.out.println("Login time : "+dst);
                        DateFormat df = new SimpleDateFormat("dd/MM/yyyy HH:mm:ss");
                        loginTime= df.parse(dst);
                        System.out.println("Login Time  : "+loginTime);
                        long sessionTime= logoutTime.getTime()-loginTime.getTime();
        out.println("<html><body> Hello! You have Successfully Logged Out! \n Your Session
duration is : ");
```

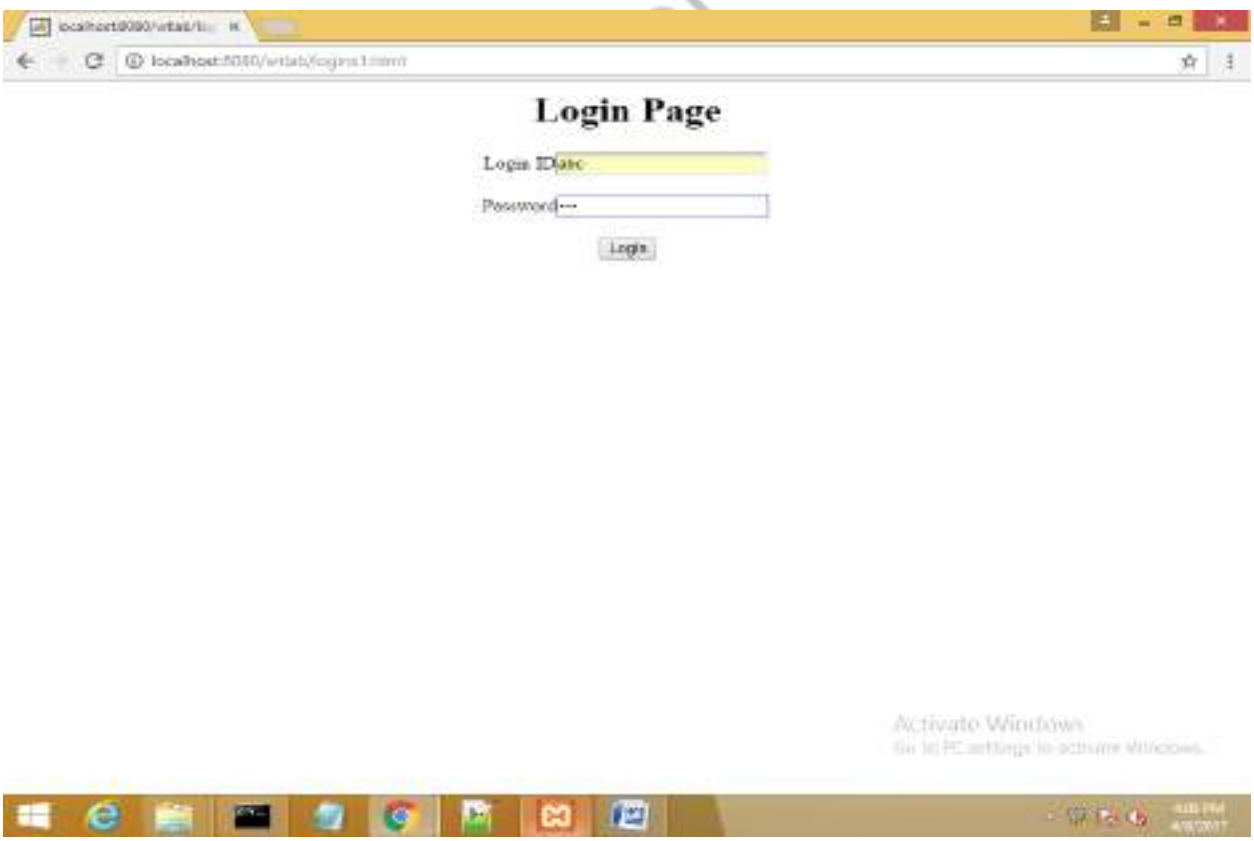
```
out.println(sessionTime+" millisecs </body></html>");
                }
                catch(Exception e)
                {

                }
        }
}
```

XML FILE

```
<servlet>
        <servlet-name>sl1</servlet-name>
        <servlet-class>slab2jlogin</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>sl1</servlet-name>
        <url-pattern>/abc3</url-pattern>
    </servlet-mapping>
    <servlet>
        <servlet-name>sl2</servlet-name>
        <servlet-class>slab2jlogout</servlet-class>
    </servlet>
    <servlet-mapping>
        <servlet-name>sl2</servlet-name>
        <url-pattern>/abc4</url-pattern>
    </servlet-mapping>
```

OUTPUT


Login Page
Login ID
Password
Login


Login Page
Login ID abc
Password
Login

AIM 7(vii) Using Servlets:

A web application that takes name and age from an HTML page. If the age is less than 18, It should send a page with "Hello <name>,you are not authorized to visit this site" message, where <name> should be replaced with the entered name. Otherwise it should send "Welcome <name> to this site" message

HTML FILE

```
<html>
<body><center>
<h1>LOGIN PAGE</h1><br />
<h2> Please enter your name and age:</h2><br/>
<form action="/wtlab/abc5" method="get">
NAME:<input type="text" name="a1"><br /><br />
AGE:    <input type="text" name="a2"><br /></br />
<input type="submit" name="s1" value="submit">
</form>
</center>
</body>
</html>
```

JAVA FILE

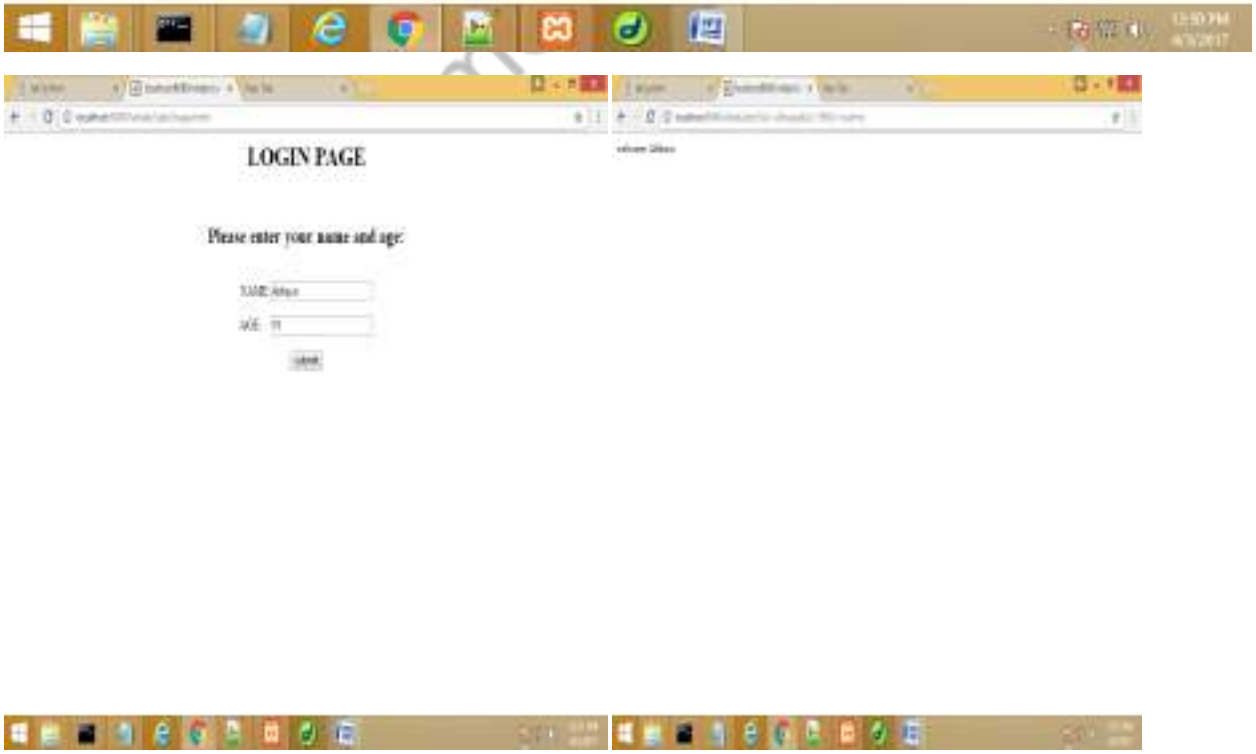
```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.text.*;
public class slab2age extends HttpServlet
{
	public void doGet(HttpServletRequest req,HttpServletResponse res) throws ServletException,IOException
	{
		String u1=req.getParameter("a1");
		String age=req.getParameter("a2");
		int age1=Integer.parseInt(age);
		PrintWriter out=res.getWriter();
		if(age1<18)
		{
			out.println("<html><body> you are not authorised user!!!!...</body></html>");
		}
		else
		{
			out.println("<html><body>welcome "+u1+" </body></html>");
		}
	}
}
```

XML FILE

```
<servlet>
        <servlet-name>sl3</servlet-name>
        <servlet-class>slab2age</servlet-class>
</servlet>
<servlet-mapping>
        <servlet-name>sl3</servlet-name>
        <url-pattern>/abc5</url-pattern>
</servlet-mapping>
```

OUTPUT


LOGIN PAGE
Please enter your name and age:
NAME:
AGE:
submit


LOGIN PAGE
Please enter your name and age:

AIM 7(viii) Using Servlets:

A web application for implementation:

The user is first served a login page which takes user's name and password. After submitting the details the server checks these values against the data from a database and takes the following decisions.

If the name and password matches, serves a welcome page with user's full name.

If name is not found in database, serves a registration page, where user's full name is asked and on submitting the full name, it stores, the login name, password and full name in the database (use sessions for storing the submitted login name and password).

HOME PAGE

```
<html>
<body>
<center>
<form name="f1" action="/wtlab/abc7" method="get">
<h1>LOGIN PAGE</h1>
LOGIN ID:<input type="text" name="l1">
<br>
<br>
PASSWORD:<input type="password" name="l2"><br><br>
<input type="submit" value="Login" >
</form>
</center>
</body>
</html>
```

REGISTRATION PAGE

```
<html>
<body>
<center>
<form name="f1"  action="/wtlab/abc8" method="get">
<h1>REGISTRATION PAGE</h1>
LOGIN ID:<input type="text" name="r1">
<br>
<br>
PASSWORD:<input type="password" name="r2"><br><br>
<input type="submit" value="submit" >
</form>
</center>
</body>
<body>
```

VALIDATION FILE

```
import java.sql.*;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class svalid1 extends HttpServlet
{
	Connection c;
	public void init()
	{
		try
		{
			Class.forName("com.mysql.jdbc.Driver");
			c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
		}
		catch(Exception e)
		{
			System.out.println(e);
		}
	}
	public void doGet(HttpServletRequestreq,HttpServletResponse res) throws
IOException,ServletException	{
		try{
		PrintWriter out=res.getWriter();
		//out.println("hello2");
		Statement s = c.createStatement();
		//out.println("hello3");
		res.setContentType("text/html");
		String n1=req.getParameter("l1");
```

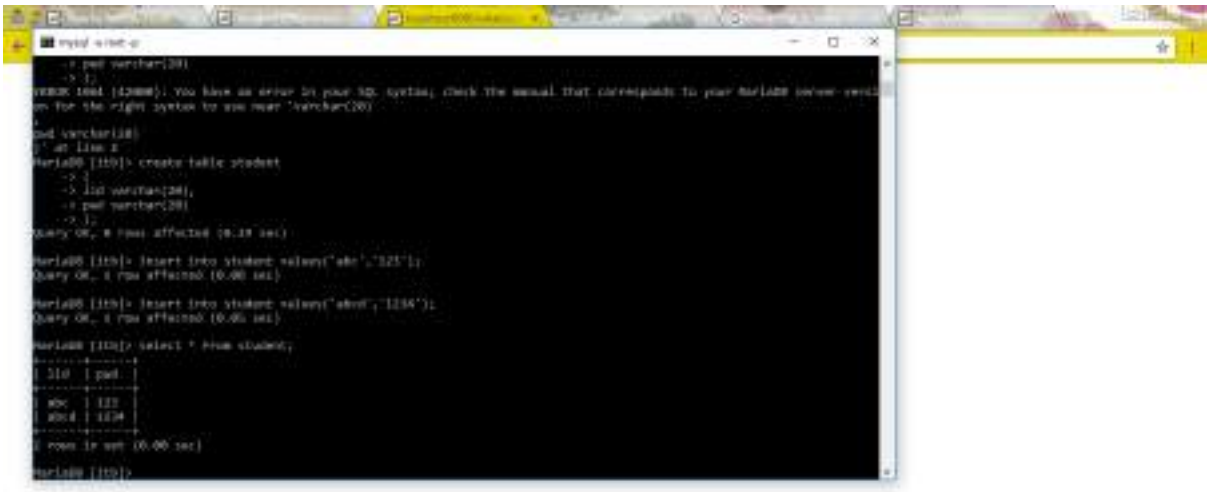
```
                String n2=req.getParameter("l2");
                //out.println("hello2");
                String q="select lid from student where lid='"+n1+"' and pwd='"+n2+"';";
                ResultSet r=s.executeQuery(q);
                if(r.next())
                {
                out.println("<html><body bgcolor='pink'><center><h1>welcome
"+n1+"</h1></center></boby></html>");
                }
                else
                {
                        out.println("<html><body>Please register...<form action='svalid2.html'
method='get'><input type='submit' value='submit'>");
                }
                }
                catch(Exception e)
                {
                        System.out.println(e);
                }

        }
}
```

REGISTRATION

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


public class svalid2 extends HttpServlet
{
	Connection c;
	public void init()
	{
		try{
			Class.forName("com.mysql.jdbc.Driver");
			c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
		}
		catch(Exception e){
			System.out.println(e);
		}
	}
	public void doGet(HttpServletRequestreq,HttpServletResponse res) throws
IOException,ServletException
	{
		try{
		PrintWriter out=res.getWriter();
		//out.println("hello2");
		Statement s = c.createStatement();
		//out.println("hello3");
		res.setContentType("text/html");
		String n1=req.getParameter("l1");
```

```
String n2=req.getParameter("l2");
//out.println("hello2");
String q="insert into student values('"+n1+"','"+n2+"');";
ResultSet r=s.executeQuery(q);
if(r.next())
{
out.println("<html><body bgcolor='pink'><center><h1>Succesfully Registered
</br>welcome "+n1+"</h1></center></boby></html>");
}
else
{
	out.println("<html><body>Please register...<form action='svalid2.html'
method='get'><input type='submit' value='submit'>");
}
}
catch(Exception e)
{
	System.out.println(e);
}

}
}
```

OUTPUT



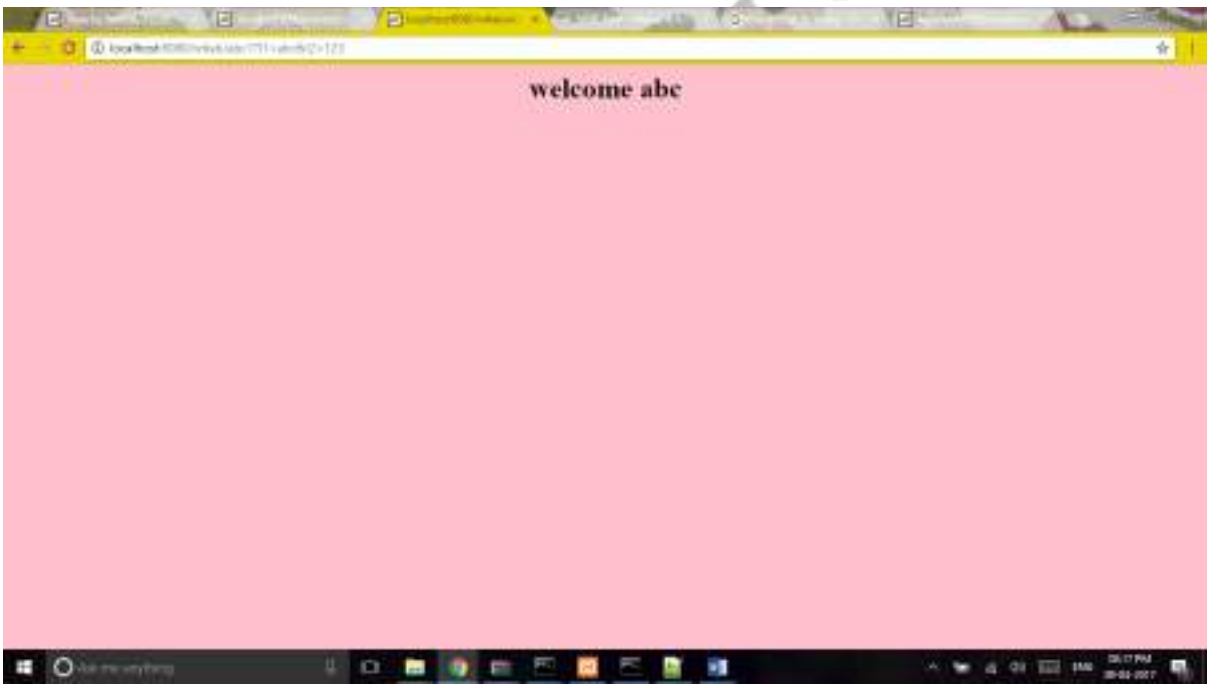
LOGIN PAGE

LOGIN ID

PASSWORD

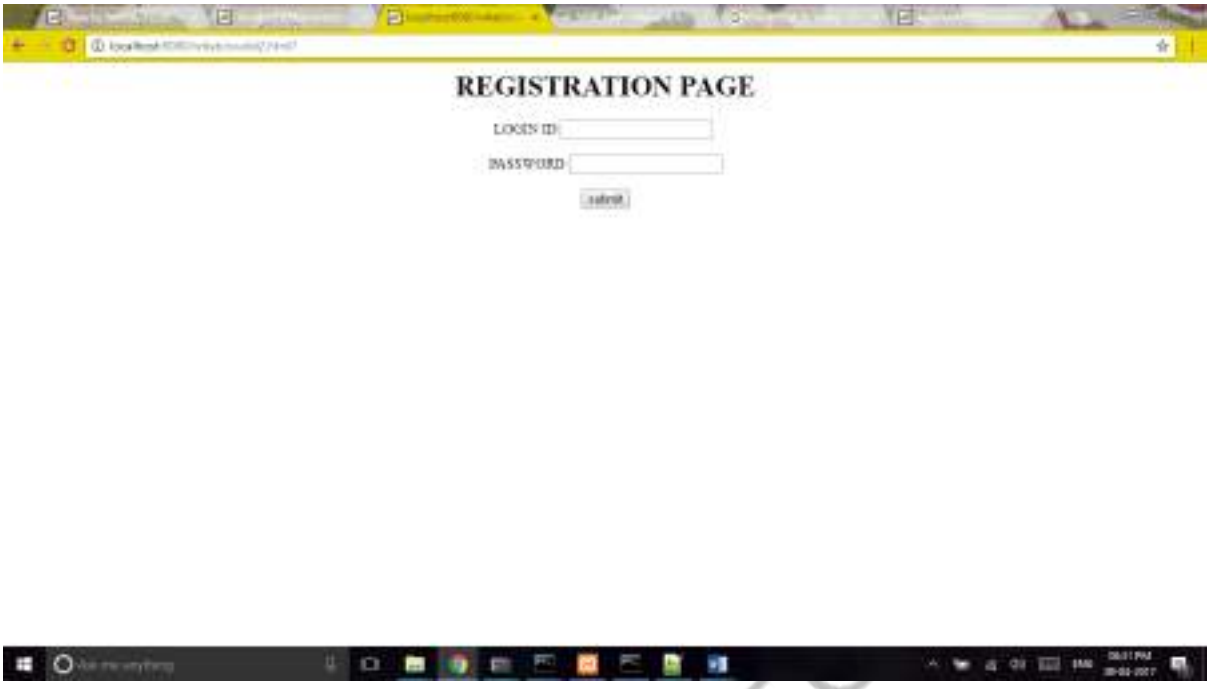
Login

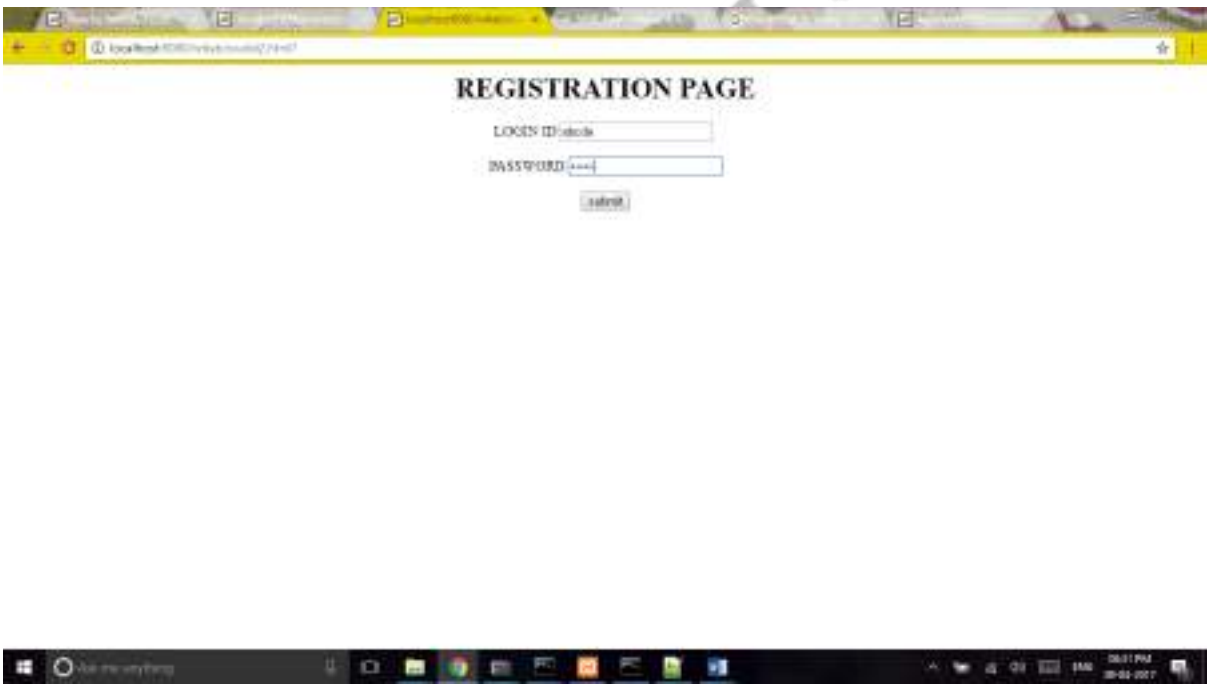

LOGIN PAGE
LOGIN ID:abc
PASSWORD:
Login

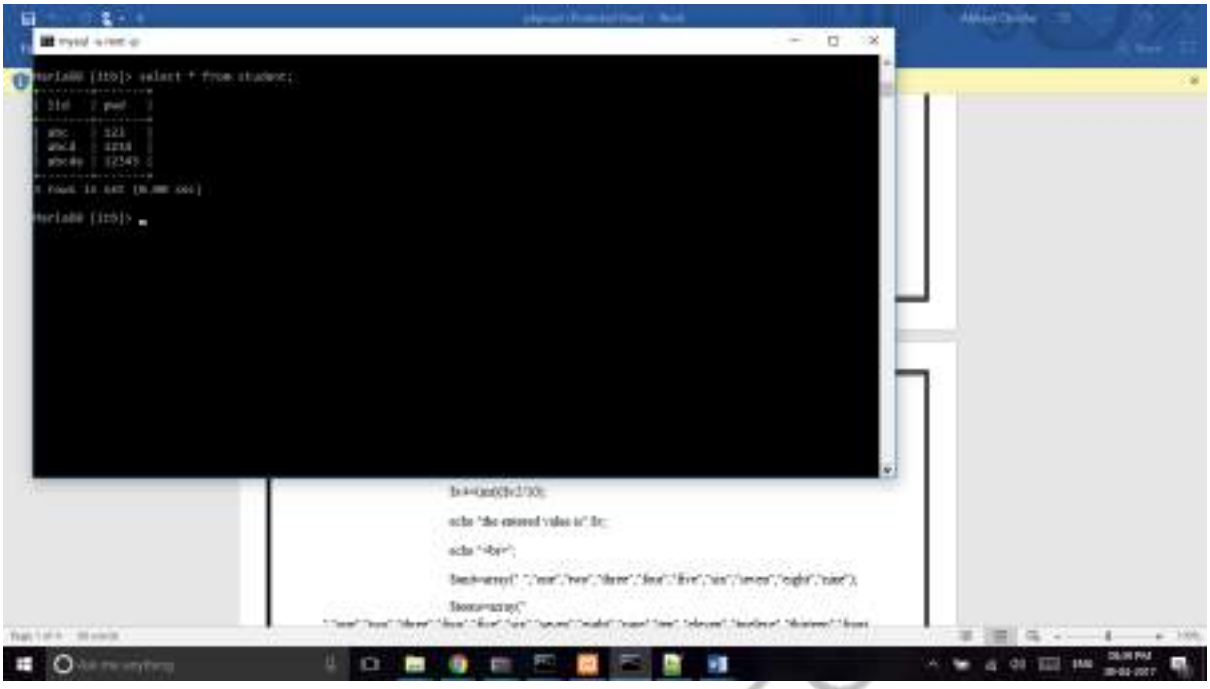

welcome abc


LOGIN PAGE
LOGIN ID:
PASSWORD:
Login


Please register..
submit


REGISTRATION PAGE
LOGIN ID:
PASSWORD:
submit


REGISTRATION PAGE
LOGIN ID:
PASSWORD:
submit



AIM 7(ix) Using Servlets:

A web application that lists all cookies stored in the browser on clicking“ List Cookies” button. Add cookies if necessary.

HTML FILE

```
<html>
<body><center>
<form action="/wtlab/abcl" method="get">
<h1>Cookie</h1>
<input type="submit" value="Set Cookies" name="btn">
</center>
</body>
</html>
```

JAVA FILES - SETTING COOKIES

```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class slabljnocks extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse res) throws
ServletException, IOException {
                    PrintWriter out= res.getWriter();
                    out.println("hi");
                    Cookie c1= new Cookie("c1","IT");
                    Cookie c2= new Cookie("c2","CSE");
                    Cookie c3= new Cookie("c3","EEE");
                    Cookie c4= new Cookie("c4","ECE");
                    Cookie c5= new Cookie("c5","ETM");
                    Cookie c6= new Cookie("c6","CIVIL");
                    res.addCookie(c1);
                    res.addCookie(c2);
                    res.addCookie(c3);
                    res.addCookie(c4);
                    res.addCookie(c5);
                    res.addCookie(c6);
                    res.sendRedirect("http://localhost:8080/wtlab/abcl2");
    }
    }
```

RETRIEVING COOKIES

```
import java.io.*;
import java.util.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class slabljnocks2 extends HttpServlet
{
	public void doGet(HttpServletRequest request, HttpServletResponse res) throws ServletException, IOException
	{

			PrintWriter out= res.getWriter();
			Cookie ck[]=request.getCookies();
			out.println("<html><body><center><h1>List of Cookies</h1></center><center></br>");
			for(int i=0;i<ck.length;i++)
			{
				out.println(ck[i].getName()+" : "+ck[i].getValue());//+"</br>");
			}
			out.println("</br>Total No. of Cookies: "+ck.length);
			out.println("</center></body></html>");

	}
}
```

XML FILE

```
<servlet>
<servlet-name>CookieServlet</servlet-name>
<servlet-class>slabljnocks</servlet-class>
</servlet>

<servlet-mapping>
<servlet-name>CookieServlet</servlet-name>
<url-pattern>/abcl</url-pattern>
</servlet-mapping>
<servlet>
<servlet-name>CookieServlet2</servlet-name>
<servlet-class>slabljnocks2</servlet-class>
</servlet>
<servlet-mapping>
<servlet-name>CookieServlet2</servlet-name>
<url-pattern>/abcl2</url-pattern>
</servlet-mapping>
```

OUTPUT


Cookie
Set Cookies


List of Cookies
e1 : IT e2 : CSE e3 : EEE e4 : ECE e5 : ETM e6 : CIVIL
Total No. of Cookies: 6

AIM 7(i) Using JSP

A user validation web application , where the user submits the login name and password to the server. The name and password are checked against the data already available in Database and if the data matches , a successful login page is returned.Otherwise a failure message is shown to the user.

HTML FILE

```
<html>
<body>
<center>
<form action="jspAccess.jsp" name="f1">
<h1>Login Page</h1>
Login ID<input type="text" name="t1">
<span name="s1">
</br>
</br>
Password<input type="password" name="t2">
</br>
</br>
<input type="submit" value="Submit" name="b1">
</form>
</center>
</body>
</html>
```

JSP FILE

```
<%@ page import="java.io.*" %>
<%@ page import="java.util.*" %>
<%@ page import="java.sql.*" %>
<%	Class.forName("com.mysql.jdbc.Driver");
	Connection conn=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
	Statement st=conn.createStatement();
	String n1=request.getParameter("t1");
	String n2=request.getParameter("t2");
	String query="select lid from student where lid='"+n1+"' and pwd='"+n2+"';";
	ResultSet x= st.executeQuery(query);
	if(x.next())
	{
		out.println("<html><center><h1>");
		out.println("Welcome "+n1);
		out.println("</h1></center></html>");
	}
	else
	{
		out.println("<html><center><h1>");
		out.println("Dear "+n1+", you are not a validated user.");
		out.println("</h1></center></html>");
	}
%>
```

OUTPUT


Login Page


Welcome abc


Login Page


Dear abcdd, you are not a validated user.

AIM 7(ii) Using JSP:

Modify the user validation web application to use an XML file instead of Database.

HTML FILE

```
<html>
<center>
<body>
<h1>Login Page</h1>
<form action="/wtlab/jspp/xmlaccess" name="f1">
Login ID<input type="text" name="t1">
</br>
</br>
Password<input type="password" name="t2">
</br>
</br>
<input type="submit" value="Submit" name="b1">
</form>
</body>
</center>
</html>
```

JSP FILE

```
<%@ page import=" org.w3c.dom.*" %>
<%@ page import=" javax.xml.parsers.*" %>
<%@ page import="java.io.*" %>
<%@ page import="java.util.*" %>
<%@ page import="java.sql.*" %>
<%

        try {
                int found=0;
               DocumentBuilderFactory Factory = DocumentBuilderFactory.newInstance();
                DocumentBuilder parser = Factory.newDocumentBuilder();
       Document doc = parser.parse("C:\\xampp\\tomcat\\webapps\\wtlab\\domxml.xml");
                Element root=doc.getDocumentElement();
               String uname=request.getParameter("t1");
                String pwd=request.getParameter("t2");
                  NodeList children = doc.getElementsByTagName("student");
              out.println("<html><body>");
               for (int temp = 0; temp < children.getLength(); temp++)
              {
              Node nNode = children.item(temp);
                     Element eElement = (Element) nNode;

      if(uname.equals(eElement.getElementsByTagName("name").item(0).getTextContent()))
      {
              if(pwd.equals(
eElement.getElementsByTagName("pwd").item(0).getTextContent()))
              {
                           out.println("<h1><center>welcome "+uname);
```

```
                    found=1;
                }
            }

        }
        if(found==0)
                out.println("<h1><center>Invalid user");
                out.println("</h1></center></body></html>");                    }
catch (Exception e) {
        e.printStackTrace();
    }
%>
```

XML FILE

```
<?xml version="1.0"?>
<class>
<student>
<rollno>1</rollno>
<name>seetha</name>
        <pwd>ram</pwd>
<marks>85</marks>
</student>
<student>
<rollno>2</rollno>
<name>geetha</name>
        <pwd>ram</pwd>
<marks>95</marks>
</student>
<student>
<rollno>3</rollno>
<name>rama</name>
        <pwd>ram</pwd>
<marks>90</marks>
</student>
</class>
```

OUTPUT

AIM 7(iv) Using JSP

A simple calculator web application that takes two numbers and an operator(+,-,/,* and %) from an HTML page & returns the result page with the operation performed on the operands.

HTML FILE

```
<html>
<body><center><h1><u>CALCULATOR</u><br>
<form name="f1" action="/wtlab/jspp/jlab1calcij.jsp" method="get">
value1:<input type="text" name="v1">
<br /><br />
value2:<input type="text" name="v2">
<br /><br />
choose an operator:
<select name="ops">
        <option >operators</option>
        <option >*</option>
        <option >/</option>
        <option >+</option>
        <option >-</option>
        <option >%</option>
</select>
<br /><br />
<input type="submit" value="calculate">
<br /><br />
</form></h1></center>
</body></html>
```

JSP FILE

```
<%@ page import="java.io.*"%>
<%@ page import="java.util.*"%>
<%@ page import="java.text.*"%>
<%
        String o1=request.getParameter("v1");
        String o2=request.getParameter("v2");
        String o3=request.getParameter("ops");
        char o4=o3.charAt(0);
        int n1=Integer.parseInt(o1);
        int n2=Integer.parseInt(o2);
        int r=0;
        switch(o4)
        {
                case '+' :r=n1+n2;break;
                case '%' :r=n1%n2;break;
                case '-' :r=n1-n2;break;
                case '*' :r=n1*n2;break;
                case '/' :r=n1/n2;break;
        }
        out.println("<html><body>Result is "+r);
        out.println("<form action='/wtlab/jspp/jlab1calci.html' method='get' ><input
type='submit' value='back'>");
%>
```

OUTPUT


CALCULATOR
value1:
value2:
choose an operator:


CALCULATOR
value1:
value2:
choose an operator:

AIM 7(v) Using JSP:

Modify the above program such that it stores each query in a database and checks the database first for the result. If the query is already available in the DB ,it returns the value that was previously computed or it computes the result and returns it after storing the new query and result in DB

HTMLFILE

```
<html>
<body>
<form name="f1" action="jlab1calcij.jsp" method="get">
<center>
<h1>Calculator</h1>
</br>
</br>
Number<input type="text" name="val1">
</br>
</br>
Operator<select name="op">
<option >+</option>
<option >-</option>
<option >*</option>
<option >/</option>
<option >%</option>
</select>
</br>
</br>
Number<input type="text" name="val2">
</center>
```

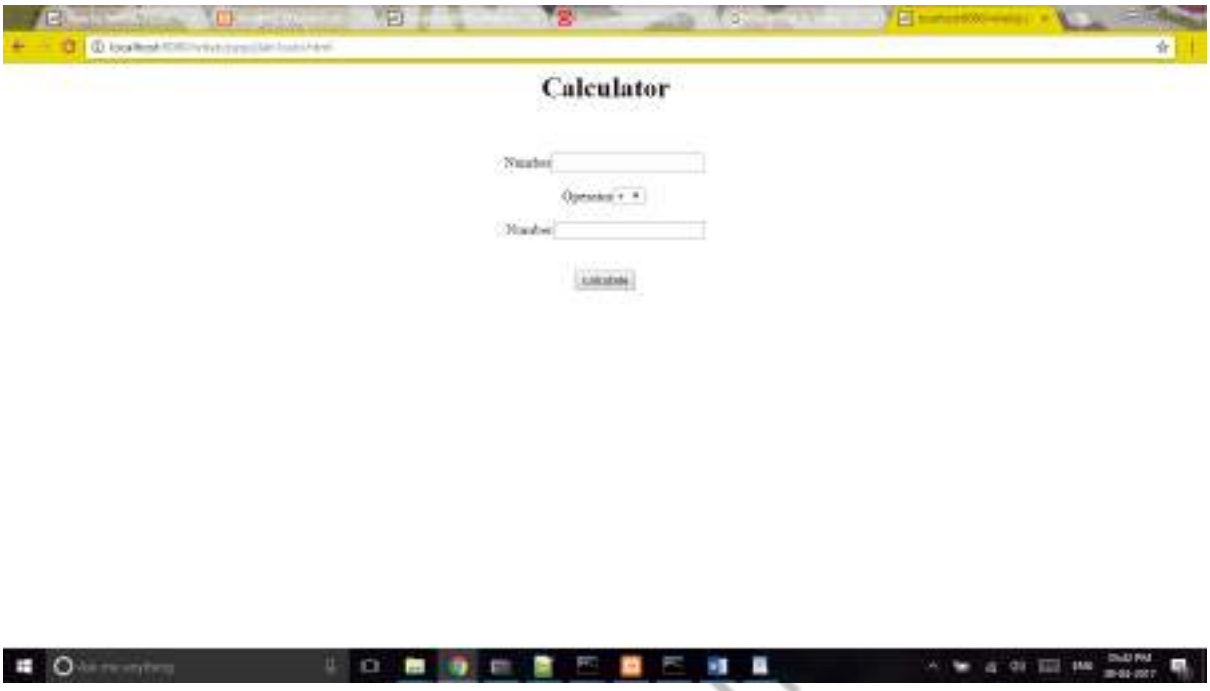
```
</br>
</br>
<center>
<input type="submit" value="calculate">
</center>
</form>
</body><html>
```

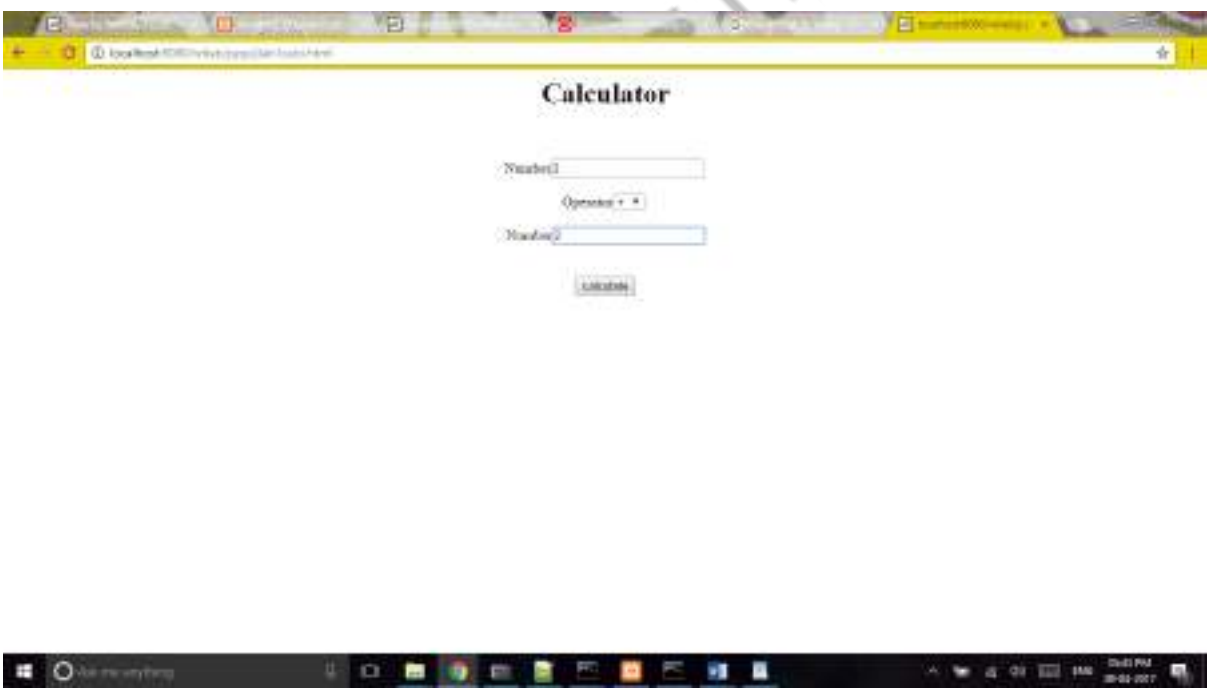
JSP FILE

```
<%@ page import ="java.io.*" %>
<%@ page import = "java.util.*" %>
<%@ page import = "java.sql.*" %>
<%
        Connection c;
        try
        {
                Class.forName("com.mysql.jdbc.Driver");
                c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
                Statement s = c.createStatement();
        response.setContentType("text/html");
        String v1= request.getParameter("val1");
        String v2= request.getParameter("val2");
        String o= request.getParameter("op");
        char op= o.charAt(0);
        int n1= Integer.parseInt(v1);
        int n2= Integer.parseInt(v2);
        int r=0;
        switch(op)
        {
                case '+' :      r = n1 + n2 ; break;
                case '-' :      r = n1 - n2 ; break;
                case '%' :      r = n1 % n2 ; break;
                case '/' :      r = n1 / n2 ; break;
                case '*' :      r = n1 * n2 ; break;
        }
        String q="select * from calci where v1="+n1+" and v2="+n2+" and op='"+op+"';";
```

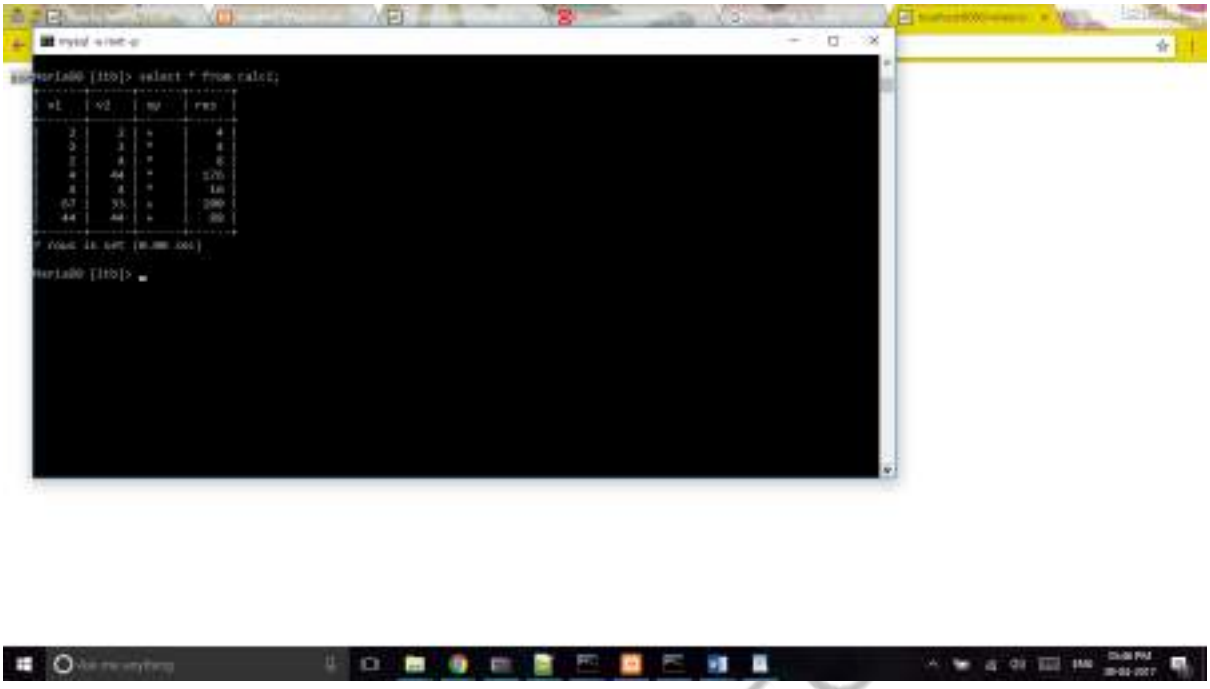
```
                ResultSetrss=s.executeQuery(q);
                String resultt="";
                 if(rss.next()) {
resultt = rss.getString(4);
                }
                else
                {
                        String q2="insert into calci values("+n1+","+n2+",'"+op+"',"+r+");";
                        out.println(q2);
                        ResultSet rs2=s.executeQuery(q2);
                        resultt=Integer.toString(r);

                }
                out.println("<html><body><center>Result is : "+resultt+" </br>");
                out.println("<form action='/wtlab/slab2calci.html' method='get'><input
type='submit' value='Go Back' ></form></center></body></html>");
                }
                catch(Exception e)
                {
                        System.out.println(e);
                }
%>
```

OUTPUT






Calculator



AIM 7(vi) Using JSP:

A web application takes a name as input and on submit it shows a hello<name>page where <name> is taken from the request. It shows the start time at the right top corner of the page and provides a logout button. On clicking this button, it should show a logout page with Thank You <name> mesaage with the duration of usage(hint;use session to store name and time).

HTML FILE

```
<html>
<body>
<center>
<form name="f1" action="jlab1login.jsp" method="get">
<h1>Login Page</h1>
Login ID<input type="text" name="l1">
<span name="s1">
</br>
</br>
Password<input type="password" name="l2">
</br>
</br>
<input type="submit" value="Login">
</form>
</center>
</body>
</html>
```

JSP FILE LOGIN FILE

```
<%@ page import ="java.io.*" %>
<%@ page import = "java.util.*" %>
<%@ page import= "java.text.*" %>
<%
        String uname = request.getParameter("l1");
        Date d1 = new Date();
        DateFormat df= new SimpleDateFormat("dd/MM/yyyy HH:mm:ss");
        String formatted= df.format(d1);
        Cookie c1 = new Cookie("name",uname);
        Cookie c2= new Cookie("logintime",formatted);
        response.addCookie(c1);
        response.addCookie(c2);
        out.println("<html><center><h1><body><form action='jlab1logout.jsp' name='f2'
method='get'> Welcome " +uname);
        out.println("<br><br> You Logged in at : "+d1+" <br><input type='submit'
value='Logout'></form></body></center></h1></html>");
%>
```

JSP FILE LOGOUT FILE

```
<%@ page import ="java.io.*" %>
<%@ page import = "java.util.*" %>
<%@ page import= "java.text.*" %>
<%
        Date loginTime= null;
        try
        {
                Cookie ck[] = request.getCookies();
                String uname= ck[0].getValue();
                String dst= ck[1].getValue();
                Date logoutTime = new Date();
                System.out.println("Login time : "+dst);
                DateFormat df = new SimpleDateFormat("dd/MM/yyyy HH:mm:ss");
                loginTime= df.parse(dst);
                System.out.println("Login Time  : "+loginTime);
                long sessionTime= logoutTime.getTime()-loginTime.getTime();
                out.println("<html><center><h1><body> Hello! You have Successfully
Logged Out!</br> Your Session duration is : ");
                out.println(sessionTime+" millisecs </body></center></h1></html>");
        }
        catch(Exception e)
        {
        }
%>
```

OUTPUT

AIM 7(vii) Using JSP

A web application that takes name and age from an HTML page. If the age is less than 18, It should send a page with "Hello <name>, you are not authorized to visit this site" message, where <name> should be replaced with the entered name. Otherwise it should send "Welcome <name> to this site" message.

HTML FILE

```
<html><body><center>
<h1>LOGIN PAGE</h1><br />
<h2> Please enter your name and age:</h2><br/>
<form action="/wtlab/jspp/jlab1agej.jsp" method="get">
NAME:<input type="text" name="a1"><br /><br />
AGE:    <input type="text" name="a2"><br /></br />
<input type="submit" name="s1" value="submit">
</form></center></body></html>
```

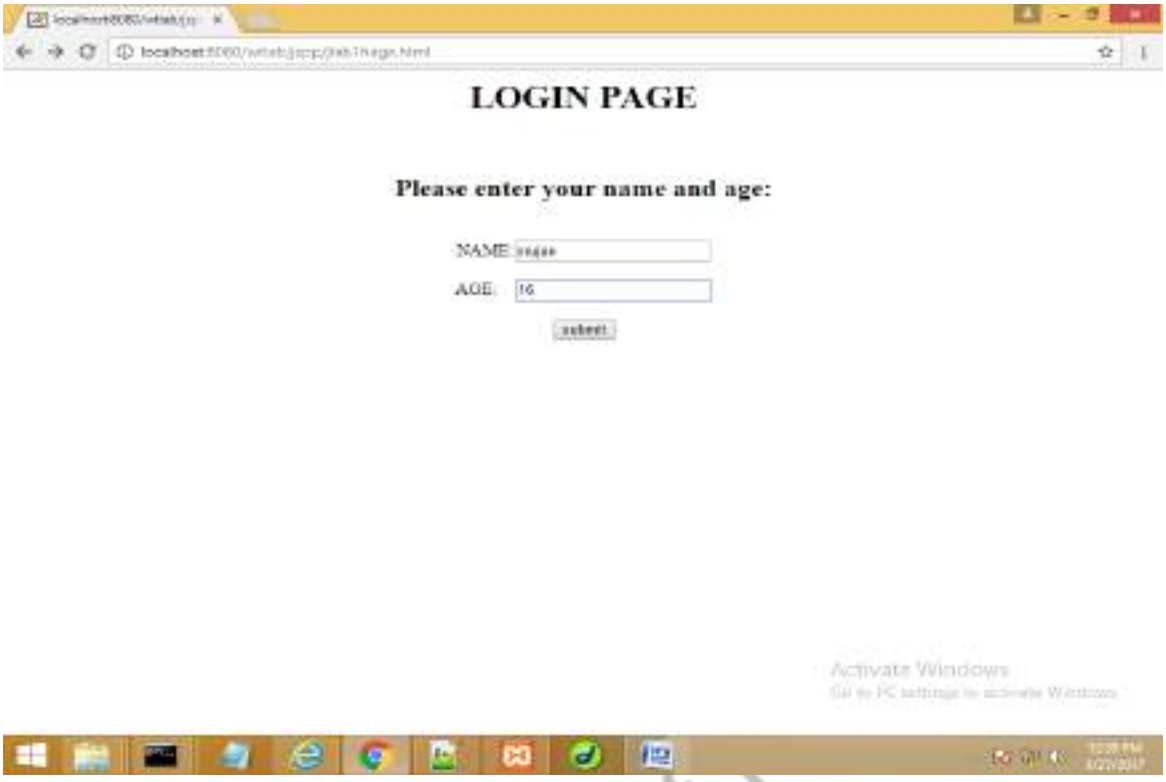
JSP FILE

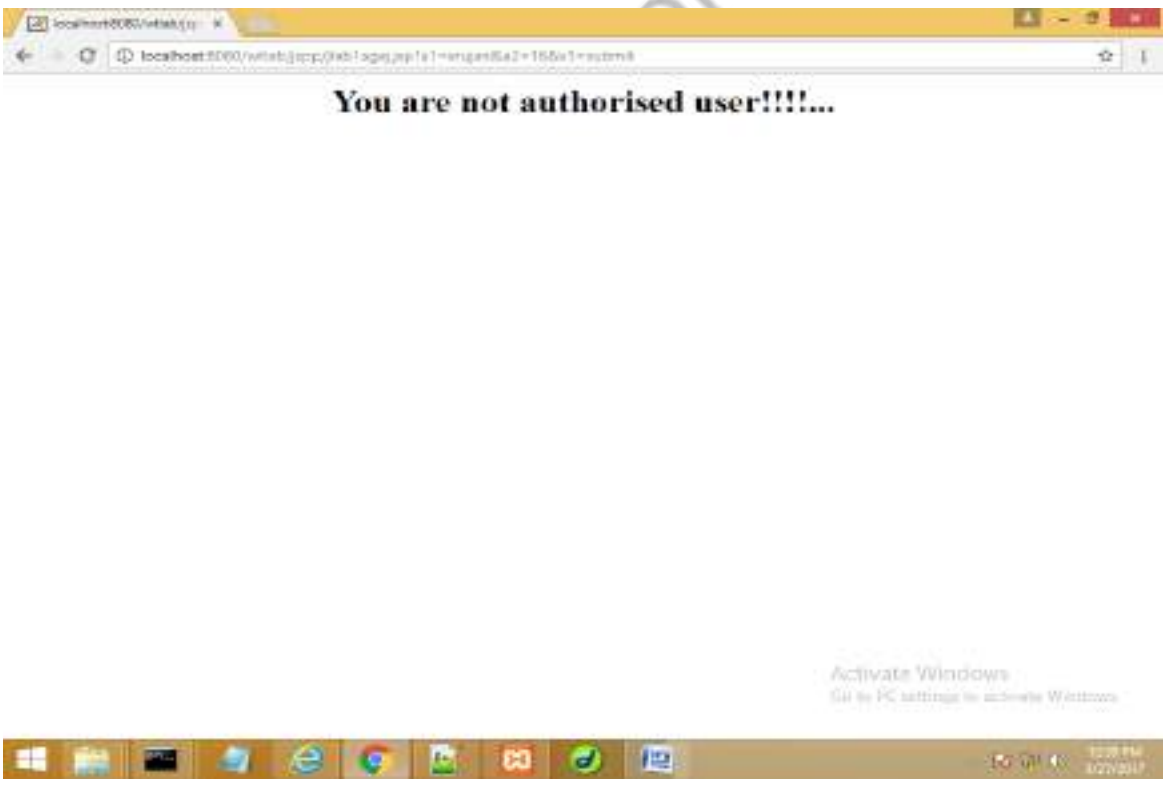
```
<%@ page import="java.io.*"%>
<%@ page import="java.util.*"%>
<%@ page import="java.text.*"%>
<%      String u1=request.getParameter("a1");
        String age=request.getParameter("a2");
        int age1=Integer.parseInt(age);
        if(age1<18)
        {
                out.println("<html><body><h1><center>You are not authorised
        user!!!!...</center></h1></body></html>");
        }
                else
        out.println("<html><body><h1><center>welcome "+u1+"
</center></h1></body></html>");
%>
```

OUTPUT


LOGIN PAGE
Please enter your name and age:
NAME:
AGE:
submit


welcome vidya


LOGIN PAGE
Please enter your name and age:
NAME:
AGE:
16
submit


You are not authorised user!!!!...

AIM 7(viii) Using JSP:

A web application for implementation:

The user is first served a login page which takes user's name and password. After submitting the details the server checks these values against the data from a database and takes the following decisions.

If the name and password matches, serves a welcome page with user's full name.

If name is not found in database, serves a registration page, where user's full name is asked and on submitting the full name, it stores, the login name, password and full name in the database (use sessions for storing the submitted login name and password).

HOME PAGE

```
<html>
<body>
<center>
<form name="f1" action="sjvalid1.jsp" method="get">
<h1>LOGIN PAGE</h1>
LOGIN ID:<input type="text" name="l1">
<br>
<br>
PASSWORD:<input type="password" name="l2"><br><br>
<input type="submit" value="Login" >
</form>
</center>
</body>
</html>
```

REGISTRATION PAGE

```
<html>
<body>
<center>
<form name="f1"  action="sjvalid2.jsp" method="get">
<h1>REGISTRATION PAGE</h1>
LOGIN ID:<input type="text" name="r1">
<br>
<br>
PASSWORD:<input type="password" name="r2"><br><br>
<input type="submit" value="submit" >
</form>

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

VALIDATION FILE

```
<%@ page import ="java.io.*" %>
<%@ page import = "java.util.*" %>
<%@ page import= "java.sql.*" %>
<%
        Connection c;
                try
                {
                        Class.forName("com.mysql.jdbc.Driver");
                        c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
                        Statement s = c.createStatement();
                response.setContentType("text/html");
                String v1= request.getParameter("l1");
                String v2= request.getParameter("l2");
                String q="select * from student where lid="'+v1+'" and pwd="'+v2+'";";
                ResultSet rss=s.executeQuery(q);
                String resultt="";
                 if(rss.next()) {
         resultt = rss.getString(1);
                        out.println("<html><body><center>Welcome: "+resultt+" </br>");
                }
                else
                {


                        out.println("<html><body>Please register...<form action='svalid2.html'
method='get'><input type='submit' value='submit'>");


                }
```

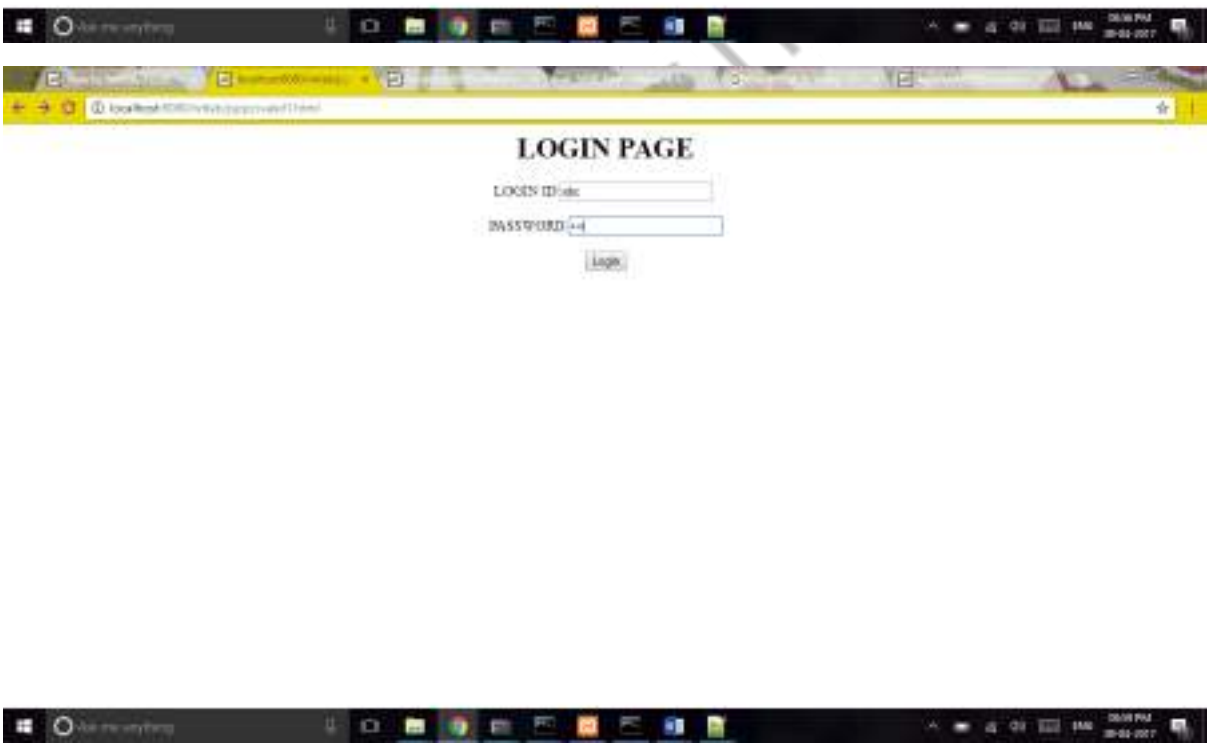
```
            }
            catch(Exception e)
            {
                System.out.println(e);
}%>
```

REGISTRATION

```
<%@ page import ="java.io.*" %>
<%@ page import = "java.util.*" %>
<%@ page import= "java.sql.*" %>
<%
Connection c;
        try{
                Class.forName("com.mysql.jdbc.Driver");
                c=DriverManager.getConnection("jdbc:mysql://localhost/itb","root","");
                Statement s = c.createStatement();
        response.setContentType("text/html");
        String v1= request.getParameter("r1");
        String v2= request.getParameter("r2");
        String q="insert into student values('"+v1+"','"+v2+"');";
        ResultSet r=s.executeQuery(q);
        if(r.next()){
        out.println("<html><body bgcolor='pink'><center><h1>Succesfully Registered
</br>welcome "+v1+"</h1></center></boby></html>");
        }
        else
        {
                out.println("<html><body>Please register...<form action='svalid2.html'
method='get'><input type='submit' value='submit'>");
        }
        }
        catch(Exception e){
                System.out.println(e);
        }
%>
```

OUTPUT


LOGIN PAGE
LOGIN ID:
PASSWORD:
Login


LOGIN PAGE
LOGIN ID:
PASSWORD:
Login

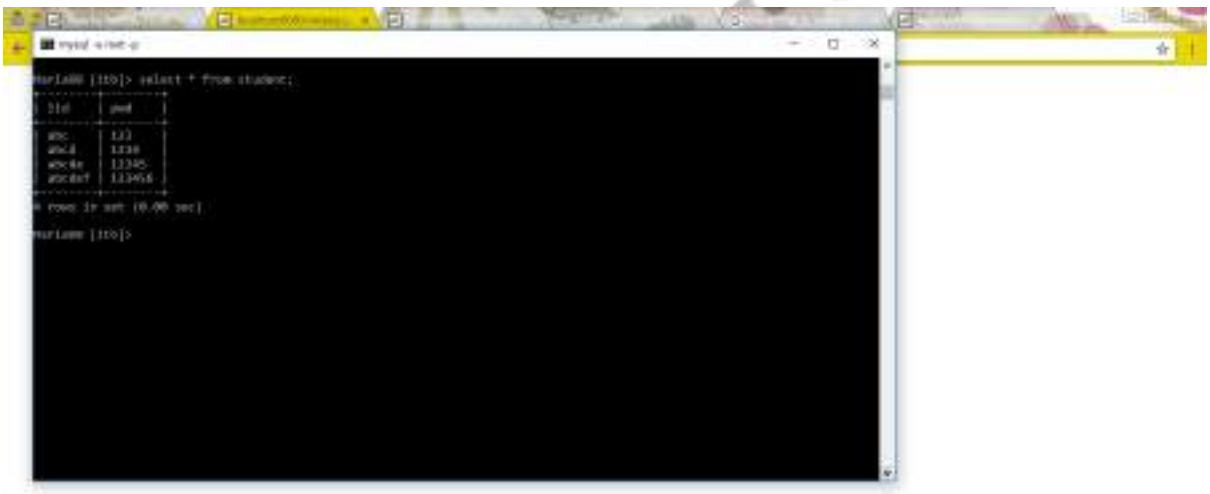

Welcome abc


LOGIN PAGE
LOGIN ID
PASSWORD
Login


Please register..
submit


REGISTRATION PAGE
LOGIN ID:
PASSWORD
submit


REGISTRATION PAGE
LOGIN ID:
PASSWORD:
submit


mysql> select * from student;
lid	pwd
abc	123
abc1	1234
abc4a	12345
abcdef	123456
6 rows in set (0.00 sec)

AIM 7(ix) Using JSP

A web application that lists all cookies stored in the browser on clicking“ list cookies” button. Add cookies if necessary.

HTML FILE

```
<html>
<body><center>
<form action="/wtlab/jspp/scc1.jsp" method="get">
<h1>Cookie</h1>
<input type="submit" value="Set Cookies" name="btn">
</center>
</body>
</html>
```

JSP FILES

SETTING COOKIES

```
<%@ page import="java.io.*"%>
<%@ page import="java.util.*"%>
<%@ page import="javax.servlet.*"%>
<%@ page import="javax.servlet.http.*"%>
<%
                    out.println("hi");
                    Cookie c1= new Cookie("c1","IT");
                    Cookie c2= new Cookie("c2","CSE");
                    Cookie c3= new Cookie("c3","EEE");
                    Cookie c4= new Cookie("c4","ECE");
                    Cookie c5= new Cookie("c5","ETM");
                    Cookie c6= new Cookie("c6","CIVIL");
                    response.addCookie(c1);
                    response.addCookie(c2);
                    response.addCookie(c3);
                    response.addCookie(c4);
                    response.addCookie(c5);
                    response.addCookie(c6);
                    response.sendRedirect("http://localhost:8080/wtlab/jspp/ssc2.jsp");
%>
```

RETRIEVING COOKIES

```
<%@ page import="java.io.*"%>
<%@ page import="java.util.*"%>
<%@ page import="javax.servlet.*"%>
<%@ page import="javax.servlet.http.*"%>
<%
                    Cookie ck[]=request.getCookies();
                    out.println("<html><body><center><h1>List of
Cookies</h1></center><center></br>");
                    for(inti=0;i<ck.length;i++)
                    {
                        out.println(ck[i].getName()+" : "+ck[i].getValue());//+"</br>");
                    }
                    out.println("</br>Total No. of Cookies: "+ck.length);
                    out.println("</center></body></html>");
%>
```

OUTPUT