

IP Lab 6

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2018115059

IDE used: Netbeans IDE

Server used : Glassfish server

Database used : MySQL (XAMPP)

1. Create a Currency Converter application using EJB.

Source Code:

index.html

```
<html><head><title>Simple Currency Converter</title></head> <body>  
  
<form action="CCServlets" >  
  
    <center> <h1>Simple Currency Converter using Stateless EJB</h1> </center>  
  
    <br>  
  
    <b>Enter Amount :</b><input type="text" name="amt" required><br>  
  
    <br>  
  
    <b>Select Conversion Type :</b> <br>  
  
    <input type="radio" name="type" value="r2d" checked>Rupees to Dollar <br>  
  
    <input type="radio" name="type" value="d2r" >Dollor to Rupees<br>  
  
    <input type="radio" name="type" value="r2euro" checked>Rupees to Euro <br>  
  
    <input type="radio" name="type" value="euro2r" >Euro to Rupees<br>  
  
    <input type="radio" name="type" value="r2yen" checked>Rupees to Yen <br>
```

```
<input type="radio" name="type" value="yen2r" >Yen to Rupees<br>
```

```
<br>
```

```
<br>
```

```
<input type="reset" ><input type="submit" value="CONVERT" >
```

```
</form>
```

```
</body>
```

```
</html>
```

CCbean.java

```
/*
```

```
 * To change this license header, choose License Headers in Project Properties.
```

```
 * To change this template file, choose Tools | Templates
```

```
 * and open the template in the editor.
```

```
*/
```

```
package mybeans;
```

```
import javax.ejb.Stateless;
```

```
@Stateless
```

```
public class CCBean {
```

```
public CCBean(){ }
```

```
public double r2Dollor(double r)
```

```
{
```

```
return r/74.01;
```

```
}
```

```
public double d2Rupees(double d)
{
return d*74.01;
}
```

```
public double Rupees2Euro(double r)
{
return r/87.99;
}
```

```
public double Euro2Rupees(double e)
{
return e*87.99;
}
```

```
public double Rupees2Yen(double r)
{
return r/0.67;
}
```

```
public double Yen2Rupees(double e)
{
return e*0.67;
}
```

```
}
```

CCServlets.java

```
/*
```

```
* To change this license header, choose License Headers in Project Properties.
```

```
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```

```
* and open the template in the editor.
```

```
*/
```

```
package myservlets;
```

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

```
import javax.servlet.*;
```

```
import javax.servlet.http.*;
```

```
import javax.ejb.EJB;
```

```
import mybeans.CCBean;
```

```
/**
```

```
*
```

```
* @author Murugan
```

```
*/
```

```
public class CCServlets extends HttpServlet {
```

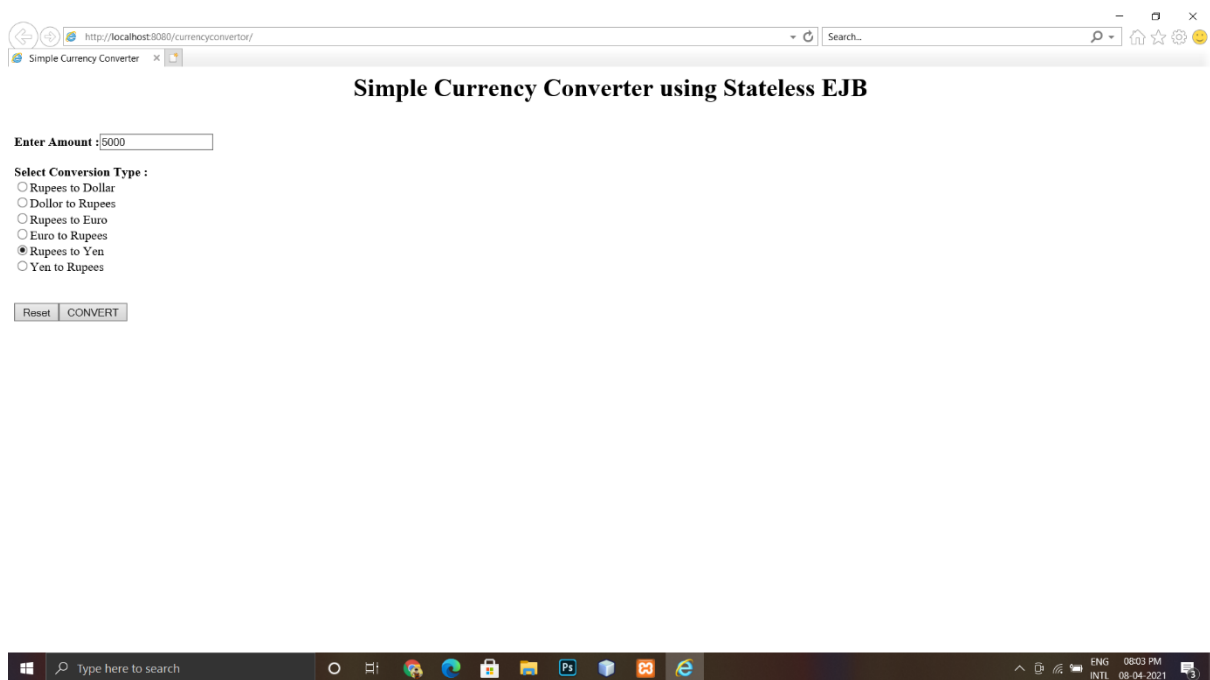
```
@EJB CCBean obj;
```

```
@Override
```

```
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
    double amt = Double.parseDouble(request.getParameter("amt"));
    if(request.getParameter("type").equals("r2d")) {
        out.println("<h1>"+amt+ " Rupees = "+obj.r2Dollor(amt)+" Dollors</h1>");
    }
    if(request.getParameter("type").equals("d2r"))
    {
        out.println("<h1>"+amt+ " Dollors = "+obj.d2Rupees(amt)+" Rupees</h1>");
    }
    if(request.getParameter("type").equals("euro2r"))
    {
        out.println("<h1>"+amt+ " Euros = "+obj.Euro2Rupees(amt)+" Rupees</h1>");
    }
    if(request.getParameter("type").equals("r2euro"))
    {
        out.println("<h1>"+amt+ " Rupees = "+obj.Rupees2Euro(amt)+" Euros </h1>");
    }
    if(request.getParameter("type").equals("yen2r"))
    {
        out.println("<h1>"+amt+ " Yens = "+obj.Yen2Rupees(amt)+" Rupees</h1>");
    }
}
```

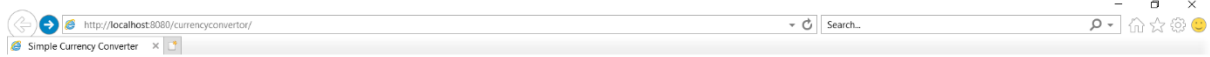
```
if(request.getParameter("type").equals("r2yen"))  
  
{  
  
out.println("<h1>" + amt + " Rupees = " + obj.Rupees2Yen(amt) + " Yens </h1>");  
  
}  
  
}  
  
}
```

Output:





Do you want AutoComplete to remember web form entries? [Learn about AutoComplete](#)



Simple Currency Converter using Stateless EJB

Enter Amount :

Select Conversion Type :

- ☐ Rupees to Dollar
- ☐ Dollar to Rupees
- ☐ Rupees to Euro
- ☐ Euro to Rupees
- ☐ Rupees to Yen
- ☐ Yen to Rupees

Do you want AutoComplete to remember web form entries? [Learn about AutoComplete](#)



500.0 Rupees = 6.755843804891231 Dollars

Do you want AutoComplete to remember web form entries? [Learn about AutoComplete](#)



2. Develop a Simple Room Reservation System Application Using EJB.

Source Code:

roomreservation.html

```
<!DOCTYPE html>
```

```
<!--
```

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and open the template in the editor.

```
-->
```

```
<html>
```

```
  <head>
```

```
    <title>TODO supply a title</title>
```

```
    <meta charset="UTF-8">
```

```
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
  </head>
```

```
  <body>
```

```
    <center> <h1>Simple Room Reservation Application using Stateless  
EJB</h1> </center>
```

```
    <br>
```

```
    <br>
```

```
    <form action="RoomServlet" >
```

Select a room Type :

```
<input type="radio" name="txtType" value="Delux">Delux
```

```
<input type="radio" name="txtType" value="Super Delux">
```

Super Delux

<input type="radio" name="txtType" value="Suit">

Suit

Enter Your Name :

<input type="text" name="txtCust" >

Enter Mobile No :

<input type="text" name="txtMob" >

<input type="reset" >

<input type="submit" value="Book Room">

</form>

</body>

</html>

RoomSession.java

/*

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* and open the template in the editor.

*/

package mybeans;

import javax.ejb.Stateless;

import java.sql.*;

@Stateless

public class RoomSession {

public RoomSession(){} }

public String roomBook(String rt, String cn, String cm){

String msg="";

try{

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

Connection con =

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

String query="select * from room where RoomType=? and status='Not Booked'";

PreparedStatement pst = con.prepareStatement(query); pst.setString(1,rt);

ResultSet rs= pst.executeQuery();

if(rs.next()){

String rno=rs.getString(1);

PreparedStatement stm1 = con.prepareStatement("update room set cust=? where RoomId=? ");

PreparedStatement stm2 = con.prepareStatement("update room set mob=? where RoomId=? ");

```
PreparedStatement stm3 = con.prepareStatement("update room set status=? where  
RoomId=? ");
```

```
stm1.setString(1,cn);
```

```
stm1.setString(2,rno);
```

```
stm2.setString(1,cm);    stm2.setString(2,rno);
```

```
stm3.setString(1, "Booked"); stm3.setString(2,rno);
```

```
stm1.executeUpdate();
```

```
stm2.executeUpdate();
```

```
stm3.executeUpdate();
```

```
msg = "Room "+rno+ " Booked <br> Charges = "+rs.getString(3);
```

```
}
```

```
else
```

```
{
```

```
msg = "Room "+rt+ " currently Not available";
```

```
}
```

```
}catch(Exception e){msg="" +e;}
```

```
return msg;
```

```
}
```

```
}
```

RoomServlet.java

```
/*
```

```
* To change this license header, choose License Headers in Project Properties.
```

```
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```

* and open the template in the editor.

*/

```
package myservlets;
```

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

```
import javax.servlet.*;
```

```
import javax.servlet.http.*;
```

```
import javax.ejb.EJB;
```

```
import mybeans.RoomSession;
```

```
public class RoomServlet extends HttpServlet {
```

```
    @EJB RoomSession obj;
```

```
    public void doGet(HttpServletRequest request, HttpServletResponse response)
```

```
        throws ServletException, IOException{
```

```
        PrintWriter out=response.getWriter();
```

```
        String rt=request.getParameter("txtType");
```

```
        String cn=request.getParameter("txtCust");
```

```
        String cm=request.getParameter("txtMob");
```

```
        String msg = obj.roomBook(rt, cn, cm);
```

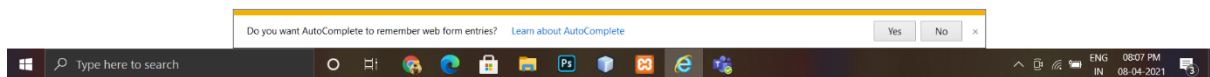
```
        out.println(msg);
```

```
    }
```

```
}
```

Output:



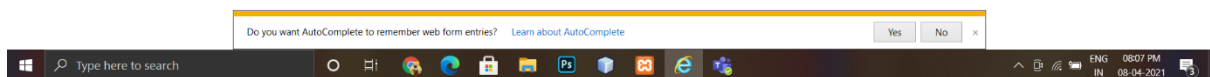


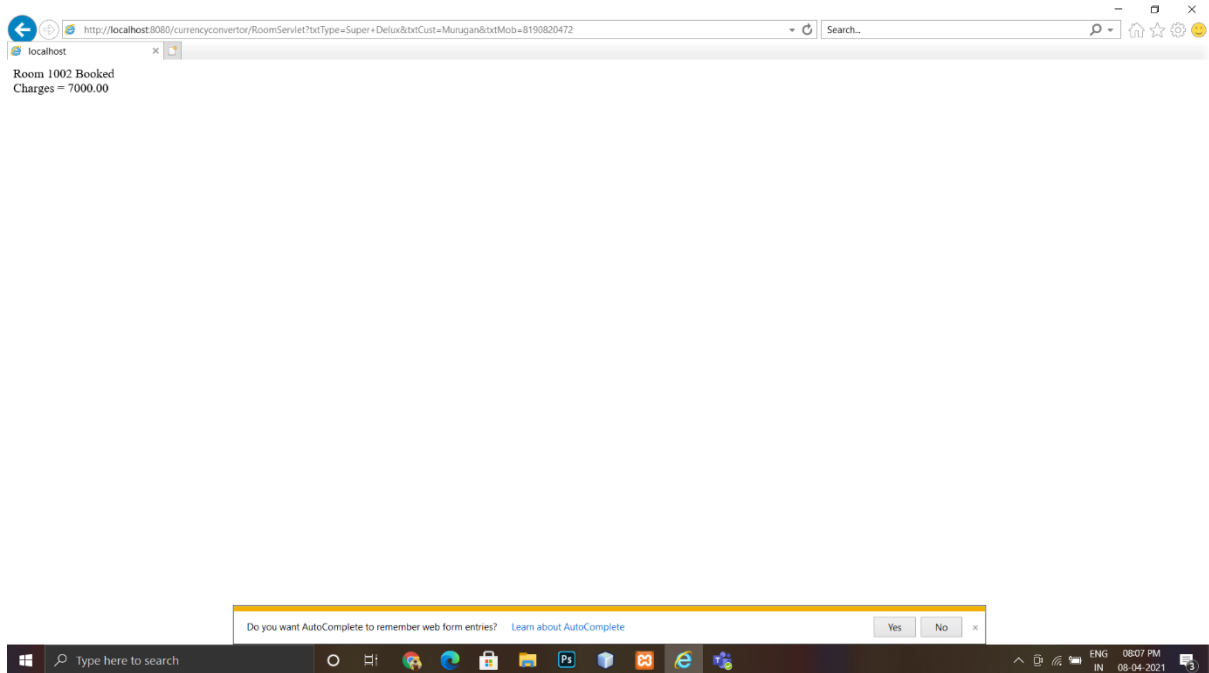
Simple Room Reservation Application using Stateless EJB

Select a room Type : ☐ Delux ☒ Super Delux ☐ Suit

Enter Your Name :

Enter Mobile No :





+ Options					
RoomID	Room Type	charges	cust	mob	status
1001	Delux	5000.00	tonystark	3333444543	Booked
1002	Super Delux	7000.00	Murugan	8190820472	Booked
1003	Suit	9500.00			Not Booked
2001	Delux	5000.00	winry rockbell	3333444543	Booked
2002	Super Delux	7000.00			Not Booked
2003	Suit	9500.00			Not Booked

3. Develop simple shopping cart application using EJB [Stateful Session Bean].

Source Code:

index.html

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```



```
<title>EJB CART</title>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body style="background-color: #cccccc;">

    <center> <h1>Simple Shopping Cart Application using Stateful EJB</h1>
</center>

<br>

<br>

<br>

<form action = "HelloServlet" method="get">

    <center>

        <h1> Enter your name:</h1> <input type="text" name="name" value="" />

        <br>

        <br>

        <br>

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

    </center>

</form>

</body>

</html>
```

Addcart.java

```
/*
```

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* To change this template file, choose Tools | Templates

* and open the template in the editor.

*/

```
package HelloServ;
```

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

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

```
import javax.servlet.ServletException;
```

```
import javax.servlet.http.HttpServlet;
```

```
import javax.servlet.http.HttpServletRequest;
```

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

```
/**
```

```
 *
```

```
 * @author Murugan
```

```
 */
```

```
public class Addcart extends HttpServlet {
```

```
    /**
```

```
     * Processes requests for both HTTP GET and  
     POST
```

```
     * methods.
```

```
     *
```

```
* @param request servlet request
* @param response servlet response
* @throws ServletException if a servlet-specific error occurs
* @throws IOException if an I/O error occurs
*/
```

```
protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
```

```
    throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
        /* TODO output your page here. You may use following sample code. */
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Addcart</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<h1>Servlet Addcart at " + request.getContextPath() +
"</h1>");
        out.println("</body>");
        out.println("</html>");
    }
}
```

```
// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the  
+ sign on the left to edit the code.">
```

```
/**
```

```
 * Handles the HTTP <code>GET</code> method.
```

```
 *
```

```
 * @param request servlet request
```

```
 * @param response servlet response
```

```
 * @throws ServletException if a servlet-specific error occurs
```

```
 * @throws IOException if an I/O error occurs
```

```
 */
```

```
@Override
```

```
protected void doGet(HttpServletRequest request, HttpServletResponse  
response)
```

```
    throws ServletException, IOException {
```

```
    processRequest(request, response);
```

```
}
```

```
/**
```

```
 * Handles the HTTP <code>POST</code> method.
```

```
 *
```

```
 * @param request servlet request
```

```
 * @param response servlet response
```

```
 * @throws ServletException if a servlet-specific error occurs
```

```
 * @throws IOException if an I/O error occurs
```

```
 */
```

@Override

protected void doPost(HttpServletRequest request, HttpServletResponse
response)

throws ServletException, IOException {

processRequest(request, response);

}

/**

* Returns a short description of the servlet.

*

* @return a String containing servlet description

*/

@Override

public String getServletInfo() {

return "Short description";

}// </editor-fold>

}

Checkout.java

package HelloServ;

```
import hello.HelloSessionLocal;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import java.util.List;

import java.util.logging.Level;

import java.util.logging.Logger;

import javax.naming.Context;

import javax.naming.InitialContext;

import javax.naming.NamingException;

import javax.servlet.ServletException;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;
```

```
public class Checkout extends HttpServlet
```

```
{
```

```
    HelloSessionLocal helloSession = lookupHelloSessionLocal();
```

```
protected void processRequest(HttpServletRequest request,
HttpServletRequest response)
```

```
throws ServletException, IOException
```

```
{
```

```
    HttpSession session=request.getSession(false);
```

```
    String q;
```

```
    List<String[]> list = new ArrayList<String[]>();
```

```
        String[] arr1 = { "1", "toy","120","2" };
```

```
        String[] arr2 = { "2", "shirt","240", "5" };
```

```
        String[] arr3 = { "3", "tops","120", "2" };
```

```
        String[] arr4 = { "4", "television","240", "5" };
```

```
        String[] arr5 = { "5", "washing machine","120","2" };
```

```
        String[] arr6= { "6", "chair", "240","5" };
```

```
        list.add(arr1);
```

```
        list.add(arr2);
```

```
        list.add(arr3);
```

```
        list.add(arr4);
```

```
        list.add(arr5);
```

```
        list.add(arr6);
```

```
    response.setContentType("text/html;charset=UTF-8");
```

```
    try (PrintWriter pw = response.getWriter())
```

```
    {
```

```
        pw.print("<center><h1>CHECKOUT</h1></center>");
```

```
pw.print("<a href='Viewcart'>VIEW CART</a>");
```

```
pw.print("<a href='HelloServlet'>PRODUCTS</a>");
```

```
Cookie ck[]=request.getCookies();
```

```
pw.print(
```

```
"<style>"
```

```
+ "th{ padding-top: 12px;\r\n"
```

```
+ " padding-bottom: 12px;\r\n"
```

```
+ " text-align: left;\r\n"
```

```
+ " background-color: #097969;\r\n"
```

```
+ " color: white;}"
```

```
+ "td{ border: 1px solid #ddd;\r\n"
```

```
+ " padding: 8px;"
```

```
+ " padding-top: 12px;\r\n"
```

```
+ " padding-bottom: 12px;\r\n"
```

```
+ " text-align: left;\r\n"
```

```
+ " background-color: white;\r\n"
```

```
+ " color: black;}"
```

```
+ "body{ font-famil:arial;"
```

```
+ " background-image: url(\"paper.gif\");\r\n"
```

```
+ " background-color: #cccccc;}"
```


+ "table{ font-family: Arial, Helvetica, sans-serif;\r\n"

+ " border-collapse: collapse;\r\n"

+ " width: 100%;\r\n"

+ " margin-left: auto;\r\n"

+ " margin-bottom: 10px;\r\n"

+ " margin-top: 10px;\r\n"

+ " margin-right: auto;}"

solid black;padding: 10px 10px;}"

+ "a{ text-decoration: none; border: 1px

+ "a: hover{ color: red;}"

+ "</style>"

+ "<table>"

+ "<tr>"

+ "<th>ID</th>"

+ "<th>Product Name</th>"

+ "<th>Price</th>"

+ "<th>Quantity</th>"

);

int sum=0;

for(int j=0;j<ck.length;j++)

{

q=ck[j].getName();

for (String[] strArray :list)

{

if(q.equals(strArray[0]))

{

int z=Integer.parseInt(strArray[2]);

sum=sum+z;

for(int i = 0 ; i < strArray.length; i++)

{

pw.print("<td>" +strArray[i]+ "</td> ");

}

// pw.print("<td>" +sum+ "</td>");

}

pw.println("</tr>");

}

}

pw.print("<header>\r\n"

```

+ "        <table width=\"100%\">\r\n"
+ "        <tr>\r\n"
+ "            <td width=\"75%\">\r\n"
+ "                <h1>YOUR TOTAL BILL
AMOUNT IS:"+sum+"</h1>\r\n"
+ "            </td>\r\n"
+ "        </tr>\r\n"
+ "    </table>\r\n"
+ "    </header>");

```

```

        pw.print(" </table><br><br><h1> Thank you for shopping with us
!!!</body></html>");

```

```

    }

```

```

}

```

```

@Override

```

```

protected void doGet(HttpServletRequest request, HttpServletResponse
response)

```

```

    throws ServletException, IOException {

```

```

        processRequest(request, response);

```

```

    }

```

```

@Override

```

```

public String getServletInfo() {

    return "Short description";

} // </editor-fold>


private HelloSessionLocal lookupHelloSessionLocal() {

    try {

        Context c = new InitialContext();

        return (HelloSessionLocal)
c.lookup("java:global/HelloStatefull/HelloStatefull-
ejb/HelloSession!hello.HelloSessionLocal");

    } catch (NamingException ne) {

        Logger.getLogger(getClass().getName()).log(Level.SEVERE, "exception
caught", ne);

        throw new RuntimeException(ne);

    }

}

}

```

HelloServlet.java

```

package HelloServ;

import hello.HelloSessionLocal;

```

```
import java.io.IOException;

import java.io.PrintWriter;

import java.net.HttpCookie;

import java.util.ArrayList;

import static java.util.Collections.list;

import java.util.List;

import java.util.logging.Level;

import java.util.logging.Logger;

import javax.naming.Context;

import javax.naming.InitialContext;

import javax.naming.NamingException;

import javax.servlet.ServletException;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;
```

```
public class HelloServlet extends HttpServlet

{

    HelloSessionLocal helloSession = lookupHelloSessionLocal();
```

```
protected void processRequest(HttpServletRequest request,
HttpServletRequest response)
```

```
throws ServletException, IOException {
```

```
String n=request.getParameter("name");
```

```
HttpSession session=request.getSession();
```

```
session.setAttribute("name",n);
```

```
Cookie c=null;
```

```
response.setContentType("text/html;charset=UTF-8");
```

```
List<String[]> list = new ArrayList<String[]>();
```

```
String[] arr1 = { "1", "robo toy","120","2" };
```

```
String[] arr2 = { "2", "T-shirt","140", "5" };
```

```
String[] arr3 = { "3", "keyboard","120", "2" };
```

```
String[] arr4 = { "4", "tablefan","240", "1" };
```

```
String[] arr5 = { "5", "ironbox","120","1" };
```

```
String[] arr6= { "6", "chair", "240","2" };
```

```
list.add(arr1);
```

```
list.add(arr2);
```

```
list.add(arr3);
```

```
list.add(arr4);
```

```
list.add(arr5);
```

```
list.add(arr6);
```

```
try (PrintWriter out = response.getWriter())
{

    try

        {

            c = new Cookie(request.getParameter("productid"),"1");
            response.addCookie(c);
            out.print("product added into cart successfully");

        }

        catch(Exception ex) {}

    out.print("<center><h1>WELCOME TO OUR ONLINE  
SHOP</h1></center>");

    out.print("<br><br>");

    out.print("<a href='Viewcart'>view cart</a>");

    /* TODO output your page here. You may use following sample code. */

    out.println("<!DOCTYPE html>");

    out.println("<html>");
```

```
out.println("<head>");

out.println("<title>Cart page</title>");

out.println("</head>");

out.println("<body>");

out.println("<h1>" +helloSession.sayHello(n)+"</h1>");

out.println("<table border=\"1\">");

    out.println("<tr>");

    out.println("<th>Product Id</th>");

        out.println("<th>Product Name</th>");

        out.print("<th>Price</th>");

        out.print("<th>Quantity</th>");

        out.print("<th>Cart</th>");


        out.println("</tr>");

for (String[] strArray :helloSession.cart(list) )

{

    out.println("<tr>");

    for(int i = 0 ; i < strArray.length; i++)

    {

        out.print("<td>" +strArray[i]+"</td> ");

    }

}
```



```
        out.print("<td><a href='HelloServlet?productid=" +strArray[0]+">add  
to cart</a></td>");
```

```
        out.println("</tr>");
```

```
    }
```

```
    out.println("</body>");
```

```
    out.println("</html>");
```

```
}
```

```
}
```

```
@Override
```

```
protected void doGet(HttpServletRequest request, HttpServletResponse  
response)
```

```
    throws ServletException, IOException {
```

```
        processRequest(request, response);
```

```
}
```

```
@Override
```

```
public String getServletInfo() {
```

```
    return "Short description";
```

```
}// </editor-fold>
```

```

private HelloSessionLocal lookupHelloSessionLocal() {

    try {

        Context c = new InitialContext();

        return (HelloSessionLocal)
c.lookup("java:global/HelloStatefull/HelloStatefull-
ejb/HelloSession!hello.HelloSessionLocal");

    } catch (NamingException ne) {

        Logger.getLogger(getClass().getName()).log(Level.SEVERE, "exception
caught", ne);

        throw new RuntimeException(ne);

    }

}

private void addCookie(Cookie c) {

    throw new UnsupportedOperationException("Not supported yet."); //To
change body of generated methods, choose Tools | Templates.

}

}

```

Viewcart.java

```

package HelloServ;

import hello.HelloSessionLocal;

```

```
import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import static java.util.Collections.list;

import java.util.List;

import java.util.logging.Level;

import java.util.logging.Logger;

import javax.naming.Context;

import javax.naming.InitialContext;

import javax.naming.NamingException;

import javax.servlet.ServletException;

import javax.servlet.http.Cookie;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

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

```
public class Viewcart extends HttpServlet {

    HelloSessionLocal helloSession = lookupHelloSessionLocal();
```

```
    protected void processRequest(HttpServletRequest request,
    HttpServletResponse response)
```

```

        throws ServletException, IOException
    {
        String q;

        List<String[]> list = new ArrayList<String[]>();

        String[] arr1 = { "1", "toy","120","2" };

        String[] arr2 = { "2", "shirt","240", "5" };

        String[] arr3 = { "3", "tops","120", "2" };

        String[] arr4 = { "4", "television","240", "5" };

        String[] arr5 = { "5", "washing machine","120","2" };

        String[] arr6= { "6", "chair", "240","5" };

        list.add(arr1);

        list.add(arr2);

        list.add(arr3);

        list.add(arr4);

        list.add(arr5);

        list.add(arr6);

        response.setContentType("text/html;charset=UTF-8");

        try
        {

            Cookie c=new
Cookie(request.getParameter("productid"),"1");

```

```

        c.setMaxAge(0);

        response.addCookie(c);

    }

    catch(Exception ex)

    {

    }

try (PrintWriter pw = response.getWriter())
{
    pw.print("<a href='HelloServlet'>GO BACK</a>");

    pw.print("<a href='Checkout'>Checkout</a>");

    Cookie ck[]=request.getCookies();

    pw.print("<br>");

    pw.print("<br>");

    pw.print("<br>");

    pw.print("<br>");

    pw.print(

        "<style>"

        + "th{ padding-top: 12px;\r\n"

        + " padding-bottom: 12px;\r\n"

```

```
+ " text-align: left;\r\n"
+ " background-color: #097969;\r\n"
+ " color: white;}"
```

```
+ "td{ border: 1px solid #ddd;\r\n"
```

```
+ " padding: 8px;"
```

```
+ " padding-top: 12px;\r\n"
```

```
+ " padding-bottom: 12px;\r\n"
```

```
+ " text-align: left;\r\n"
```

```
+ " background-color: white;\r\n"
```

```
+ " color: black;}"
```

```
+ "body{ font-family:arial;"
```

```
+ " background-image: url(\"paper.gif\");\r\n"
```

```
+ " background-color: #cccccc;}"
```

```
+ "table{ font-family: Arial, Helvetica, sans-serif;\r\n"
```

```
+ " border-collapse: collapse;\r\n"
```

```
+ " width: 100%;\r\n"
```

```
+ " margin-left: auto;\r\n"
```

```
+ " margin-bottom:10px;\r\n"
```

```
+ " margin-top:10px;\r\n"
```

```
+ " margin-right: auto;}"
```

```
solid black;padding:10px 10px;}"
```

```
+"a{text-decoration:none;border:1px
```

```
+"a:hover{color:red;}"
```

```
+"</style>"
```

```
+"<table>"
```

```
+"<tr>"
```

```
+"<th>ID</th>"
```

```
+"<th>Product Name</th>"
```

```
+"<th>Price</th>"
```

```
+"<th>Quantity</th>"
```

```
+"<th>Total cost</th>"
```

```
+"<th>Cart</th>"
```

```
);
```

```
int sum=0;
```

```
for(int j=0;j<ck.length;j++)
```

```
{
```

```
q=ck[j].getName();
```

```
for (String[] strArray :list )
```

```

    {
        if(q.equals(strArray[0]))
        {
            int z=Integer.parseInt(strArray[2]);

            sum=sum+z;

            for(int i = 0 ; i < strArray.length; i++)
            {

                pw.print("<td>" +strArray[i]+ "</td> ");

            }

            pw.print("<td>" +sum+ "</td>");

            pw.print("<td><a href='Viewcart?productid=" +strArray[0]+" '>Remove
from cart</a></td>");

        }


        pw.println("</tr>");

    }

    pw.print(" </table></body></html>");

}

catch(Exception ex)

    {

    }

}

```


@Override

```
protected void doGet(HttpServletRequest request, HttpServletResponse  
response)
```

```
throws ServletException, IOException {
```

```
    processRequest(request, response);
```

```
}
```

@Override

```
public String getServletInfo() {
```

```
    return "Short description";
```

```
}// </editor-fold>
```

```
private HelloSessionLocal lookupHelloSessionLocal() {
```

```
    try {
```

```
        Context c = new InitialContext();
```

```
        return (HelloSessionLocal)
```

```
c.lookup("java:global/HelloStatefull/HelloStatefull-  
ejb/HelloSession!hello.HelloSessionLocal");
```

```
    } catch (NamingException ne) {
```

```
        Logger.getLogger(getClass().getName()).log(Level.SEVERE, "exception  
caught", ne);
```

```
        throw new RuntimeException(ne);
```

```
    }
```

```
}  
  
}
```

HelloSession.java

```
/*  
  
 * To change this license header, choose License Headers in Project Properties.  
 * To change this template file, choose Tools | Templates  
 * and open the template in the editor.  
 */  
  
package hello;  
  
  
  
import java.util.List;  
import javax.ejb.Stateful;  
  
  
/**  
 *  
 * @author User  
 */  
  
@Stateful  
public class HelloSession implements HelloSessionLocal {  
  
    @Override  
    public String sayHello(String name) {  
        return "Hello," +name+" !!!";  
    }  
}
```

```
/**
```

```
*
```

```
* @param pro
```

```
* @return
```

```
*/
```

```
@Override
```

```
public List<String[]> cart(List<String[]> pro)
```

```
{
```

```
    return pro;
```

```
}
```

```
// Add business logic below. (Right-click in editor and choose
```

```
// "Insert Code > Add Business Method")
```

```
}
```

HelloSessionLocal.java

```
/*
```

```
* To change this license header, choose License Headers in Project Properties.
```

```
* To change this template file, choose Tools | Templates
```

```
* and open the template in the editor.
```

```
*/
```

```
package hello;
```

```

import java.util.List;

import javax.ejb.Local;

/**
 *
 * @author User
 */
@Local

public interface HelloSessionLocal

{

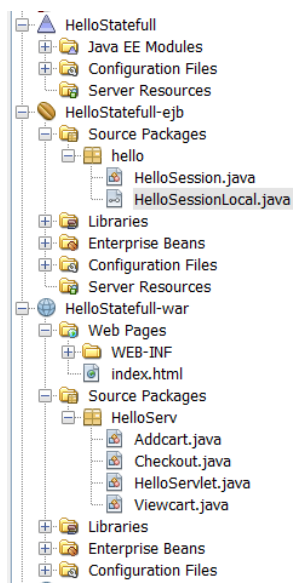
    String sayHello(String name);

    List<String[]> cart(List<String[]> pro);

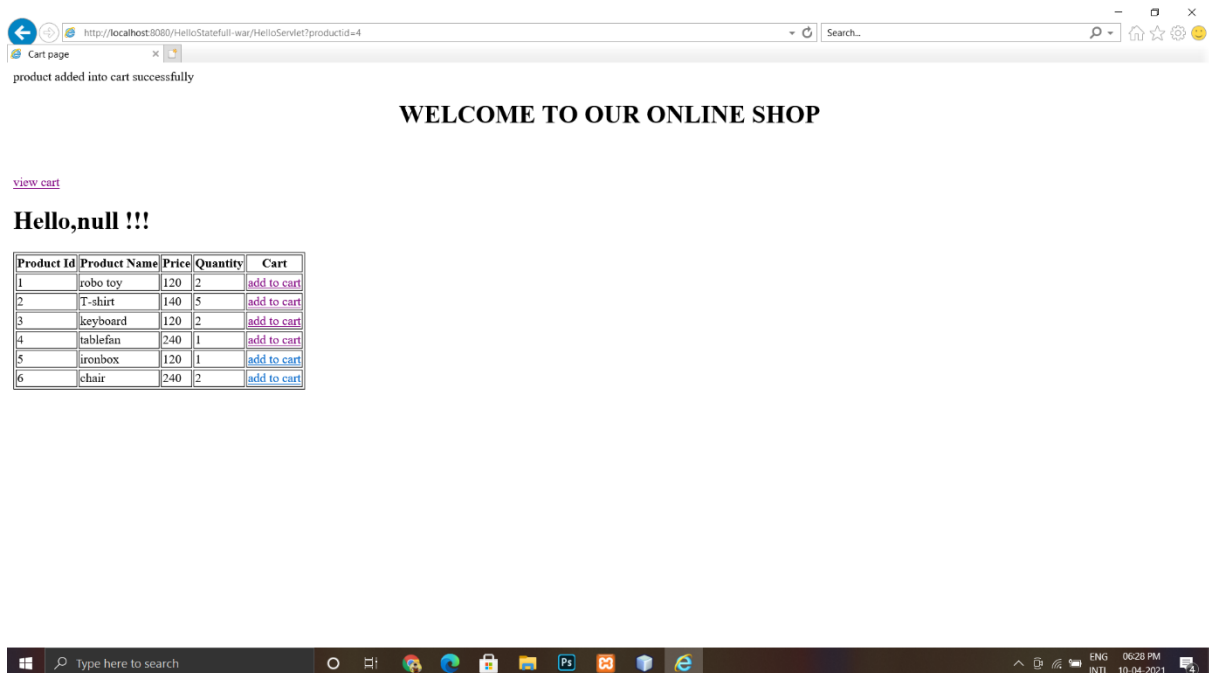
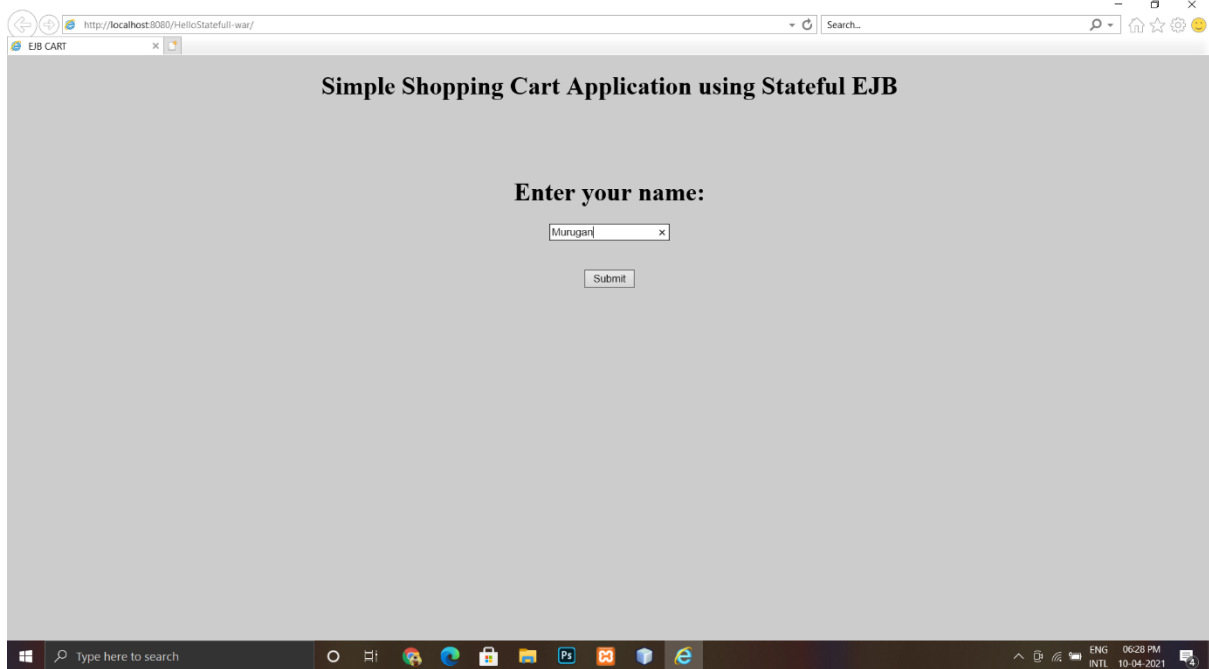
}

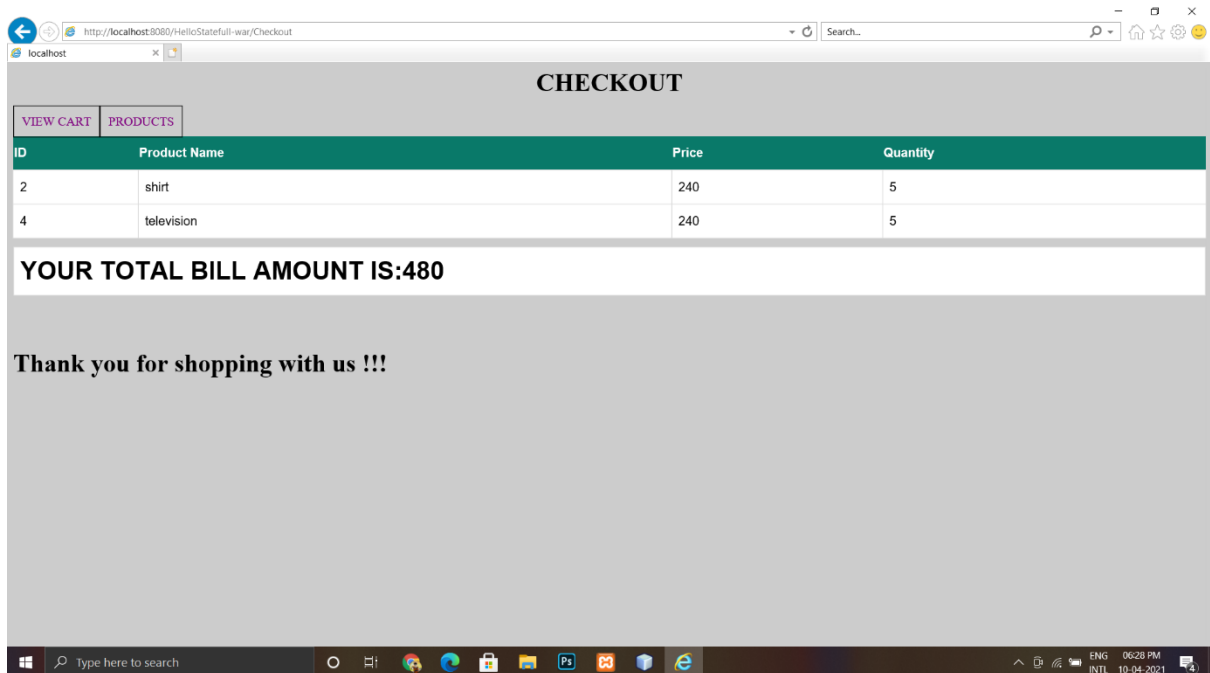
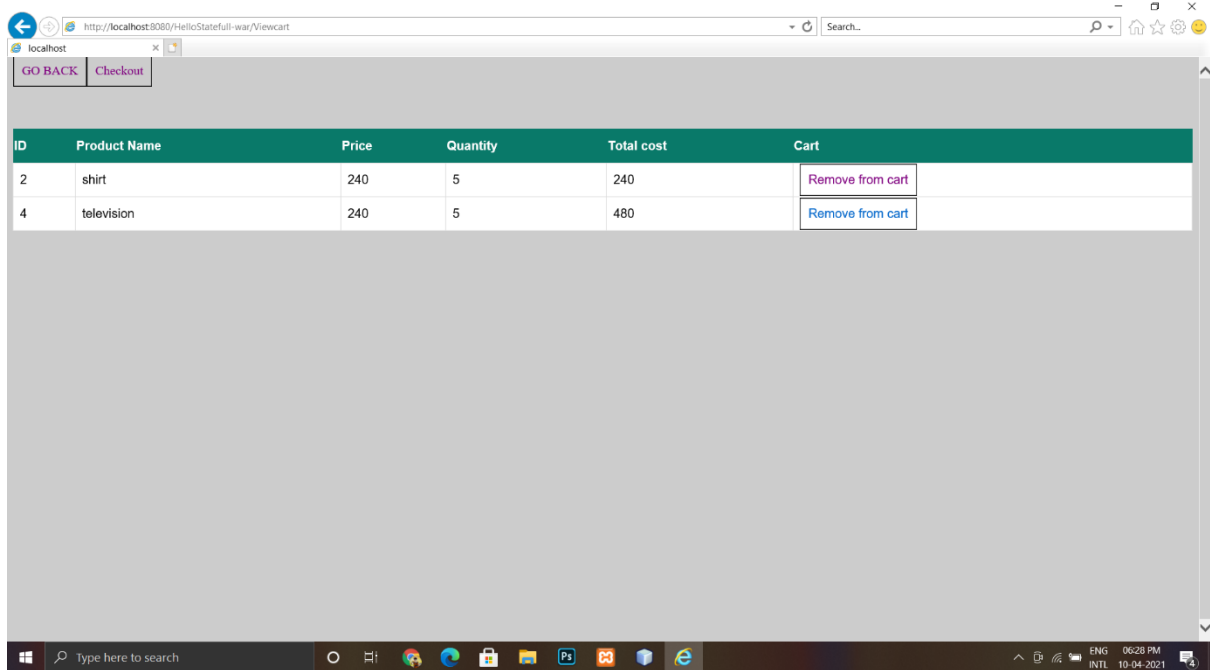
```

Project structure:



Output:





4. Develop simple visitor Statistics application using EJB.

Source Code:

visitorform.jsp

<%--

Document : visitorform

Created on : 10 Apr, 2021, 11:13:49 PM

Author : Murugan

--%>

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

<!DOCTYPE html>

<html>

<head>

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

<title>Visitor Registration</title>

</head>

<body>

<center>

<h1>Visitor Statistics Application</h1>

<h2>Enter the details about the location: </h2>

<form action="visitorservlet" method="post">

<h3>Enter Your Name: <input type="text" name="name">

Enter the No. of members: <input type="text" name="members">

Select the Location:

<input type="radio" name="location" value="Nellaiyappar temple">
Nellaiyappar temple


```
<input type="radio" name="location" value="Courtallam"> Courtallam  
<br><br>
```

```
<input type="radio" name="location" value="VOC Ground"> VOC  
Ground <br><br>
```

```
<input type="radio" name="location" value="Manjolai hills"> Manjolai  
hills <br><br>
```

```
<input type="radio" name="location" value="Kalakkadu Sanctuary">  
Kalakkadu Sanctuary <br><br>
```

```
<input type="submit" value="Submit">
```

```
<input type="Reset"></h3>
```

```
</form>
```

```
</center>
```

```
</body>
```

```
</html>
```

visitorservlet.java

```
/*
```

```
* To change this license header, choose License Headers in Project Properties.
```

```
* To change this template file, choose Tools | Templates
```

```
* and open the template in the editor.
```

```
*/
```

```
package HelloServ;
```

```
import hello.visitorsLocal;
```

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

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

```
import javax.ejb.EJB;
```



```

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/**
 *
 * @author palani
 */

public class visitorservlet extends HttpServlet {

    @EJB

    private visitorsLocal visitors;


    /**
     * Processes requests for both HTTP <code>GET</code> and
     <code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */

```

```

protected void processRequest(HttpServletRequest request,
HttpServletResponse response)

    throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

try (PrintWriter out = response.getWriter()) {

    /* TODO output your page here. You may use following sample code. */

String name = request.getParameter("name");

int members = Integer.parseInt(request.getParameter("members"));

String location = request.getParameter("location");

int[] result = visitors.updateVisitor(name, members, location);

String[] locs = {"Nellaiyappar temple", "Courtallam", "VOC Ground",
"Manjulai hills", "Kalakkadu Sanctuary"};

out.println("<!DOCTYPE html>");

out.println("<html>");

out.println("<head>");

out.println("<title>Servlet visitorservlet</title>");

out.println("</head>");

out.println("<body><center>");

out.println("<h1>Visitor Statistics </h1>");

out.println("<h4><table border=1 width=50%
><tr><th>Location</th><th>No of visitors</th></tr>");

    for(int i=0; i<5; i++) {

        out.println("<tr><td align='center'>" + locs[i] + "</td><td
align='center'>" + result[i] + "</td></tr>");

    }

out.println("</table></h4></center></body>");

```

```

        out.print("<form action='visitorform.jsp' method='post'>");

        out.print("<input type='submit' value='Main page'/></form>") ;

        out.println("</html>");

    }

}

```

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to edit the code.">

```

/**

 * Handles the HTTP <code>GET</code> method.

 *

 * @param request servlet request
 * @param response servlet response
 * @throws ServletException if a servlet-specific error occurs
 * @throws IOException if an I/O error occurs

 */

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse
response)

    throws ServletException, IOException {

    processRequest(request, response);

}

/**

 * Handles the HTTP <code>POST</code> method.

```

*

* @param request servlet request

* @param response servlet response

* @throws ServletException if a servlet-specific error occurs

* @throws IOException if an I/O error occurs

*/

@Override

protected void doPost(HttpServletRequest request, HttpServletResponse
response)

throws ServletException, IOException {

processRequest(request, response);

}

/**

* Returns a short description of the servlet.

*

* @return a String containing servlet description

*/

@Override

public String getServletInfo() {

return "Short description";

}// </editor-fold>

}

visitors.java

```
/*  
  
 * To change this license header, choose License Headers in Project Properties.  
 * To change this template file, choose Tools | Templates  
 * and open the template in the editor.  
 */  
  
package hello;  
  
  
  
import java.sql.*;  
import javax.ejb.Stateless;  
  
  
/**  
 *  
 * @author Murugan  
 */  
  
@Stateless  
  
public class visitors implements visitorsLocal {  
  
    public int[] updateVisitor(String name, int members, String location) {  
  
        int[] result = new int[5];  
  
        try {  
  
            Class.forName("com.mysql.jdbc.Driver");  
  
            Connection conn =  
DriverManager.getConnection("jdbc:mysql://localhost:3306/test", "root", "");  
  
            Statement st=conn.createStatement();
```

```

        PreparedStatement ps = conn.prepareStatement("insert into visitors(name,
members, location) values(?,?,?)");

        ps.setString(1, name);

        ps.setInt(2, members);

        ps.setString(3, location);

        int j = ps.executeUpdate();

        if(j != 0)

            System.out.println("INSERTED!!!");

        else

            System.out.println("FAILED!!!");

        PreparedStatement ps1 = null;

        String[] locs = {"Nellaiyappar temple", "Courtallam", "VOC Ground",
"Manjolai hills", "Kalakkadu Sanctuary"};

        for (int i = 0; i < locs.length; i++) {

            ps1 = conn.prepareStatement("select SUM(members) from visitors
where location=?");

            ps1.setString(1, locs[i]);

            ResultSet rs = ps1.executeQuery();

            rs.next();

            result[i] = rs.getInt(1);

        }

    } catch(Exception e) {

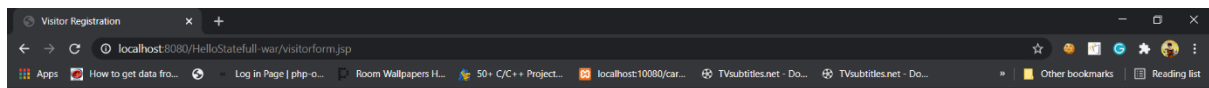
        System.out.println(e);

    }

    return result;

```


Output:



Visitor Statistics Application

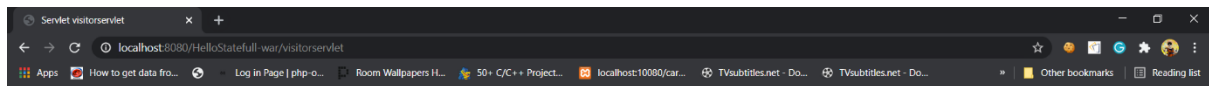
Enter the details about the location:

Enter Your Name:

Enter the No. of members:

Select the Location:

- ☐ Nelliayappar temple
- ☐ Courtallam
- ☒ VOC Ground
- ☐ Manjolai hills
- ☐ Kalakkadu Sanctuary

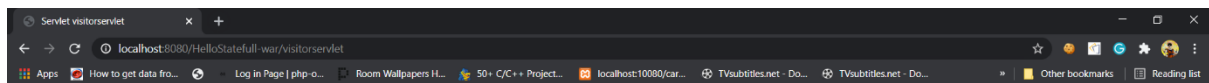
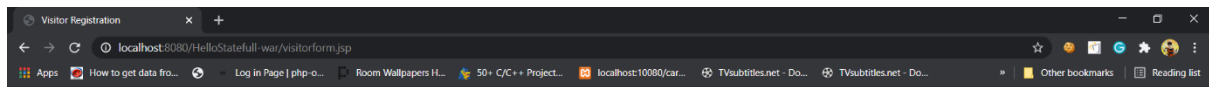


Visitor Statistics

Location	No of visitors
Nelliayappar temple	0
Courtallam	0
VOC Ground	4
Manjolai hills	0
Kalakkadu Sanctuary	0

[Main page](#)





Visitor Statistics

Location	No of visitors
Nellaiyappar temple	0
Courtallam	3
VOC Ground	4
Manjolai hills	0
Kalakkadu Sanctuary	0

[Main page](#)



5. Develop simple Marks Entry Application to demonstrate accessing Database using EJB.

Source Code:

index.html

```
<!DOCTYPE html>
```

```
<!--
```

To change this license header, choose License Headers in Project Properties.

To change this template file, choose Tools | Templates

and open the template in the editor.

-->

<html>

<head>

<style>

form input[type = text]{

width: 280px;

height:35px;

}

form input[type = submit]{

width: 150px;

height:35px;

}

</style>

</head>

<body>

<center>

<h1>Simple Mark Entry Application</h1>


```
<br>

<form action="index0.html" method="post">

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

  </form><br/>

<form action="page.html" method="post">

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

  </form>

</center>

</body>

</html>
```

index0.html

```
<html>

<head>

  <style>

    form input[type = text]{

      width: 180px;

      height:35px;

    }

    form input[type = submit]{

      width: 150px;

      height:35px;

    }

  </style>

</head>
```

<body>

<center> <h1>Student Mark Entry Form</h1></center>

<form action="MarkServlet" method="post">

Student name :<input type="text" name="name"/>

Student Rollno :<input type="text"
name="rollno"/>

MobileComputing :<input type="text"
name="mc"/>

Parallel and Distributed System :<input type="text"
name="pds"/>

Integrated Programming :<input type="text"
name="ip"/>

Information Security :<input type="text" name="is"/>

PE :<input type="text" name="pe"/>

OE :<input type="text" name="oe"/>

IS lab :<input type="text" name="islab"/>


```

        <br/>
        IP lab :<input type="text"
name="iplab"/><br/>

```

```

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

```

page.html

```

<html>
    <body>
        <form action="Markjsp.jsp" method="post">
            <center>
                Enter Rollno : <input type="text" name="rollno"/><br/>
                <br/>
                <input type="submit" value="Submit"/>
            </center>
        </form>
    </body>
</html>

```

Markjsp.jsp

```

<%--

```

Document : Markjsp

Created on : 10 Apr, 2021, 10:05:48 PM

Author : Murugan

--%>

<% @ page import="java.sql.*" %>

<HTML>

<BODY>

<%

String rollnum = request.getParameter("rollno");

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

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

Statement statement = connection.createStatement() ;

ResultSet resultset = statement.executeQuery("select * from markejb
where rollno='"+rollnum+"'");

resultset.next();

int a;

%>

<h1> Student mark detail </h1>

<h1>Student Name is <%= resultset.getString(1)%>
 </h1>

<h1>Roll number : <%= resultset.getInt(2)%>
 </h1>

<h1>The student marks on the respective subjects are the following</h1>

<h1>Mobile Computing : <%= resultSet.getInt(3)%>
 </h1>

<h1>Integrated Programming : <%= resultSet.getInt(4) %>
</h1>

<h1>Information Security : <%= resultSet.getInt(5) %>
</h1>

<h1>Parallel and distributed system : <%= resultSet.getInt(6) %>

</h1>

<h1> Professional elective : <%= resultSet.getInt(7) %>
</h1>

<h1> Open elective : <%= resultSet.getInt(8) %>
</h1>

<h1> Information Security lab :<%= resultSet.getInt(9) %>
 </h1>

<h1>Integrated Programming lab : <%= resultSet.getInt(10) %>
</h1>

</BODY>

</HTML>

Callejb.java

package ejbCall;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.Statement;

```
import javax.ejb.Stateless;
```

```
@Stateless
```

```
public class Callejb {
```

```
    int mc;
```

```
    int ip;
```

```
    int is;
```

```
    int pds;
```

```
    int pe;
```

```
    int oe;
```

```
    int islab;
```

```
    int iplab;
```

```
    int rollno;
```

```
    String name;
```

```
    public int getMC() {
```

```
        return mc;
```

```
    }
```

```
    public void setMC(int mc) {
```

```
        this.mc = mc;
```

```
    }
```

```
    public int getIP() {
```

```
        return ip;
```

```
    }
```



```
public void setIP(int ip) {  
    this.ip = ip;  
}  
  
public int getIS() {  
    return is;  
}  
  
public void setIS(int is) {  
    this.is = is;  
}  
  
public int getPDS() {  
    return pds;  
}  
  
public void setPDS(int pds) {  
    this.pds = pds;  
}  
  
public int getPE() {  
    return pe;  
}  
  
public void setPE(int pe) {  
    this.pe = pe;  
}  
  
public int getOE() {  
    return oe;  
}
```

```
public void setOE(int oe) {  
    this.oe = oe;  
}  
  
public int getIPlab() {  
    return iplab;  
}  
  
public void setIPlab(int iplab) {  
    this.iplab = iplab;  
}  
  
public int getISlab() {  
    return islab;  
}  
  
public void setISlab(int islab) {  
    this.islab = islab;  
}  
  
public int getRoll() {  
    return rollno;  
}  
  
public void setRoll(int rollno) {  
    this.rollno = rollno;  
}  
  
public String getName() {  
    return name;  
}
```

```

public void setName(String name) {

this.name = name;

}

public void database(){

    //create table markejb(name varchar(255),rollno int,mc int,ip int,infosec int,pds
int,pe int,oe int,islab int,iplab int);

        try{

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

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

            Statement stmt=connection.createStatement();

            int result = stmt.executeUpdate(

                "insert into markejb
values('"+name+"','"+rollno+"','"+mc+"','"+ip+"','"+is+"','"+pds+"','"+pe+"','"+oe+"
','"+islab+"','"+iplab+"')");

            if (result > 0) {

                System.out.println("successfully inserted");

            }

            else System.out.println("unsucessful insertion ");

        }

        catch(Exception e){

            System.out.println(e);

        }

    }

}

```

MarkServlet.java

```

import ejbCall.Callejb;

import java.io.IOException;

import java.io.PrintWriter;

import javax.ejb.EJB;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;


public class MarkServlet extends HttpServlet {

    @EJB

    Callejb a;

    @Override

    protected void doPost(HttpServletRequest request, HttpServletResponse
    response)throws ServletException, IOException {

        response.setContentType("text/html");

        PrintWriter out=response.getWriter();

        HttpSession session=request.getSession(false);

        String name=request.getParameter("name");

        int rollno=Integer.parseInt(request.getParameter("rollno"));

        int mc=Integer.parseInt(request.getParameter("mc"));

        int pds=Integer.parseInt(request.getParameter("pds"));

        int ip=Integer.parseInt(request.getParameter("ip"));

```

```
int is=Integer.parseInt(request.getParameter("is"));
int pe=Integer.parseInt(request.getParameter("pe"));
int oe=Integer.parseInt(request.getParameter("oe"));
int islab=Integer.parseInt(request.getParameter("islab"));
int iplab=Integer.parseInt(request.getParameter("iplab"));
```

```
a.setIP(ip);
a.setIS(is);
a.setMC(mc);
a.setPDS(pds);
a.setOE(oe);
a.setPE(pe);
a.setIPlab(iplab);
a.setISlab(islab);
a.setName(name);
a.setRoll(rollno);
a.database();
```

```
out.println("<html>");
out.print("<body>");
out.print("<center>");
out.print("<form action='index.html' method='post'>");
out.print("<input type='submit' value='Main page'/></form>");
out.print("</center>");
```

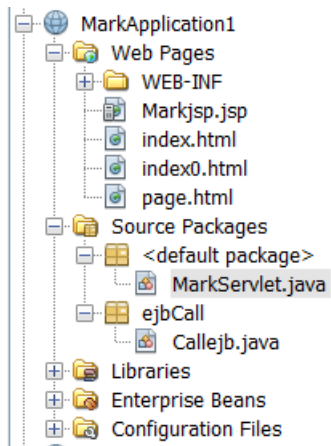
```
        out.print("</body>");

        out.println("</html>");

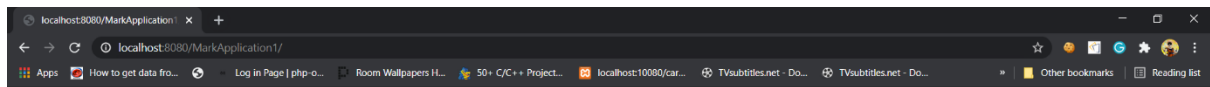
    }

}
```

Project Structure:



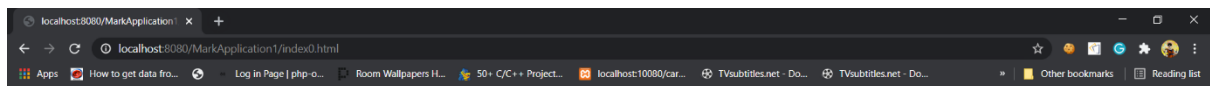
Output:



Simple Mark Entry Application

Markentry

Viewmark



Student Mark Entry Form

Student name :

Student Rollno :

MobileComputing :

Parallel and Distributed System :

Integrated Programming :

Information Security :

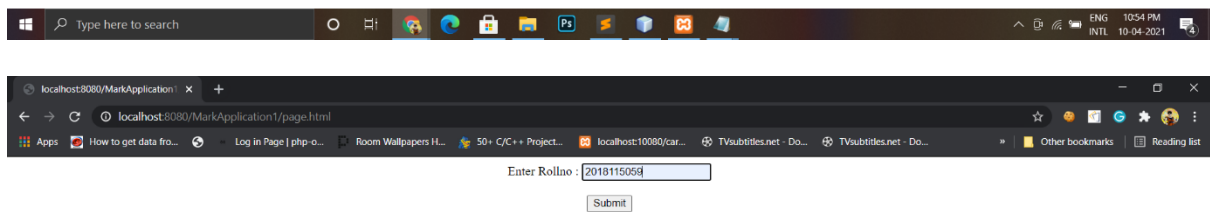
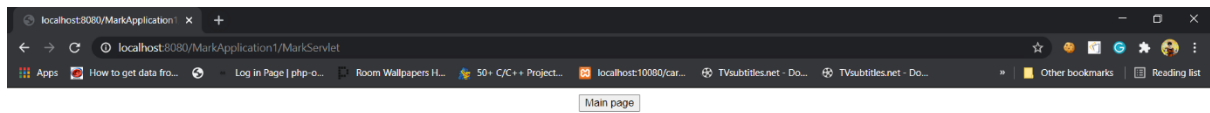
PE :

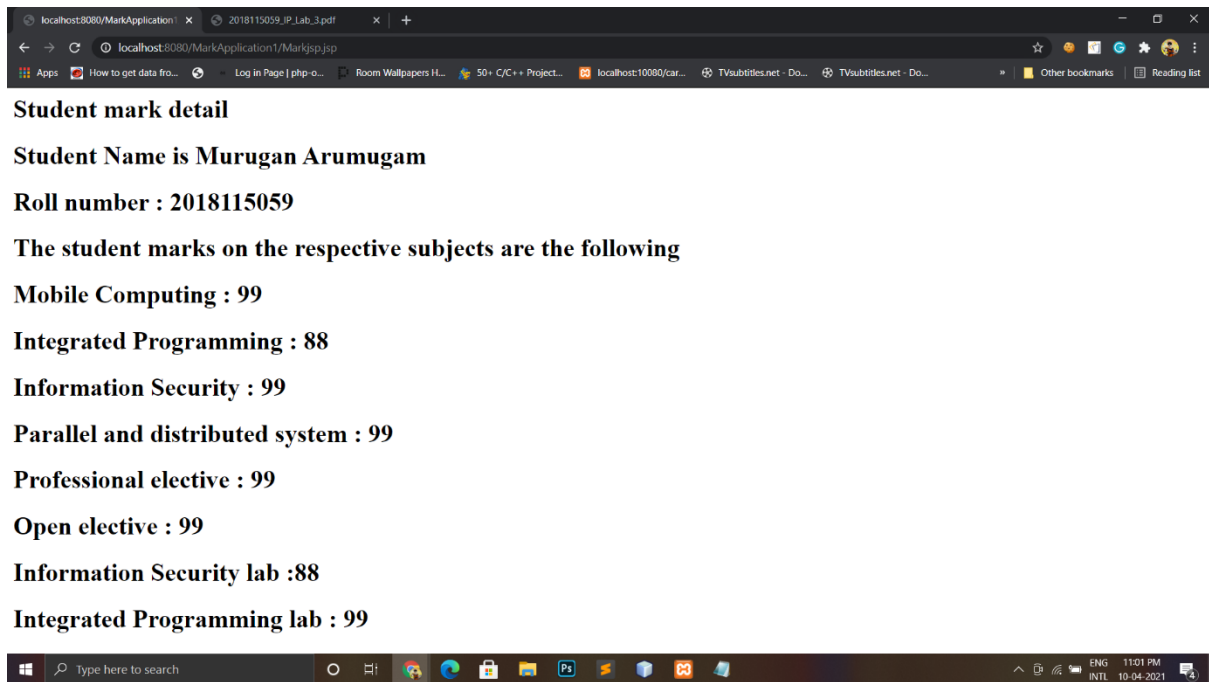
OE :

IS lab :

IP lab :







6. Develop simple EJB application to demonstrate Servlet Hit count using Singleton Session Beans.

Source Code:

index.html

```
<!DOCTYPE html>
```

```
<!--
```

To change this license header, choose License Headers in Project Properties.

To change this template file, choose Tools | Templates

and open the template in the editor.

```
-->
```

```
<html>
```

```
<head>
```

```
<meta http-equiv="Refresh" content="0; URL=ServletClient">
```

```
</head>

<body>

    </body>

</html>
```

ServletClient.java

```
package servlet;

import java.io.IOException;
import java.io.PrintWriter;
import javax.ejb.EJB;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet(name= "ServletClient", urlPatterns={"/ServletClient"})

public class ServletClient extends HttpServlet {

    @EJB CountServletHitsBean CounterBean;

    @Override

    protected void service(HttpServletRequest request, HttpServletResponse
response)

        throws ServletException, IOException {
```

```

response.setContentType("text/html;charset=UTF-8");

try (PrintWriter out = response.getWriter()) {

    /* TODO output your page here. You may use following sample code. */

    out.println("<!DOCTYPE html>");

    out.println("<html>");

    out.println("<head>");

    out.println("<title>EJB Singleton Session Bean</title>");

    out.println("</head>");

    out.println("<body>");

        out.println("<h1>EJB application to demonstrate Servlet Hit count using  
Singleton Session Beans</h1>");

        out.println("<br>");

        out.println("<br>");

        out.println("<br>");

        out.println("<h1>Number of times this servlet is accessed(hits) : " +  
CounterBean.incrementAndGetHitCount()+"</h1>");

        out.println("</body>");

        out.println("</html>");

    }

}

```

CountServletHitsBean.java

```
/*
```

* To change this license header, choose License Headers in Project Properties.

* To change this template file, choose Tools | Templates

* and open the template in the editor.

*/

package servlet;

import javax.ejb.Singleton;

/**

*

* @author Murugan

*/

@Singleton

public class CountServletHitsBean {

private int hitcount;

public int incrementAndGetHitCount()

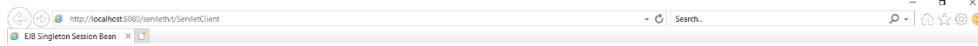
{

return hitcount++;

}

}

Output:



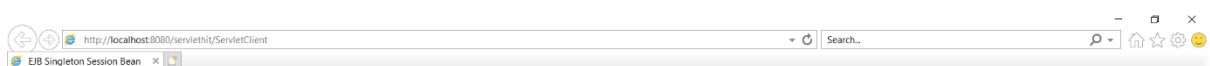
EJB application to demonstrate Servlet Hit count using Singleton Session Beans

Number of times this servlet is accessed(hits) :0



EJB application to demonstrate Servlet Hit count using Singleton Session Beans

Number of times this servlet is accessed(hits) :1



EJB application to demonstrate Servlet Hit count using Singleton Session Beans

Number of times this servlet is accessed(hits) :2

