Week 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

Step 1: Install Apache

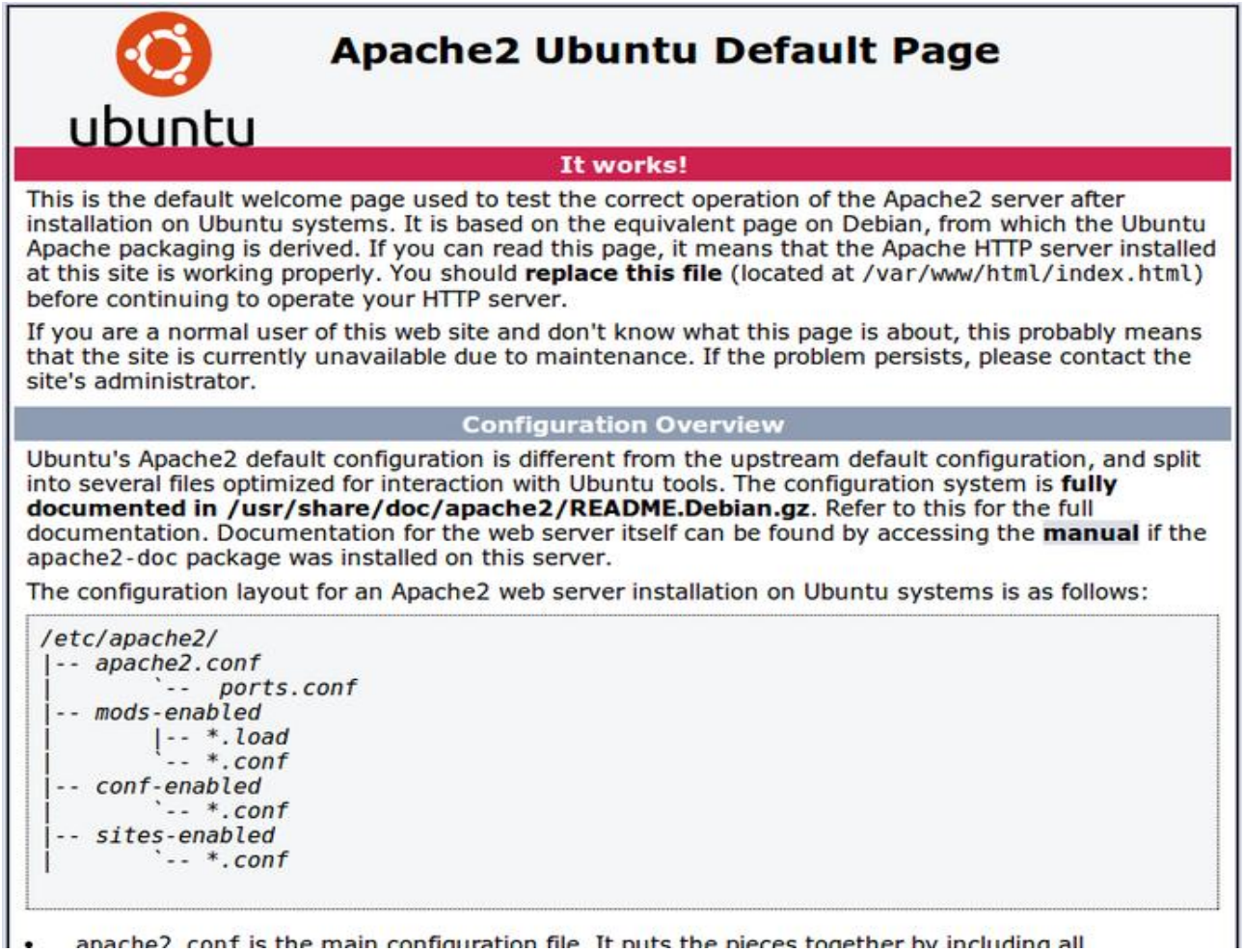
Type type the below commands at command prompt one by one:

sudo apt-get update
sudo apt-get install apache2

Afterwards, your web server is installed.

You can do a spot check right away to verify that everything went as planned by visiting your server's public IP address in your web browser (see the note under the next heading to find out what your public IP address is if you do not have this information already):

http://your_server_IP_addressYou will see the default Ubuntu 14.04 Apache web page, which is there for informational and testing purposes. It should look something like this:



If you see this page, then your web server is now correctly installed.

Step 2: Install MySQL

Now that we have our web server up and running, it is time to install MySQL. MySQL is a database management system. Basically, it will organize and provide access to databases where our site can store information.

Again, we can use apt to acquire and install our software. This time, we'll also install some other "helper" packages that will assist us in getting our components to communicate with each other:

sudo apt-get install mysql-server php5-mysql

Note: In this case, you do not have to run sudo apt-get update prior to the command. This is because we recently ran it in the commands above to install Apache. The package index on our computer should already be up-to-date.

During the installation, your server will ask you to select and confirm a password for the MySQL "root" user. This is an administrative account in MySQL that has increased privileges. Think of it as

being similar to the root account for the server itself (the one you are configuring now is a MySQL-specific account however).

Step 3: Install PHP

PHP is the component of our setup that will process code to display dynamic content. It can run scripts, connect to our MySQL databases to get information, and hand the processed content over to our web server to display.

We can once again leverage the apt system to install our components. We're going to include some helper packages as well:

sudo apt-get install php5 libapache2-mod-php5 php5-mcrypt

This should install PHP without any problems. We'll test this in a moment.

n order to test that our system is configured properly for PHP, we can create a very basic PHP script.

We will call this script info.php. In order for Apache to find the file and serve it correctly, it must be saved to a very specific directory, which is called the "web root".

In Ubuntu 14.04, this directory is located at /var/www/html/. We can create the file at that location by typing:

sudo nano /var/www/html/info.php

This will open a blank file. We want to put the following text, which is valid PHP code, inside the file:

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

When you are finished, save and close the file.

Now we can test whether our web server can correctly display content generated by a PHP script. To try this out, we just have to visit this page in our web browser. You'll need your server's public IP address again.

The address you want to visit will be:

http://your_server_IP_address/info.php

The page that you come to should look something like this:

PHP Version 5.5.9-1ubuntu4

System	Linux blah 3.13.0-24-generic #46-Ubuntu SMP Thu Apr 10 19:11:08 UTC 2014 x86_64
Build Date	Apr 9 2014 17:08:00
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php5/apache2
Loaded Configuration File	/etc/php5/apache2/php.ini
Scan this dir for additional .ini files	/etc/php5/apache2/conf.d
Additional .ini files parsed	/etc/php5/apache2/conf.d/05-opcache.ini, /etc/php5/apache2/conf.d/10-pdo.ini, /etc/php5/apache2/conf.d/20-json.ini, /etc/php5/apache2/conf.d/20-mysql.ini, /etc/php5/apache2/conf.d/20-mysqli.ini, /etc/php5/apache2/conf.d/20-pdo_mysql.ini, /etc/php5/apache2/conf.d/20-readline.ini
PHP API	20121113
PHP Extension	20121212
Zend Extension	220121212
Zend Extension Build	API220121212,NTS
PHP Extension Build	API20121212,NTS

Step Four- Install Tomcat

The first thing you will want to do is update your apt-get package lists:

```
sudo apt-get update
```

Now you are ready to install Tomcat. Run the following command to start the installation:

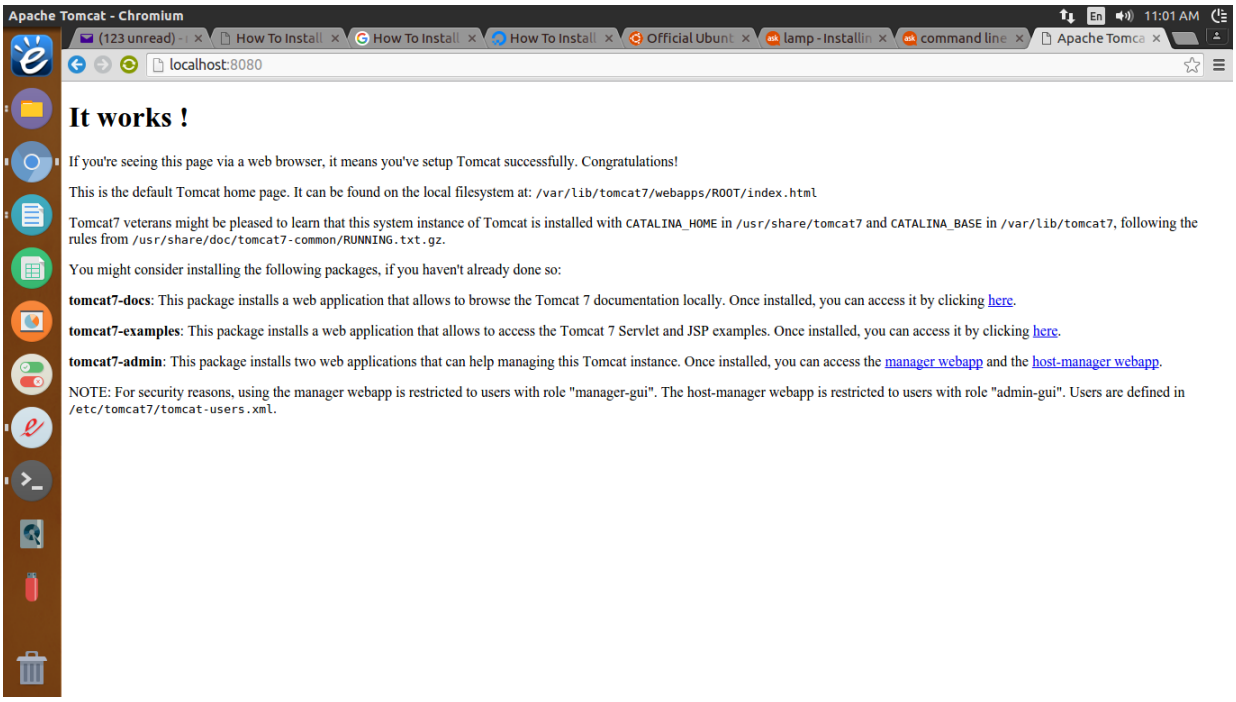
```
sudo apt-get install tomcat7
```

Tomcat is not completely set up yet, but you can access the default splash page by going to your domain or IP address followed by :8080 in a web browser:

Open in web browser:

http://server_IP_address:8080

You will see a splash page that says "It works!", in addition to other information.



Week 2 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>

<head><title>WT32_Ex6_4</title></head>

<body>

<h1>Login Form</h1>

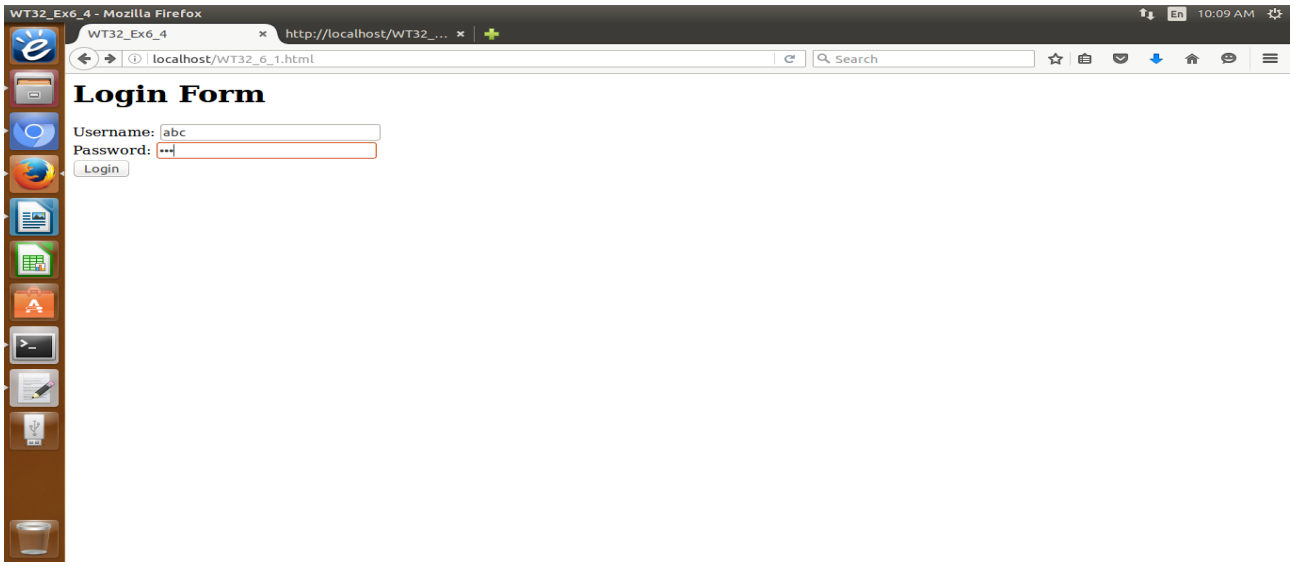
<form name="f1" action="login.php">

```
Username: <input type="text" name="uname"><br>
Password: <input type="password" name="pass"><br>
<input type="submit" value="Login">
</form>
</body>
</html>
```

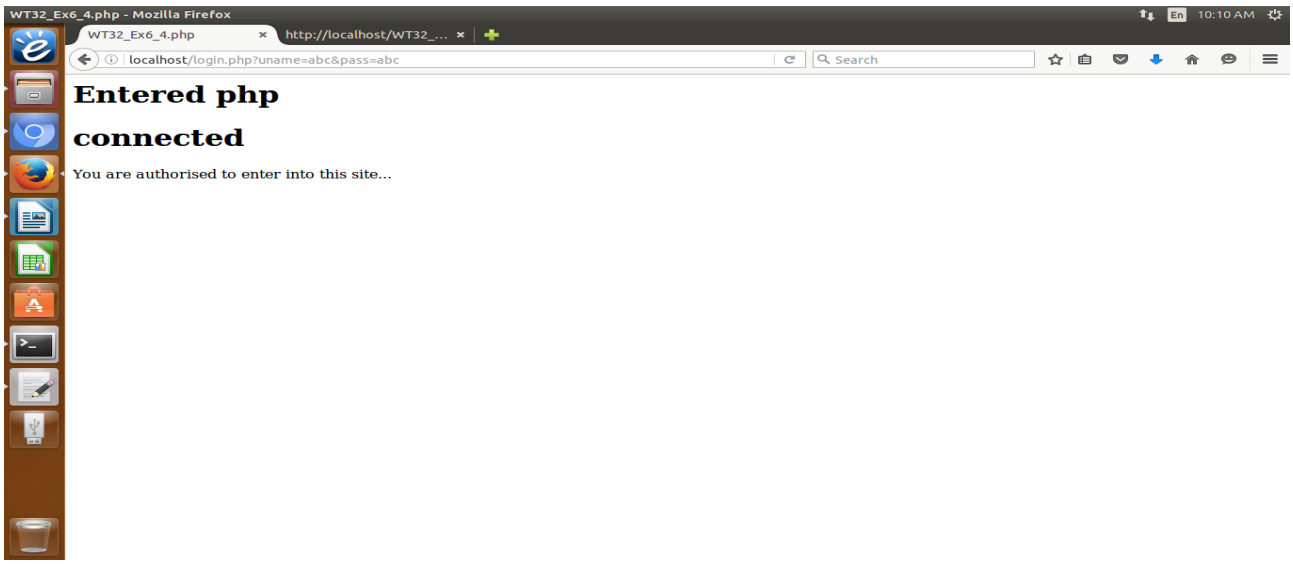
login.php

```
<html>
<head><title>WT32_Ex6_4.php</title></head>
<body>
<?php
echo "<h1>Entered php</h1>";
$flag=0;
$user=$_REQUEST["uname"];
$pwd=$_REQUEST["pass"];
$connection=mysql_connect("localhost","root","eswecha") or die("couldnot connect to server");
echo "<h1>connected</h1>";
$db=mysql_select_db("customer",$connection) or die("couldnot select database");
$query="select * from account";
$result=mysql_query($query) or die("query failed".mysql_error());

while($row=mysql_fetch_array($result))
{

if(($user==$row['uname'])&&($pwd==$row['pass']))
{
```

```
$flag=1;
}
}
if($flag==1)
echo "You are authorised to enter into this site...";
else
echo "You are a INVALID user...";
mysql_close($connection);
?>
</body>
```




```
</html>
```



Week 3 Modify the above program to use an xml file instead of database.

<form action='chkusr.php' method='post'>

Login

User name: <input type='text' name='user'>

Password: <input type='password' name='pass'>

<input type='submit'value='Login'>

</form>

chkusr.php

<?php

```
$user = $_POST['user'];
$pass = $_POST['pass'];
$flag = 0;
if ($user&&$pass)
{
$xml = simplexml_load_file("users.xml");
$cnt = count($xml->user);
for($i = 0; $i < $cnt; $i++)
{
$username = $xml->user[$i]->username;
$password = $xml->user[$i]->password;
if ($user == $username && $pass == $password)
{
print "Hello " . $user;
$flag = 0;
break;
}
else
$flag = 1;
}
if ($flag == 1)
print "user does not exist!";
}
else
die("please enter a username and password!");
?>
```

users.xml

<users>

<user>

<username>aaa</username>

<password>aaa</password>

</user>

<user>

<username>bbb</username>

<password>bbb</password>

</user>

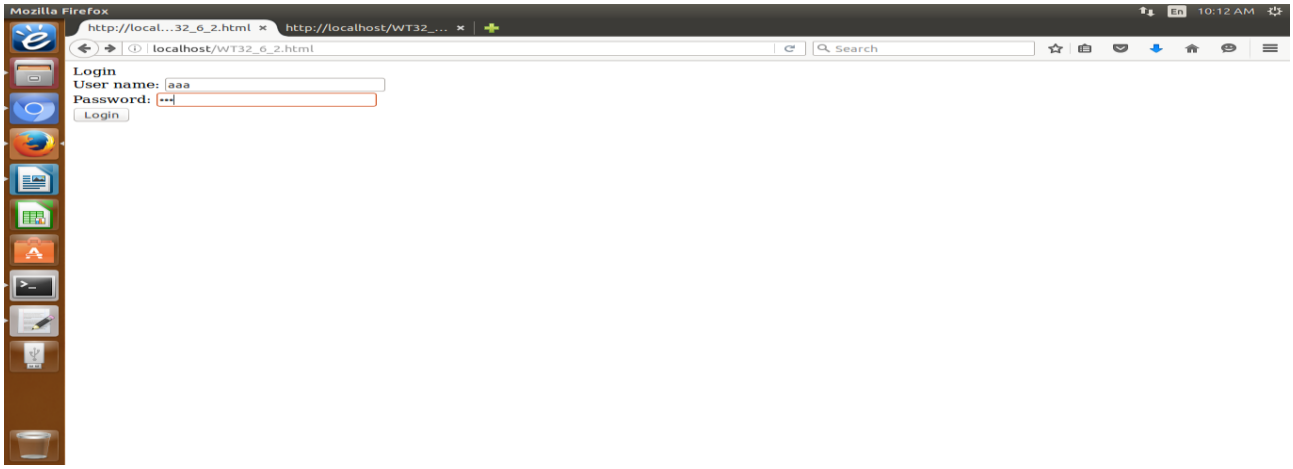
<user>

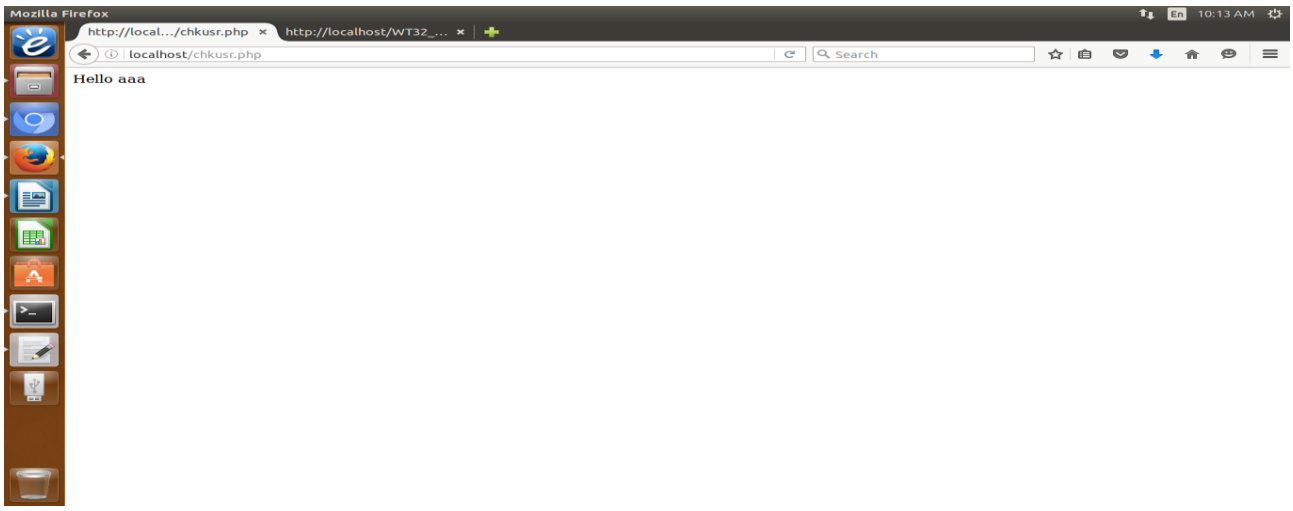
<username>ccc</username>

<password>ccc</password>

</user>

</users>





Week 4 Modify the above program to use AJAX to show the result on the same page below the submit button.

<html>

<head>

<script type="text/javascript" src="ajaxFrmSbmt.js"></script>

<title></title>

</head>

<body>

```
<form name="form1" method="post"
onsubmit="getxmlHttpRequest('LoginServlet','form1','message','please wait...'); return false;">

Enter name <input type="text" name="username"/><br>

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

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

</form>

<div id="message"></div>

</body>

</html>
```

ajaxFrmSbmt.js

```
function getxmlHttpRequest(servletName,formname,responsediv,responsemsg) {

var xmlhttp = false;

var x = this;

// For the browsers Mozilla/Safari/Ie7

if (window.XMLHttpRequest) {

x.xmlhttp = new XMLHttpRequest();

}

// for the lower version of IE

else if (window.ActiveXObject) {

x.xmlhttp = new ActiveXObject("Microsoft.XMLHTTP");

}

x.xmlhttp.open('POST', servletName, true);

x.xmlhttp.setRequestHeader('Content-Type', 'application/x-www-form-urlencoded');

x.xmlhttp.onreadystatechange = function() {
```

```
if (x.xmlhttp.readyState == 4)
{
updatepage(x.xmlhttp.responseText,responsediv);
}
else
{
updatepage(responsemsg,responsediv);
} }
x.xmlhttp.send(getquerystring(formname));
}
function getquerystring(formname) {
var form = document.forms[formname];
var qstr = "";
function GetElemValue(name, value) {
qstr += (qstr.length > 0 ? "&" : "")
+ escape(name).replace(/\+/g, "%2B") + "="
+ escape(value ? value : "").replace(/\+/g, "%2B");
//+ escape(value ? value : "").replace(/\n/g, "%0D");
}
var elemArray = form.elements;
for (var i = 0; i < elemArray.length; i++) {
var element = elemArray[i];
var elemType = element.type.toUpperCase();
var elemName = element.name;
if (elemName) {
if (elemType == "TEXT" || elemType == "PASSWORD")
```

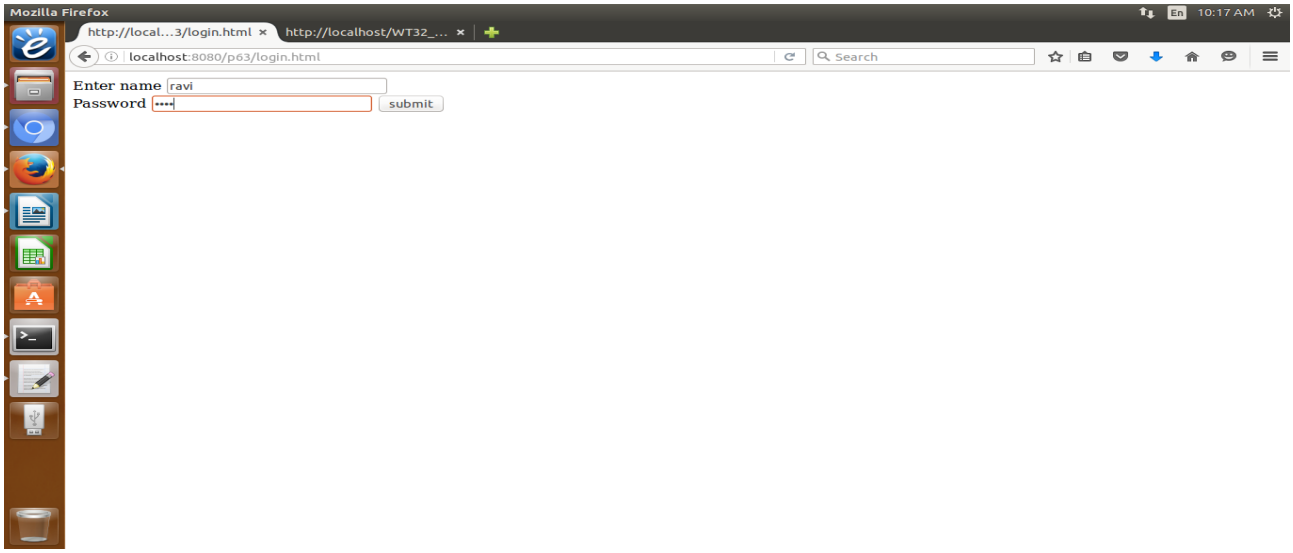
```
{
GetElemValue(elemName, element.value);
alert("welcome");
}
else if (elemType.indexOf("SELECT") != -1)
for (var j = 0; j < element.options.length; j++) {
var option = element.options[j];
if (option.selected)
GetElemValue(elemName,
option.value ? option.value : option.text);
}
}
}
return qstr;
}
function updatepage(str,responsediv){
document.getElementById(responsediv).innerHTML = str;
}
```

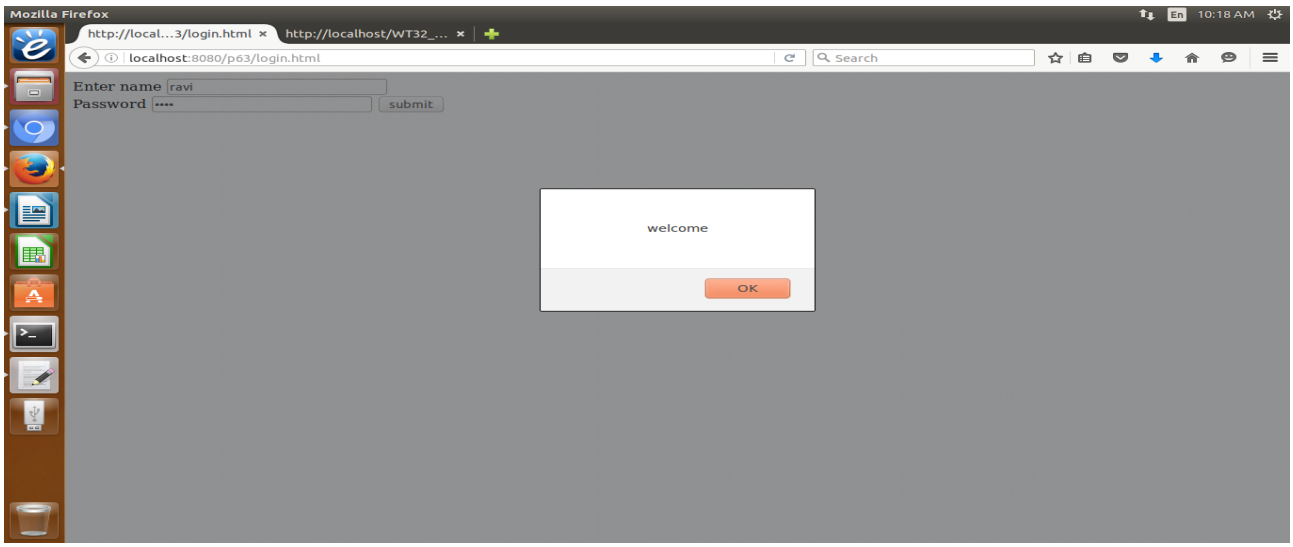
LoginServlet.java

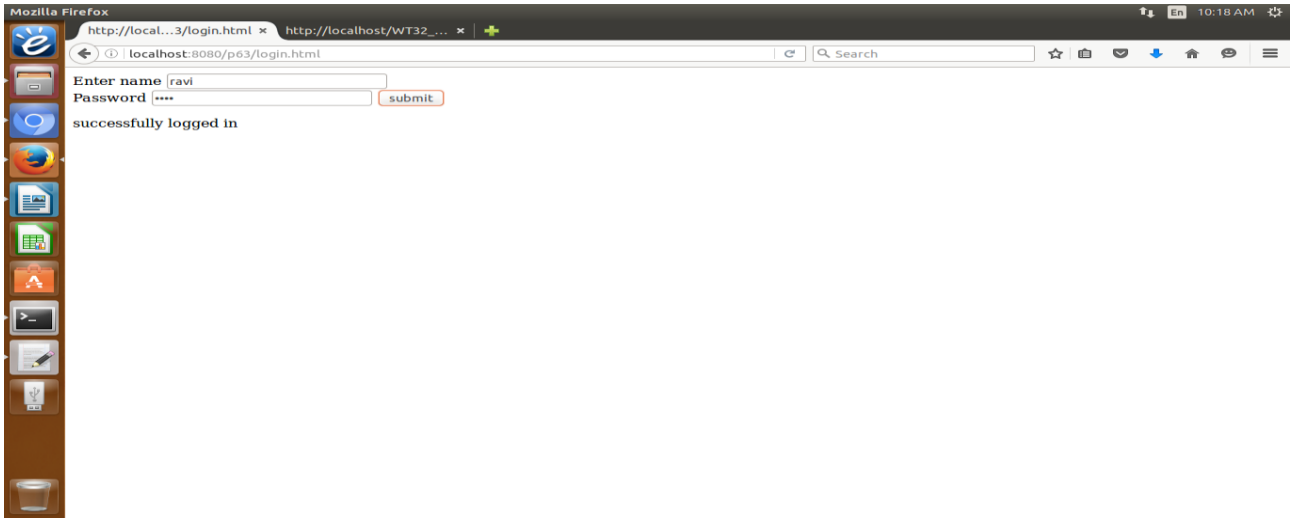
```
import java.io.IOException;
import java.io.PrintWriter;
import java.util.Enumeration;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
```

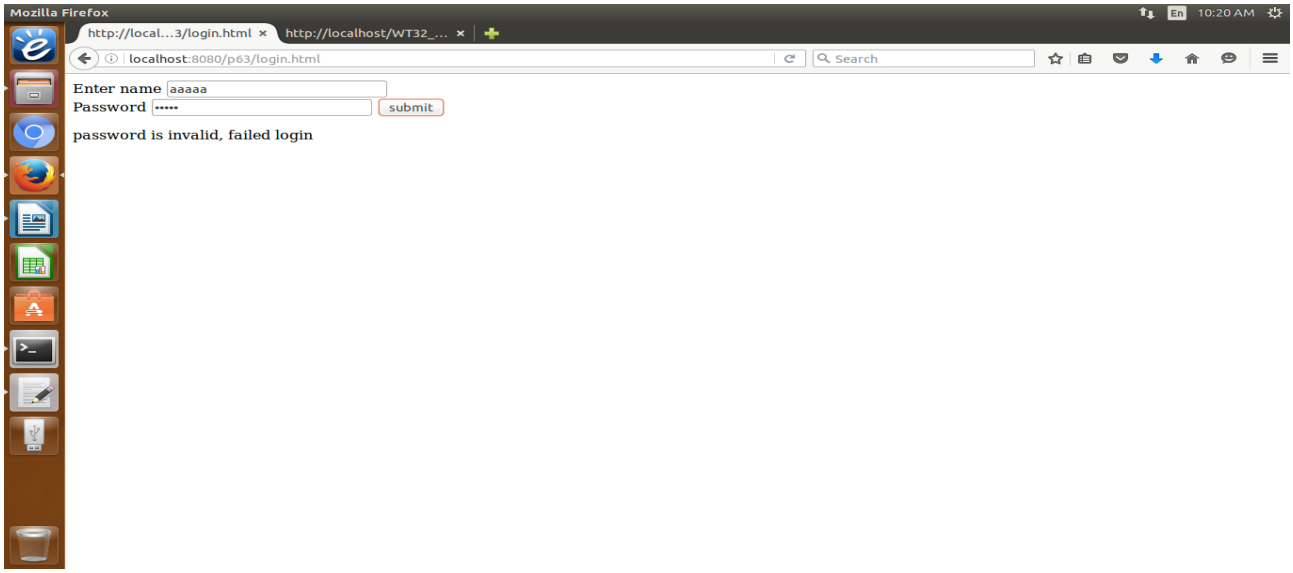
```
import javax.servlet.http.HttpServletResponse;

import java.sql.*;

public class LoginServlet extends HttpServlet

{

public void doPost(HttpServletRequest request, HttpServletResponse response)

throws IOException, ServletException

{


response.setContentType("text/html");

PrintWriter out = response.getWriter();

String uname=request.getParameter("username");

String pwd=request.getParameter("password");

out.println(uname);

out.println(pwd);

try

{

Class.forName("com.mysql.jdbc.Driver");

Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root","eswecha");

Statement st=con.createStatement();

ResultSet rs=st.executeQuery("select name,password from personal where name='"+uname+"' and
password='"+pwd+"'");

if(rs.next())

{

out.println(" successfully logged in");

}

else
```

```
{
out.println(" password is invalid, failed login");
}
}
catch(Exception e)
{
System.out.println(e);
}
}
}
```




Mozilla Firefox
10:18 AM
http://local...3/login.html
http://localhost/WT32_...
localhost:8080/p63/login.html
Search
Enter name ravi
Password ••••
submit
welcome
OK


Mozilla Firefox
10:18 AM
http://local...3/login.html
http://localhost/WT32_...
localhost:8080/p63/login.html
Search
Enter name ravi
Password ••••
submit
successfully logged in


Mozilla Firefox
10:20 AM
http://local...3/login.html
http://localhost/WT32_...
localhost:8080/p63/login.html
Search
Enter name aaaaa
Password •••••
submit
password is invalid, failed login

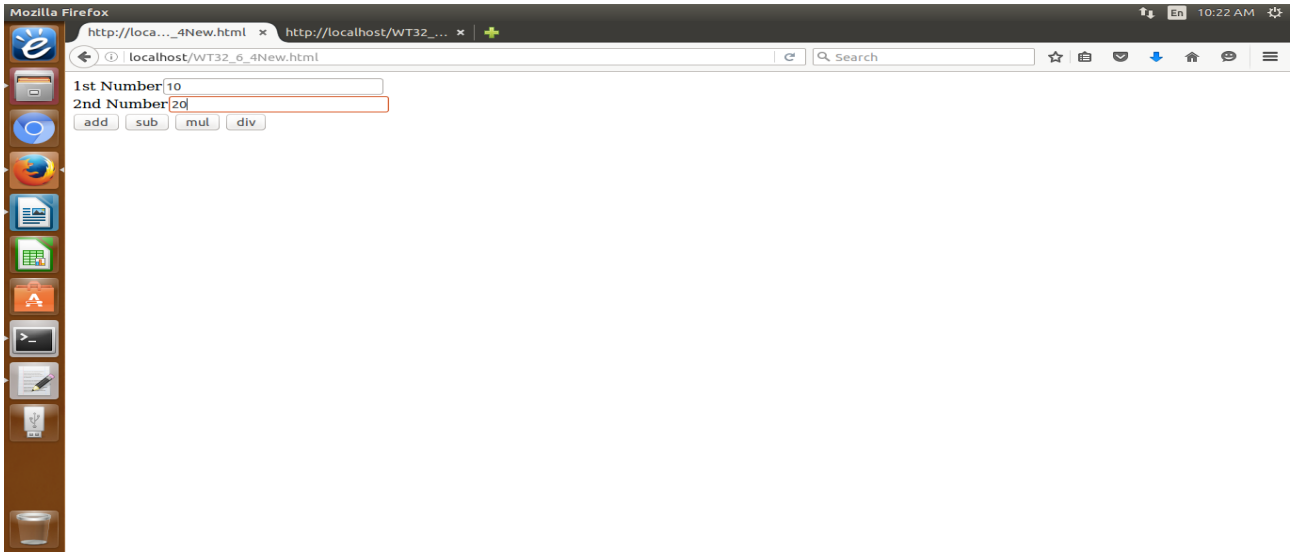
Week 4_1 A simple calculator web application that takes two numbers and an operator (+,-,/,*and%) from an HTML page and returns the result page with the operation performed on the operands.

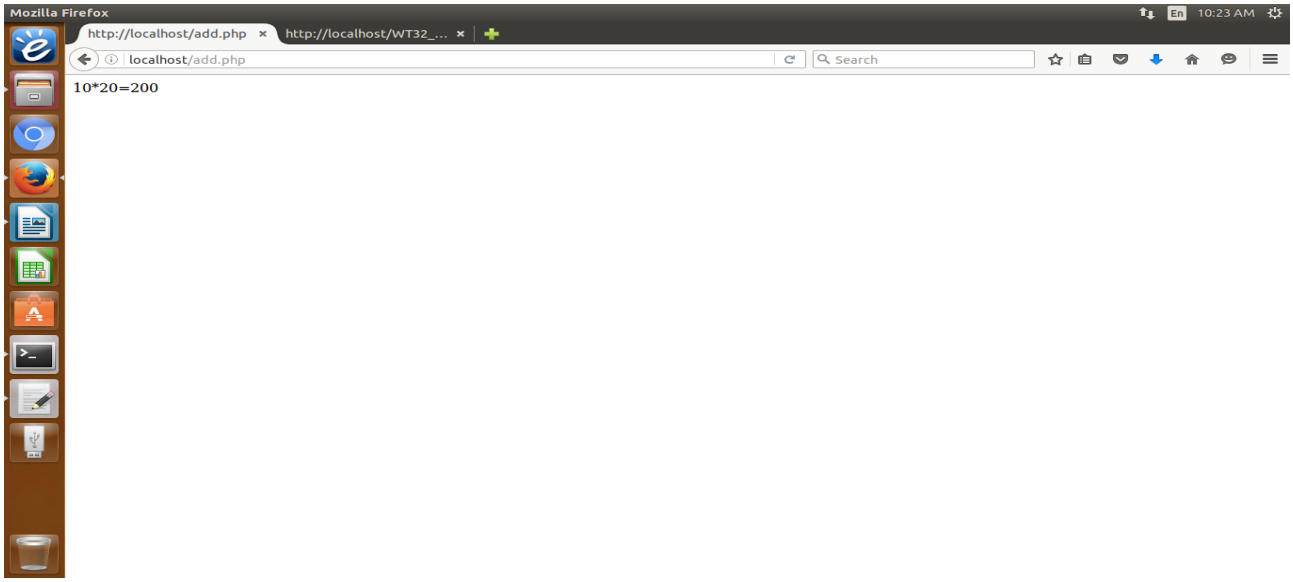
```
<form name='f1' action='add.php' method='post'>

1st Number<input type='text' name='t1'><br>

2nd Number<input type='text' name='t2'><br>

<input type='submit' name='add' value='add'>

<input type='submit' name='sub' value='sub'>

<input type='submit' name='mul' value='mul'>

<input type='submit' name='div' value='div'>

</form>
```

add.php

```
<?php

$a = $_POST['t1'];

$b = $_POST['t2'];

if (isset($_POST['add']))

{

$c = $a + $b;

print $a . "+" . $b . "=" . $c;

}

if (isset($_POST['sub']))

{

$c = $a - $b;

print $a . "-" . $b . "=" . $c;

}

if (isset($_POST['mul']))

{
```

```
$c = $a * $b;

print $a . "*" . $b . "=" . $c;

}

if (isset($_POST['div']))

{

$c = $a / $b;

print $a . "/" . $b . "=" . $c;

}

?>
```





Week 5 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.

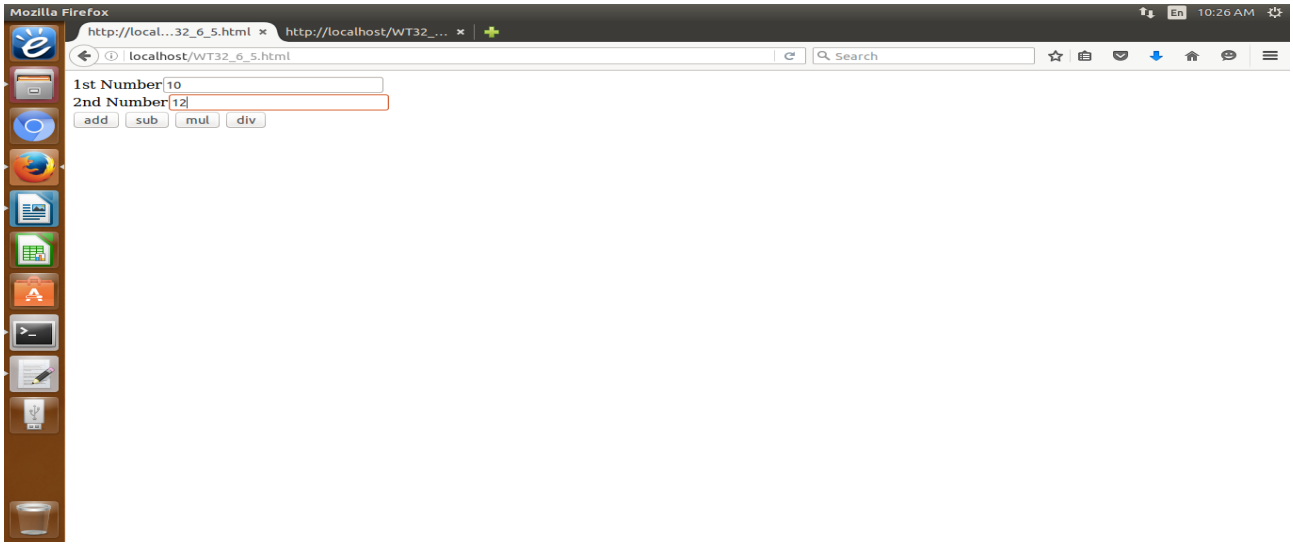
```
<form name='f1' action='addquery.php' method='post'>

1st Number<input type='text' name='t1'><br>

2nd Number<input type='text' name='t2'><br>

<input type='submit' name='add' value='add'>

<input type='submit' name='sub' value='sub'>

<input type='submit' name='mul' value='mul'>

<input type='submit' name='div' value='div'>

</form>
```

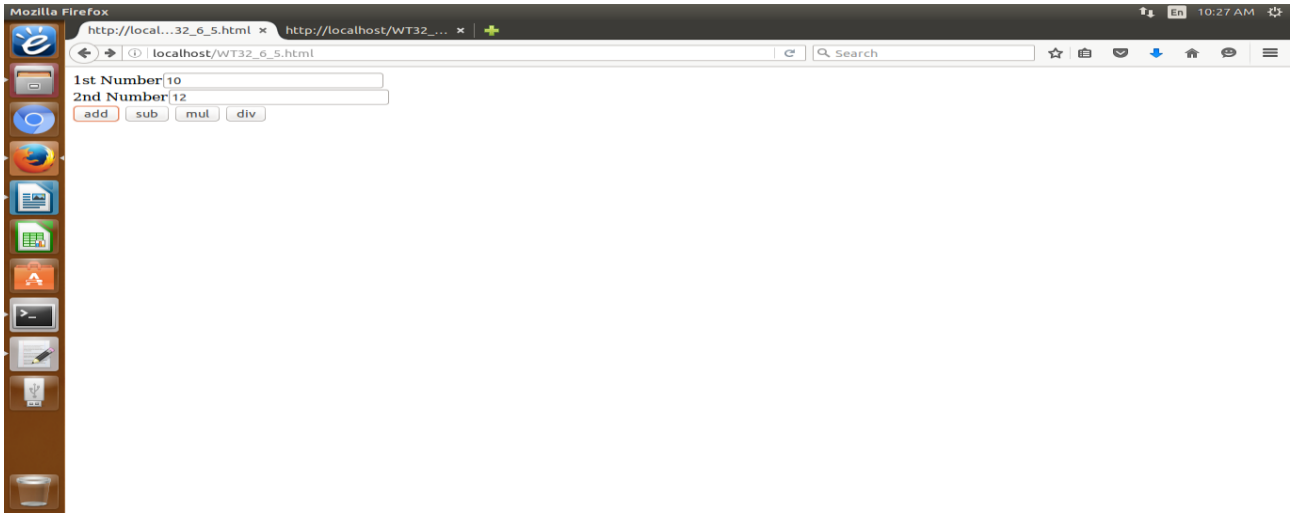
addquery.php

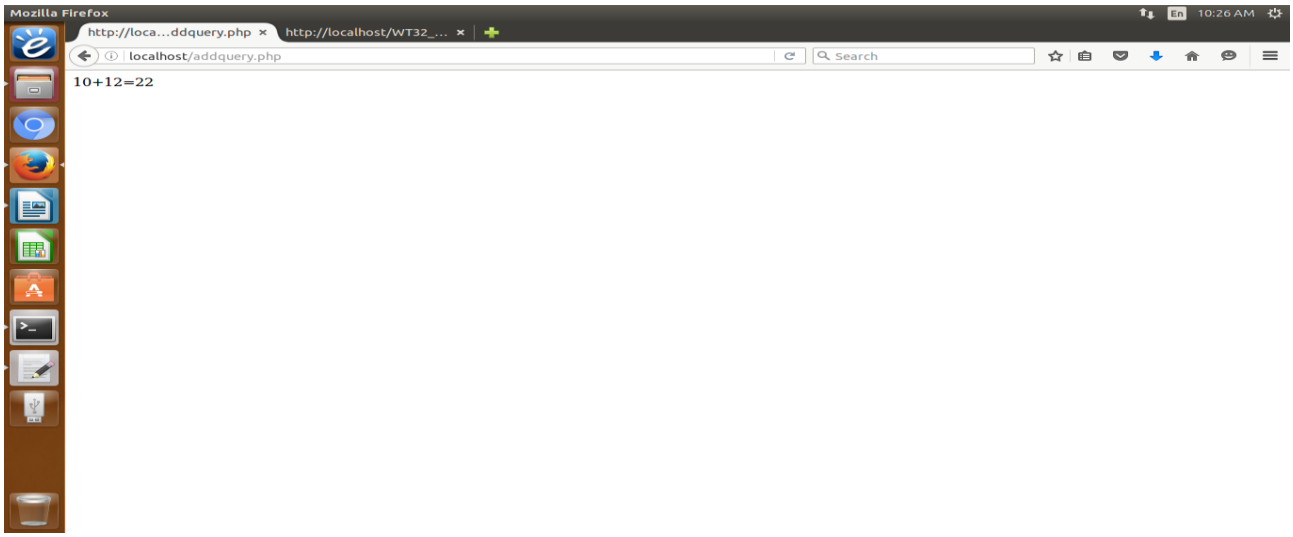
```
<?php

$a = $_POST['t1'];

$b = $_POST['t2'];

$server = "localhost";

$username = "root";

$password = "eswecha";

$database = "customer";

$tablename = "plus";

$query = "";

$connect = mysql_connect($server,$username,$password) or die("not connecting");

mysql_select_db($database) or die("no db :");

if ($a && $b)

{

if (isset($_POST['add']))
```

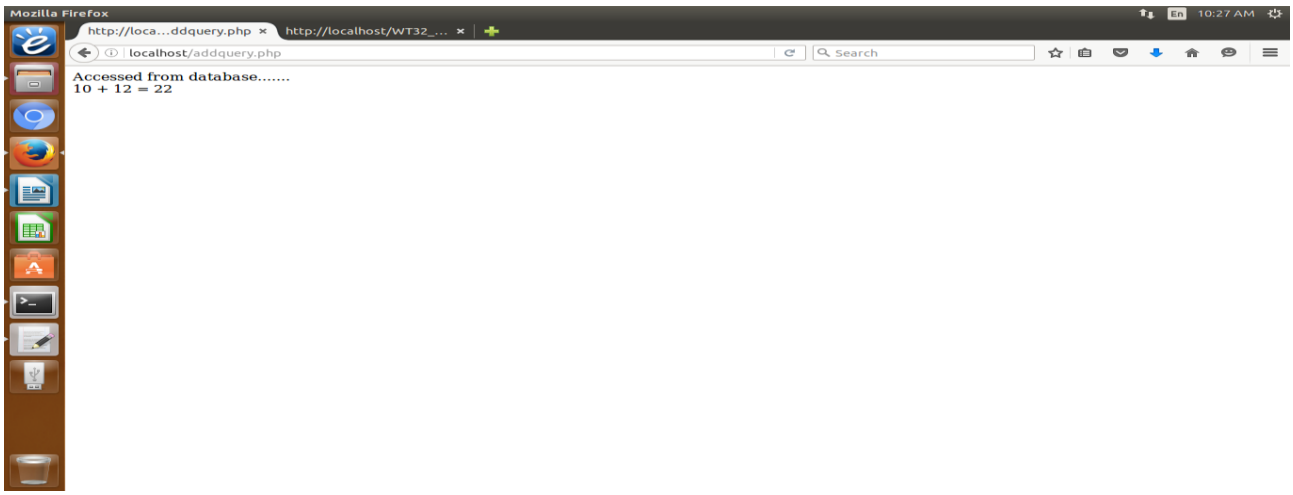
```
{
$query = mysql_query("SELECT * FROM $tablename WHERE exp='$a + $b'");
$numrows = mysql_num_rows($query);
if ($numrows == 0)
{
$c = $a + $b;
print $a . "+" . $b . "=" . $c;
mysql_query("insert into plus values('$a + $b',$c)");
}
}
if (isset($_POST['sub']))
{
$query = mysql_query("SELECT * FROM $tablename WHERE exp='$a - $b'");
$numrows = mysql_num_rows($query);
if ($numrows == 0)
{
$c = $a - $b;
print $a . "-" . $b . "=" . $c;
mysql_query("insert into plus values('$a - $b',$c)");
}
}
if (isset($_POST['mul']))
{
$query = mysql_query("SELECT * FROM $tablename WHERE exp='$a * $b'");
$numrows = mysql_num_rows($query);
if ($numrows == 0)
```

```
{
$c = $a * $b;
print $a . "*" . $b . "=" . $c;
mysql_query("insert into plus values('$a * $b',$c)");
}
}
if (isset($_POST['div']))
{
$query = mysql_query("SELECT * FROM $tablename WHERE exp='$a / $b'");
$numrows = mysql_num_rows($query);
if ($numrows == 0)
{
$c = $a / $b;
print $a . "/" . $b . "=" . $c;
mysql_query("insert into plus values('$a / $b',$c)");
}
}
while ($row = mysql_fetch_assoc($query))
{
print("Accessed from database.....<br>");
print($row['exp'] . " = " . $row['res']);
}
}
else
die("please enter a 1st number and 2nd number!");
?>
```


Mozilla Firefox
10:26 AM
http://local...32_6_5.html
http://localhost/WT32_...
localhost/WT32_6_5.html
Search
1st Number 10
2nd Number 12
add
sub
mul
div


Mozilla Firefox
10:27 AM
http://local...32_6_5.html
http://localhost/WT32_...
localhost/WT32_6_5.html
Search
1st Number 10
2nd Number 12
add
sub
mul
div


Mozilla Firefox
10:26 AM
http://loca...ddquery.php
http://localhost/WT32_...
localhost/addquery.php
Search
10+12=22


Mozilla Firefox
En
10:27 AM
http://loca...ddquery.php
http://localhost/WT32_...
localhost/addquery.php
Search
Accessed from database.....
10 + 12 = 22

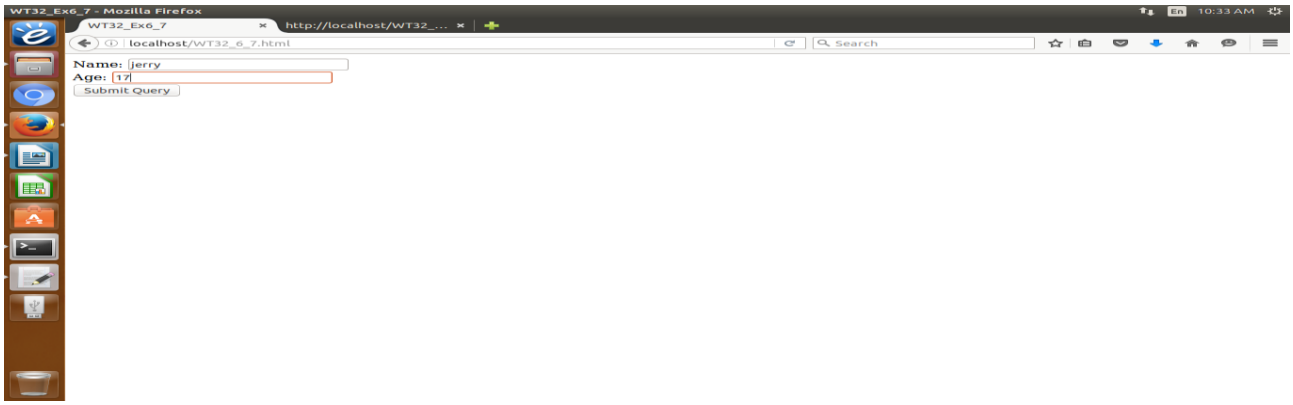
Week 6 A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with “Hello <name> you are not authorized to visit this site” message, where <name> should be replaced with the entered name. Otherwise it should send “Welcome <name> to this site” message.

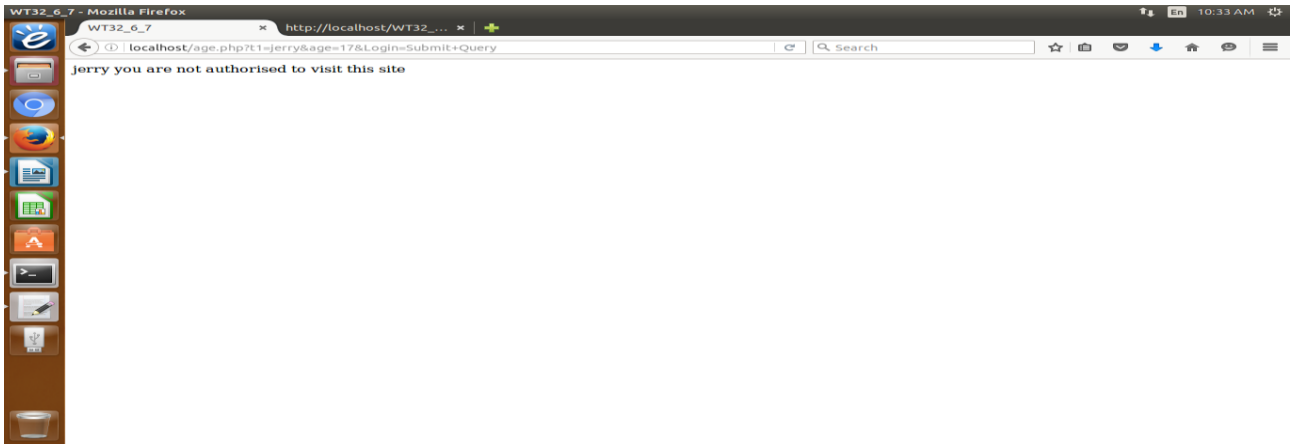
```
<html>

<head><title>WT32_Ex6_7</title></head>

<body>

<form name="f1" action="age.php">

Name: <input type="text" name="t1"><br>

Age: <input type="text" name="age"><br>

<input type="submit" name="Login">

</form>

</body>

</html>
```

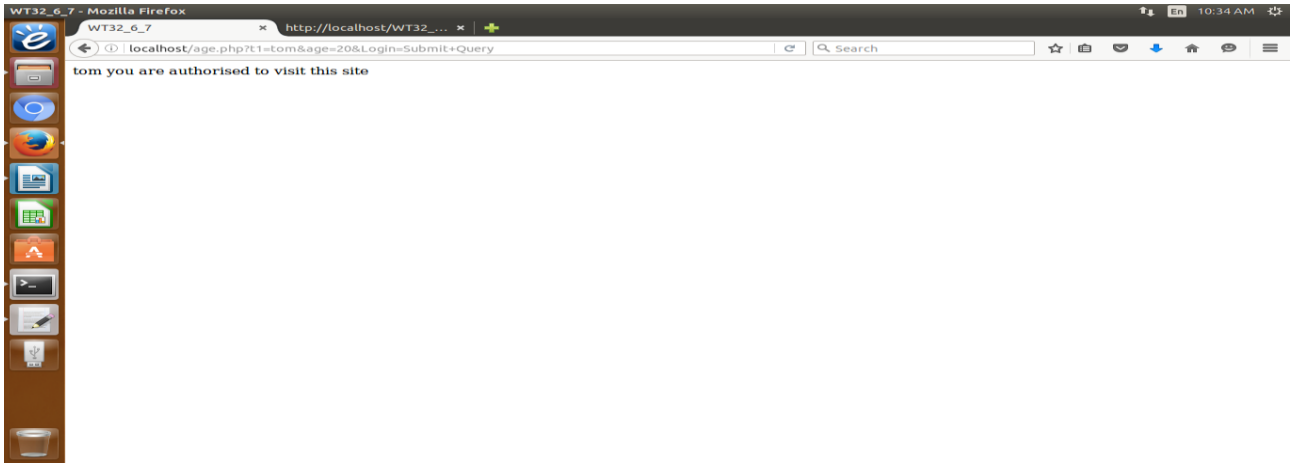
age.php

```
<html>

<head><title>WT32_6_7</title></head>

<body>

<?php

$name1=$_REQUEST["t1"];

$age1=$_REQUEST["age"];

if($age1<18)

{

echo $name1," you are not authorised to visit this site";

}

else

{
```

```
echo $name1," you are authorised to visit this site";

}

?>

</body>

</html>
```







Week 7 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 matches and password doesn't match, then serves "password mismatch" page
If name is not found in the databases, server a registration page, where user's full name is asked and on submitting the full name, if stores, the login name, password and full name in the databases (hint: use session for storing the submitted login name and password)

```
<form action='home.php' method='post'>

Login<br>

User name: <input type='text' name='user'><br>

Password: <input type='password' name='pass'><br>

<input type='submit'value='Login'>

</form>
```

home.php

```
<?php

session_start();

$user = $_POST['user'];

$pass = $_POST['pass'];



$_SESSION['luser'] = $user;

$_SESSION['lpass'] = $pass;

$server = "localhost";

$username = "root";

$password = "eswecha";

$database = "customer";

$tablename = "account8";

if ($user&&$pass)

{
```

```
$connect = mysql_connect($server,$username,$password) or die("not connecting");
mysql_select_db($database) or die("no db :");
$query = mysql_query("SELECT * FROM $tablename WHERE username='$user' and
password='$pass'");
$numrows = mysql_num_rows($query);
if ($numrows!=0)
{
while ($row = mysql_fetch_assoc($query))
{
print "Hello " . $row['firstname'] . " " . $row['lastname'];
}
}
$query = mysql_query("SELECT * FROM $tablename WHERE username='$user' and
password!='$pass'");
$numrows = mysql_num_rows($query);
if ($numrows!=0)
{
print "Password is wrong";
}
$query = mysql_query("SELECT * FROM $tablename WHERE username='$user'");
$numrows = mysql_num_rows($query);
if ($numrows==0)
{
header("Location:http://localhost/reg.php");
}
}
```

```
else
die("please enter a username and password!");
?>
```

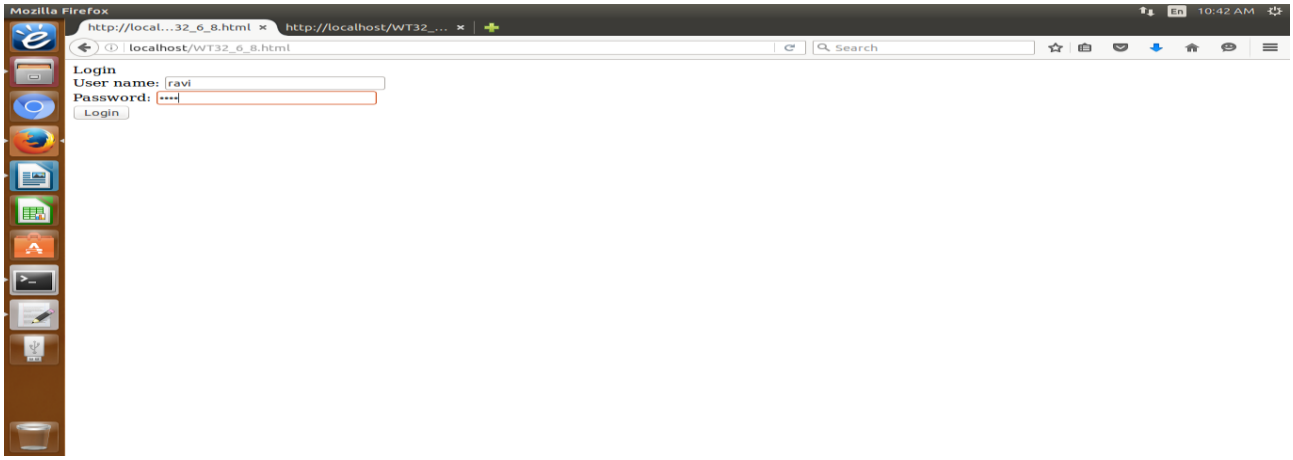
reg.php

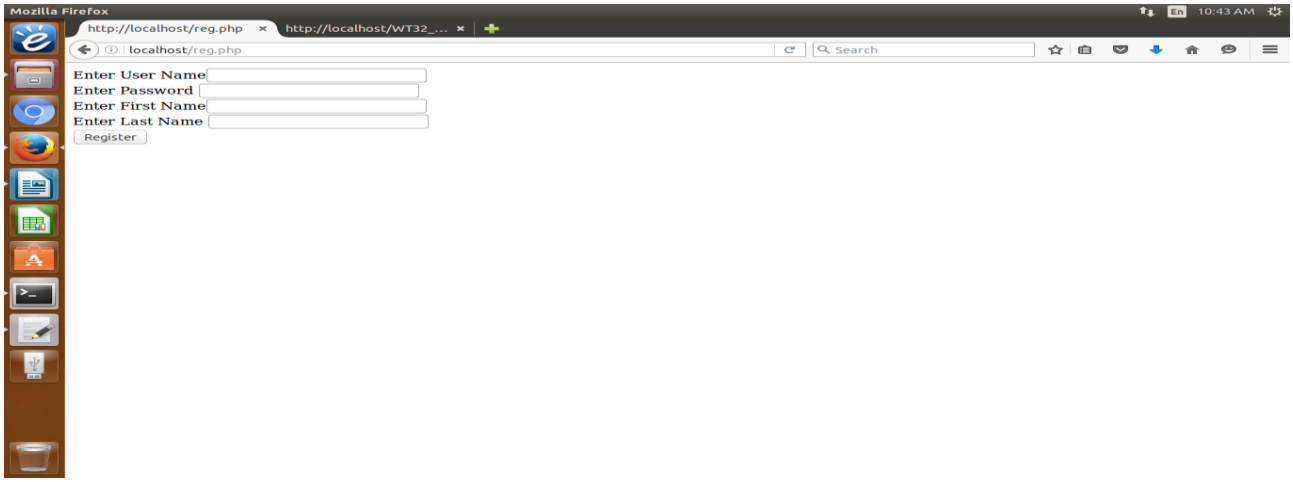
```
<?php
session_start();
?>
<form action="insert.php" method="post">
Enter User Name<input type="text" name="un"><br>
Enter Password <input type="text" name="pwd"><br>
Enter First Name<input type="text" name="fn"><br>
Enter Last Name <input type="text" name="ln"><br>
<input type="submit" value=" Register ">
</form>
```

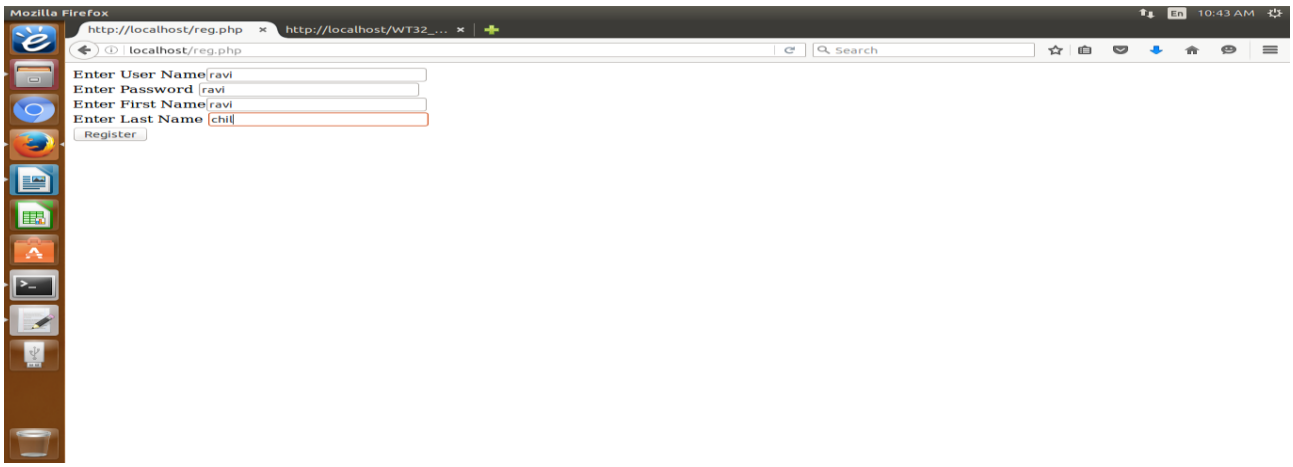
insert.php

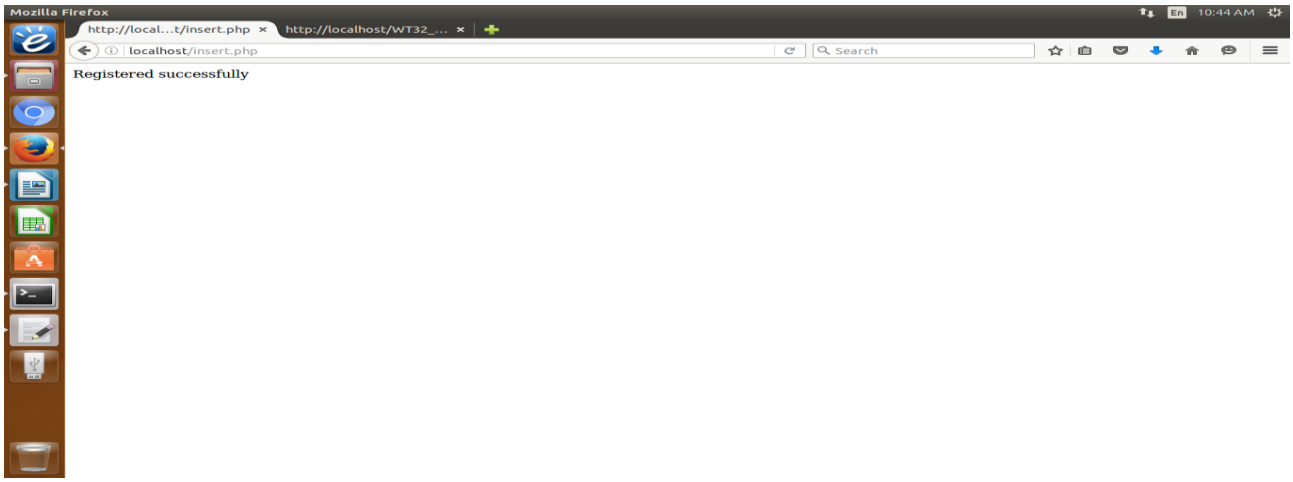
```
<?php
session_start();
$user = $_SESSION['luser'];
$pass = $_SESSION['lpass'];
$server = "localhost";
$username = "root";
$password = "eswecha";
$database = "customer";
$tablename = "account8";
$user = $_POST['un'];
```

```
$pass = $_POST['pwd'];

$firstname = $_POST['fn'];

$lastname = $_POST['ln'];

$connect = mysql_connect($server,$username,$password) or die("not connecting");

mysql_select_db($database) or die("no db :");

mysql_query(" insert into $tablename values ('$user','$pass','$firstname','$lastname')");

print "Registered successfully";

session_destroy();

?>
```






Mozilla Firefox
10:43 AM
http://localhost/reg.php
http://localhost/WT32_...
localhost/reg.php
Search
Enter User Name ravi
Enter Password ravi
Enter First Name ravi
Enter Last Name chil
Register


Mozilla Firefox
10:44 AM
http://local...t/insert.php
http://localhost/WT32_...
localhost/insert.php
Search
Registered successfully