THỰC HÀNH CHUYÊN ĐỀ CƠ SỞ 2 (JAVA NÂNG CAO)

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Lab 3: Advanced JSP

Program Code	**Chuyên đề cơ sở 2 (Java nâng cao)**
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Contents

1. Lab Guide 05: JSP Application Models

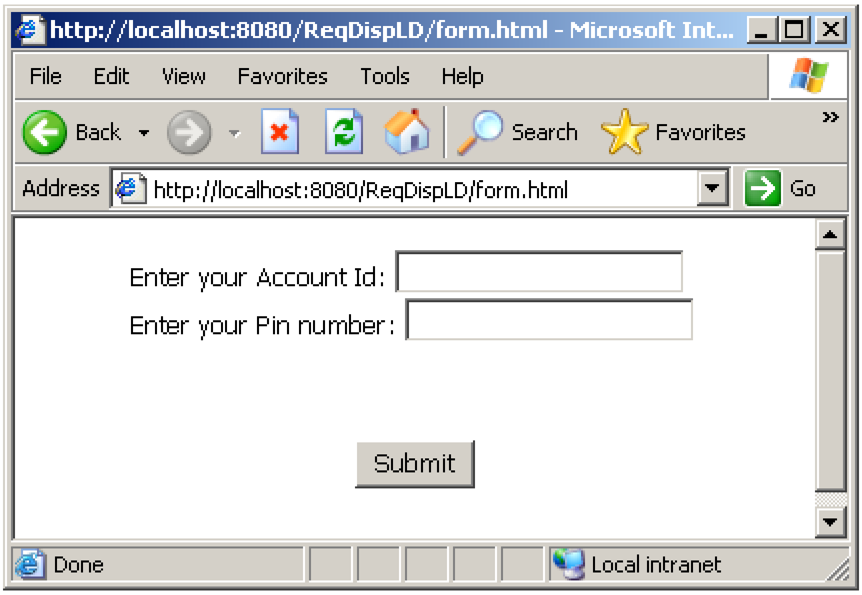
1. Write a program to include an HTML file in a JSP page using RequestDispatcher interface method. The included file should display a login form to the user. In addition, the form should provide a Submit and Reset button. Display a Welcome message to the user when the user clicks on Submit button after entering the details.

Solution:

```
   The files used to run the application are:
```

```
1. Include.jsp
2. form.html
3. Welcome.jsp


//Include.jsp

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
   <head>
      <title>Include Example</title>
      <link rel=STYLESHEET
      href="My-Style-Sheet.css" type="text/css">
   </head>
   <body bgcolor="#FDF5E6" text="#000000" link="#0000EE"
      vlink="#551A8B" alink="#FF0000"><P>
      <jsp:include page="form.htm" flush="true"/>
   </body>
</html>


//form.html

<html>
   <head>
      <style>
         body, input { font-family:Tahoma; font-size:10pt; }
      </style>
   </head>
   <body>
      <!-- HTML Form -->
      <form action="Welcome.jsp" method="post">
      &nbsp &nbsp &nbsp &nbsp &nbsp &nbsp  Enter your Account Id:
      <input type="text" name="Acc_Id" /> &nbsp &nbsp &nbsp &nbsp
      &nbsp &nbsp &nbsp &nbsp &nbsp &nbsp &nbsp &nbsp
      Enter your Pin number:
      <input type="text" name="Pin_num"/> <br><br><br><br>
      <Center><input type="submit" value="Submit"/><Center>
      </form>
   </body>
</html>


//Welcome.jsp

<%@ page language = "java" import="java.util.*" %>
<html>
   <head>
   <title>Welcome to our Website</title>
   </head>
   <body>
   <center>
      out.println("Welcome to Online Banking");
   </center>
   </body>
</html>
```

The output of the program is as shown in Figure 10.1.



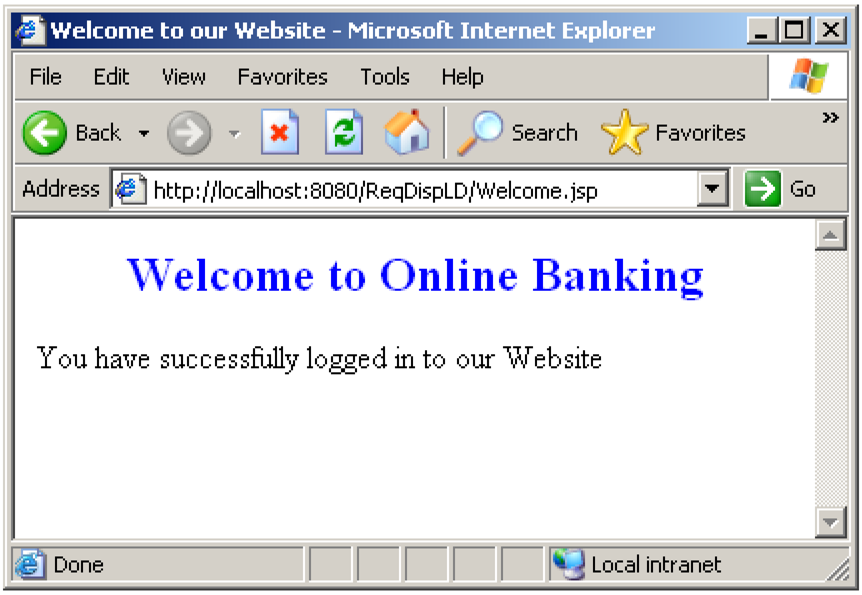
http://localhost:8080/ReqDispLD/form.html

Enter your Account Id:

Enter your Pin number:

Figure 10.1: Output of form.html

When the user enters the details and clicks on Submit button, the output appears as shown in Figure 10.2.


Welcome to our Website - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/ReqDispLD/Welcome.jsp Go
Done Local intranet

Welcome to Online Banking

You have successfully logged in to our Website

Figure 10.2: Output after clicking Submit button

2. Write a program to display an error message to the user if an exception occurs in the JSP page. In the JSP page, consider a null string and find out the length of the string using `length()` method of Java. Create an error handler to handle the exception thrown by this JSP page.

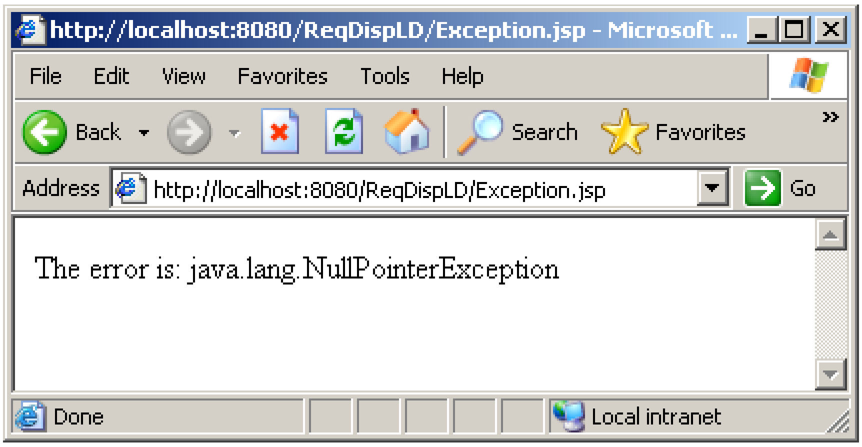
Solution:

```
   The files used to run the application are:

   1. Exception.jsp
   2. Example.html
```

```
//Exception.jsp

<html>
   <body>
      <%@ page errorPage="example.jsp" %>
      Example for Null Pointer exception:
      <%
         String s=null;
         s.length();
      %>
   </body>
</html>
```

```
//Error handler file
//Example.jsp

<html>
   <body>
      <%@ page isErrorPage="true" %>
      The error is:
      <%= exception %>
   </body>
</html>
```

The output of the program is as shown in Figure 10.3.


http://localhost:8080/ReqDispLD/Exception.jsp - Microsoft ...
File Edit View Favorites Tools Help
Back
Search
Favorites
Address
http://localhost:8080/ReqDispLD/Exception.jsp
Go
Done
Local intranet

The error is: java.lang.NullPointerException

Figure 10.3: Output of Example.jsp

Do It Yourself

1. Write a program to include an HTML file in a JSP page using RequestDispatcher interface method. The included file should display personal details form to the user. In addition, the form should provide a Submit and Reset button. Display the details entered by the user after the user clicks the Submit button.

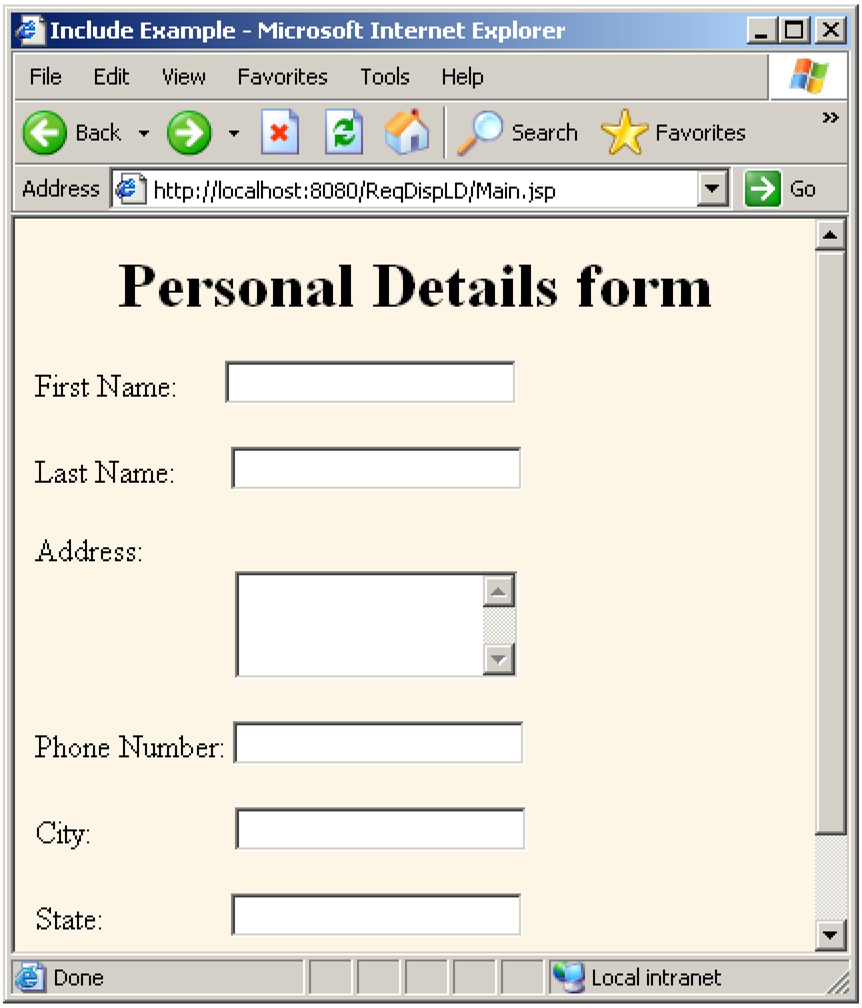
Solution:

```
The files used to run the application are:

1. Main.jsp
2. Personal.jsp
3. Details.jsp
```

```
//Main.jsp

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
   <head>
      <title>Include Example</title>
      <link rel=STYLESHEET href="My-Style-Sheet.css"
type="text/css">
   </head>
   <body bgcolor="#FDF5E6" text="#000000" link="#0000EE"
   vlink="#551A8B" alink="#FF0000"><P>
   <jsp:include page="Personal.jsp" flush="true"/>
   </body>
</html>


//Personal.jsp

<html>
   <head>
      <title>Personal Details Form</title>
   </head>
   <body>
      <Center><h1>
      Personal Details form
      </h1></Center>
      <form action="Details.jsp" method="post">
      First Name:
      &nbsp; &nbsp; &nbsp;<input type="text" name="fname">
      <br><br>

      Last Name:
      &nbsp; &nbsp; &nbsp;&nbsp;<input type="text" name="lname">
      <br><br>

      Address:<br>
      &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
      &nbsp;&nbsp;&nbsp;&nbsp; &nbsp;  &nbsp; &nbsp;
      <textarea name=address rows=3 cols=15></textarea>
      <br><br>
      Phone Number:
      <input type="text" name="phone">
      <br><br>

      City:
      &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
      &nbsp;
      <input type="text" name="city">
      <br><br>

      State:
```

```
      &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
      <input type="text" name="state">
      <br><br>

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


//Details.jsp

<html>
   <head>
      <title>Example of Implicit objects</title>
   </head>
   <body>
      <font face=Times New Roman size=3>
      Thank you for your submission. Confirm the details:
      <br><br>
      <%
         String sfName = request.getParameter("fname");
         String slName = request.getParameter("lname");
         String saddress = request.getParameter("address");
         String sphone = request.getParameter("phone");
         String scity = request.getParameter("city");
         String sstate = request.getParameter("state");
      %>
      First Name:<%=sfName%><br>
      Last Name:<%=slName%><br>
      Address:<%=saddress%><br>
      Phone:<%=sphone%><br>
      City:<%=scity%><br>
      State:<%=sstate%><br>
      </font>
   </body>
</html>
```

The output appears as shown in Figure 10.4.


Include Example - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/ReqDispLD/Main.jsp Go

Personal Details form

First Name:

Last Name:

Address:

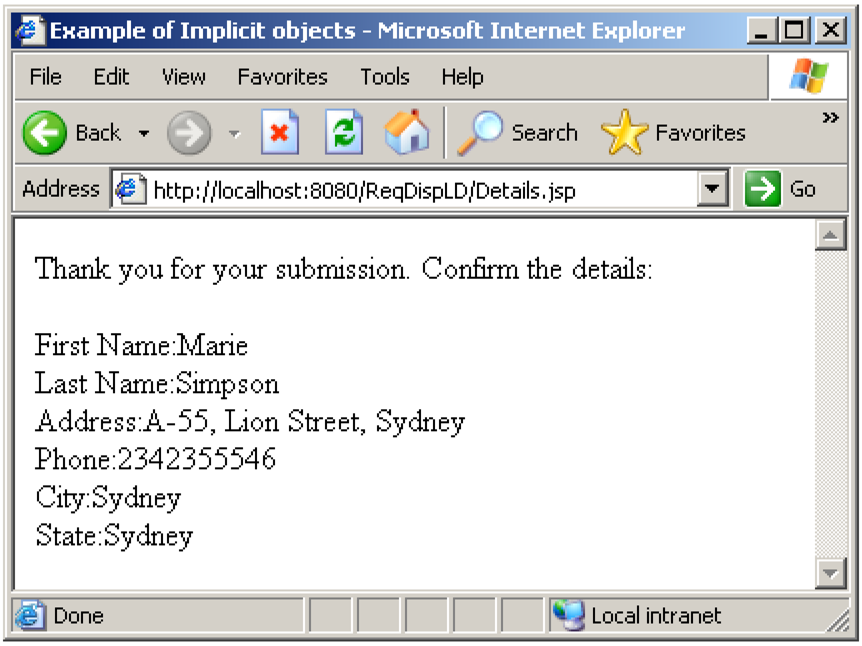
Phone Number:

City:

State:

Figure 10. 4: Output of Main.jsp

When the user clicks on Submit button after entering the details, the output appears as shown in Figure 10.5.


Example of Implicit objects - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/ReqDispLD/Details.jsp
Go
Done
Local intranet

Thank you for your submission. Confirm the details:

First Name:Marie
Last Name:Simpson
Address:A-55, Lion Street, Sydney
Phone:2342355546
City:Sydney
State:Sydney

Figure 10.5: Output of Details.jsp

2. Write a program to display an error message to the user if an exception occurs in the JSP page. In the JSP page, consider a null vector and find out the length of the string using `size()` method of Java. Create an error handler to handle the exception thrown by this JSP page.

Solution:

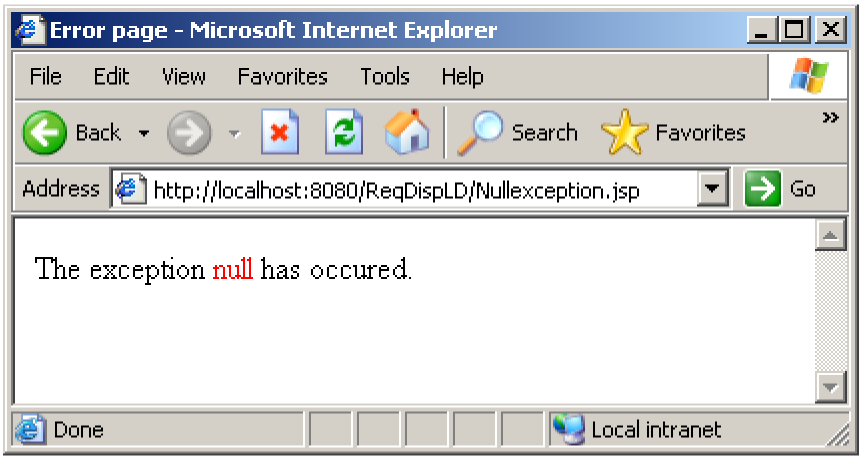
```
   The files used to run the application are:
   1. Nullexception.jsp
   2. errorpage.jsp
```

```
//Nullexception.jsp
<%@ page errorPage="errorpage.jsp" import="java.util.Vector"%>
<html>
   <head>
   </head>
   <%! Vector vec = null; %>
   <body bgcolor=#ffffff>
      Vector has <%= vec.size() %> elements.
   </body>
</html>
```

```
//errorpage.jsp
<html>
```

```
   <%@ page isErrorPage="true" %>
   The exception <font color="red"> <%= exception.getMessage() %>
</font> has occurred.
   </body>
</html>
```

The output of the program is as shown in Figure 10.6.


Error page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/ReqDispLD/Nullexception.jsp Go
Done
Local intranet

The exception null has occured.

2. Lab Guide 06: Session Management

1. Write a program to display an online shopping cart Web page with a drop down menu. The Web page should have one button to add an item to the cart, and another button to remove an item from the cart. The Web page should display the changes made to the cart.

Solution:

The file used in this exercise is **cart.jsp**

```
<html>
   <%
   java.util.Vector v =
(java.util.Vector)session.getAttribute("array");
   if (v == null)
   {
      v = new java.util.Vector();
   }
    String i = null;
    String submit = request.getParameter("submit");

   if (submit == null)
   {
      submit = "";
   }
    if (submit.equals("add") || submit.equals(""))
   {
        v.addElement(request.getParameter("item"));
        %>
        <br> Your cart Contains :
```

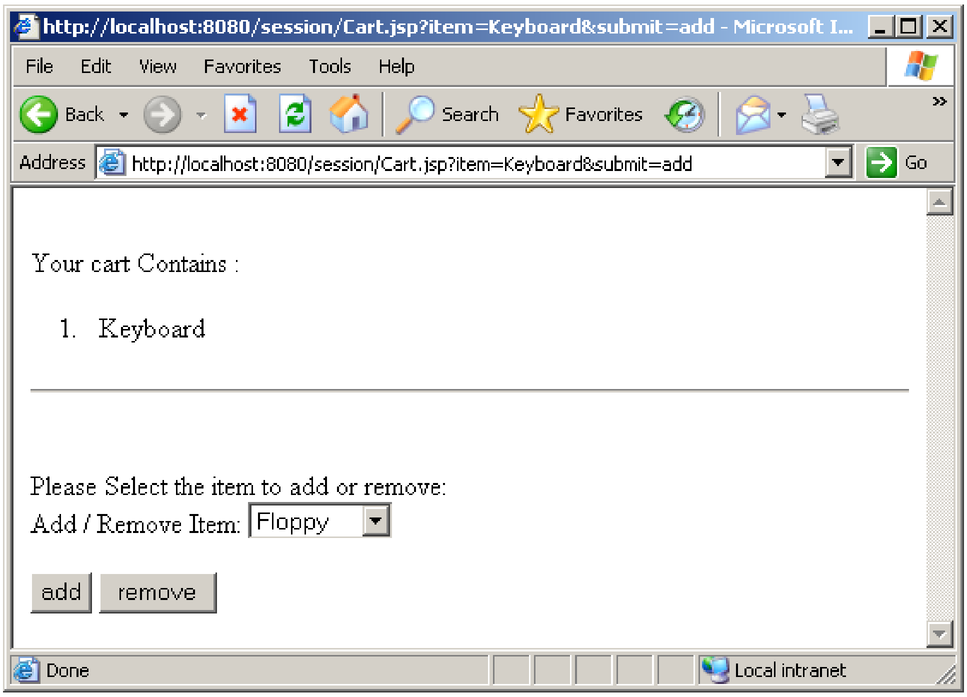
```
      <ol>
      <%
         String[] items = new String[v.size()];
         v.copyInto(items);
         for (int ix=1; ix < items.length; ix++) {
      %>
      <li> <% out.print(items[ix]);
      }
   %>
   </ol>

   <%
 }
if (submit.equals("remove"))
{
   String removeitem=request.getParameter("item");
      if(v.contains(removeitem))
      {
         v.removeElement(removeitem);
      }
      else
      {
         out.println("element not found in vector");
      }

      %>
      <br> Your cart Contains :
      <ol>
      <%
```

```
           String[] items = new String[v.size()];

           v.copyInto(items);

           for (int ix=1; ix<items.length; ix++) {

        %>

        <li> <% out.print(items[ix]);

        }

     %>

     </ol>


     <%

   }

   session.setAttribute("array",v);

%>


</font>

<hr>


<font size = 3>

<form type=POST>

<BR>

Please Select the item to add or remove:

<br>

Add / Remove Item:

<select name="item">

<option>Floppy

<option>CD

<option>Keyboard

</select>

<br> <br>
```

```
<input type=submit name="submit" value="add">

<input type=submit name="submit" value="remove">



</form>

</font>

</html>
```

Enter the code in Notepad, and save the file as Cart.jsp in `%TOMCAT_HOME%/webapps/session.`

The output of the program is as shown in Figure 12.1.


http://localhost:8080/session/Cart.jsp?item=Keyboard&submit=add - Microsoft I...
File Edit View Favorites Tools Help
Back
Search
Favorites
Address
http://localhost:8080/session/Cart.jsp?item=Keyboard&submit=add
Go
Done
Local intranet

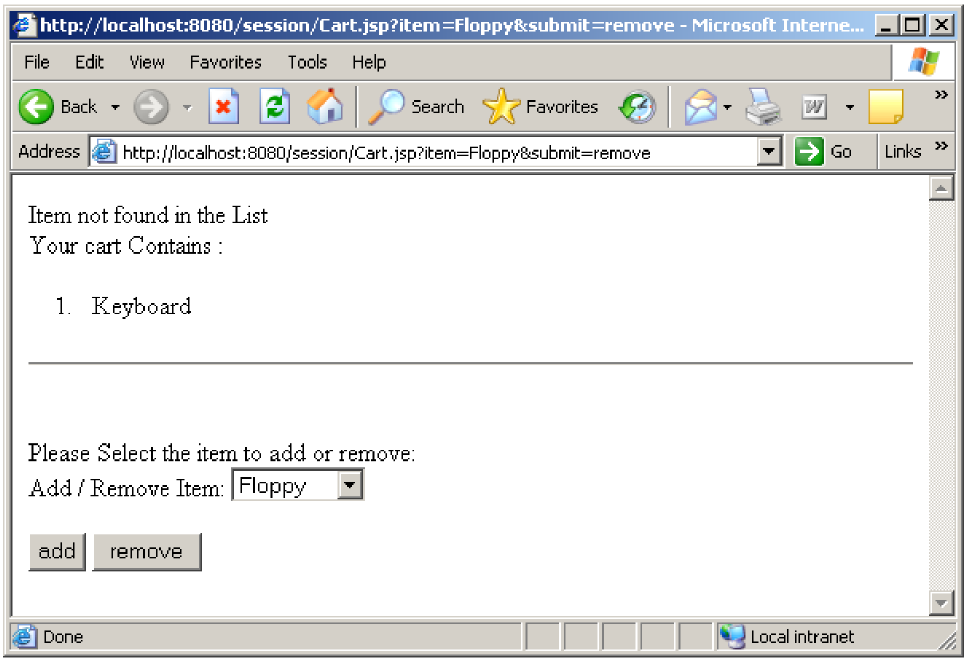
Your cart Contains :

1. Keyboard

Please Select the item to add or remove:
Add / Remove Item: Floppy

add remove

Figure 12.1: Shopping cart page


http://localhost:8080/session/Cart.jsp?item=Floppy&submit=remove - Microsoft Interne...
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/session/Cart.jsp?item=Floppy&submit=remove Go Links
Done Local intranet

Item not found in the List
Your cart Contains :

1. Keyboard

Please Select the item to add or remove:
Add / Remove Item: Floppy

add remove

Figure 12.2 Error page

Do It Yourself

3. Write a program to count and display the number of active sessions connected to the Tomcat server.

Solution:

The files used in this exercise are:

1. session.jsp

2. web.xml

3. SessionCount.java

```
<html>

<head>

<title>Session</title>

</head>
```

```
<body>

<h1>Session</h1>

There are currently

<%=com.java2s.SessionCount.getNumberOfSessions()%> active sessions.



</body>

</html>
```

Enter the above code in Notepad, and save the file as ‘Session.jsp’ in `%TOMCAT_HOME%/webapps/ counter.`

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"

  "http://java.sun.com/dtd/web-app_2_3.dtd">

<web-app>

  <listener>

    <listener-class>com.SessionCount</listener-class>

  </listener>

  <taglib>

    <taglib-uri>http://java.sun.com/jstl/core</taglib-uri>

    <taglib-location>/WEB-INF/c.tld</taglib-location>

  </taglib>

</web-app>
```

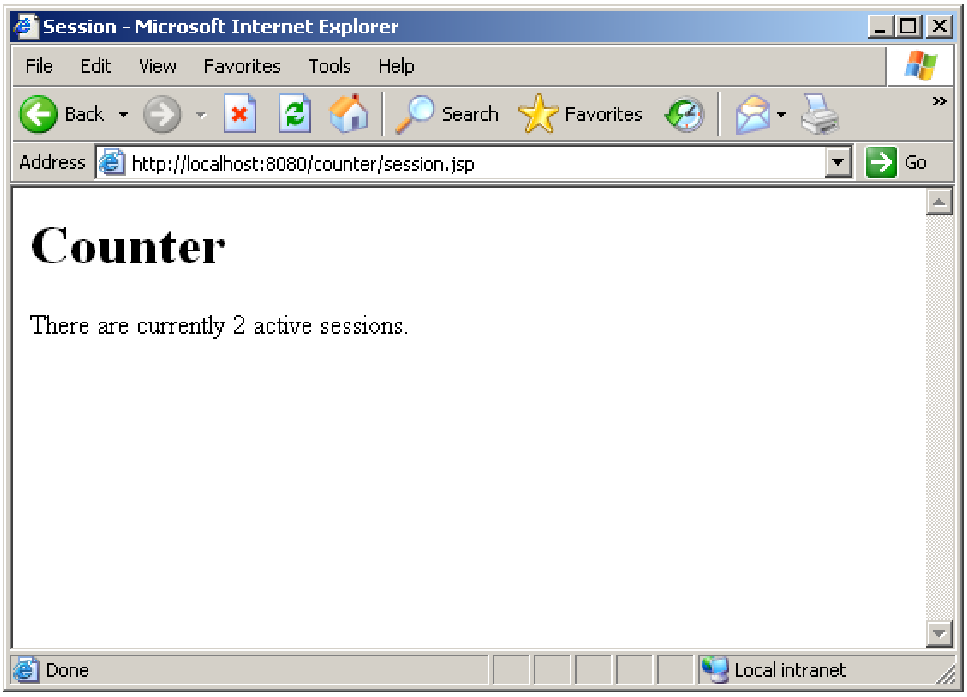
Enter the code in Notepad, and save the file as ‘web.xml’ in `%TOMCAT_HOME%/webapps/ counter/WEB-INF.`

```
package com;
```

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


public class SessionCount implements HttpSessionListener

{

  private static int numberOfSessions = 0;


  public void sessionCreated (HttpSessionEvent evt)

  {

    numberOfSessions++;

  }


  public void sessionDestroyed (HttpSessionEvent evt)

  {

    numberOfSessions--;

  }

  public static int getNumberOfSessions()

  {

    return numberOfSessions;

  }


}
```

Enter the above Java code in Notepad, and save the file as ‘SessionCount.java’. Compile the file from command prompt, and copy the class file in `%TOMCAT_HOME%/webapps/counter/ WEB-INF/classes/com.`

The output of the program is as shown in the Figure 12.3.


Session - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back
Search
Favorites
Address
http://localhost:8080/counter/session.jsp
Go
Done
Local intranet

Counter

There are currently 2 active sessions.

Figure 12.3: Counter page

3. Lab Guide 07: Java Database Connectivity

1. Write a program to display a login page to the user. The login page should ask user to enter the account Id and pin number. The account id and pin number should be compared with the data in database, and should be validated. Display appropriate message to the user after validating the user input to the login form.

The files used to run the application are:

1. main.jsp
2. Login.jsp
3. process2.jsp
4. success.jsp
5. retry.jsp

Solution:

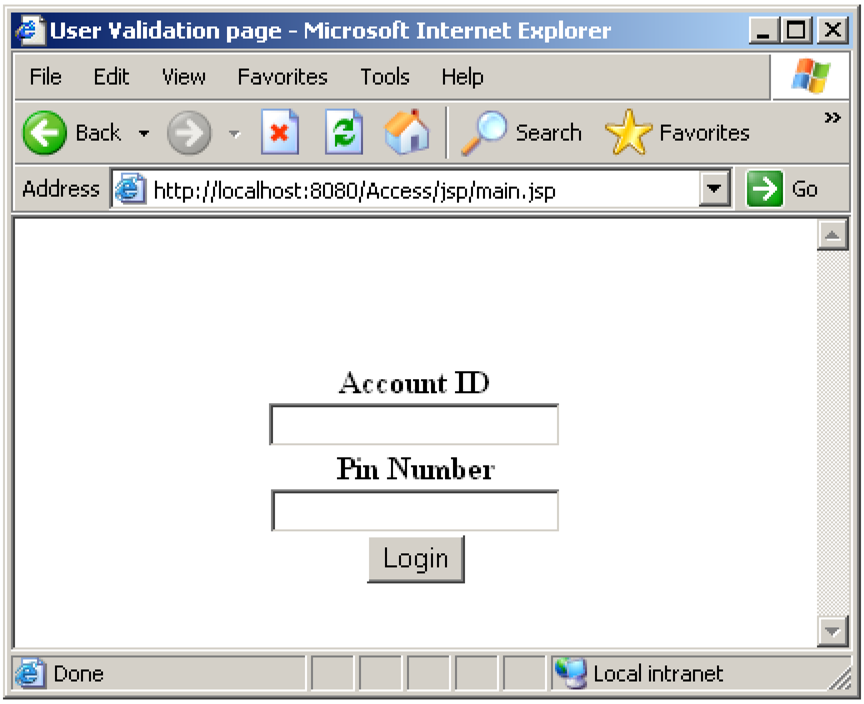
```
//main.jsp
<html>
    <head>

    <title> </title>
    </head>

    <body>
        <br>
         <br><br>
         <form action="process2.jsp” method = "post" >
             <center>Account Id</center>
             <input type = "text" name="acc_id>
             <center>Pin Number</center>
             <input type = "Pin Number" name = "pin_num">
             <center><input type="submit" name="Submit" value="Login"></center>
         </form>
    </body>
</html>
```

```
//Login.java

package Java_class;
import java.sql.*;

public class Login
    {
        private String account_id = "";
        private String pin_number = "";
        public Login()
            {
            }
        public void setaccount_id(String acc_id)
            {
                this.acc_id = acc_id;
            }
        public void setPin_num(String pin_number)
            {
                this.pin_number = pin_number;
            }
        public boolean  authenticate(String acc_id2, String pin_num2)
            {
                String query="select * from Registration";
                String Dbacc_id="";
                String DbPin_num="";

                try
                    {
                        Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
                        Connection
                        con=DriverManager.getConnection("jdbc:odbc:regist
                        er");
                        Statement stat=con.createStatement();
                        ResultSet rst=stat.executeQuery(query);
                        while(rst.next())
                        {
                            Dbacc_id=rst.getString("account_id");
                            DbPin_num=rst.getString("pin_number");

                            if (acc_id2.equals(Dbacc_id) &&
                            pin_num2.equals(DbPin_num))
                            {
                            return true;
                            // break;
                            }
                        }
                            return false;
                    }
                catch(Exception e)
                    {
                        e.printStackTrace();
                        return false;
                    }
            }
    }
```

```
//process2.jsp

<%@ page import="java.util.*" %>
<jsp:useBean id="idHandler" class="Java_class.Login" scope="request">
<jsp:setProperty name="idHandler" property="*"/>
```

```
</jsp:useBean>

<%
    String username = request.getParameter("account_id");
    String password = request.getParameter("pin_number");

    // If authenticated pass control to success.jsp
    if (idHandler.authenticate(account_id, pin_number))
        {
%>
<jsp:forward page="success.jsp"/>
<%
    } else {
%>
    <jsp:forward page="retry.jsp"/>
<%
    }
%>


//success.jsp
<html>
    <head>
        <title> User Validation Page </title>
    </head>
    <body>
        You have successfully logged in to our Website
    </body>
    </html>


//retry.jsp
<html>
    <head>
        <title> User Validation Page </title>
    </head>
    <body>
        Incorrect username or password!!!!
        <A href="main.jsp"> Retry </A>
     </body>
</html>
```

The output of the program is as shown in Figure 14.1.


User Validation page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/Access/jsp/main.jsp Go
Done Local intranet

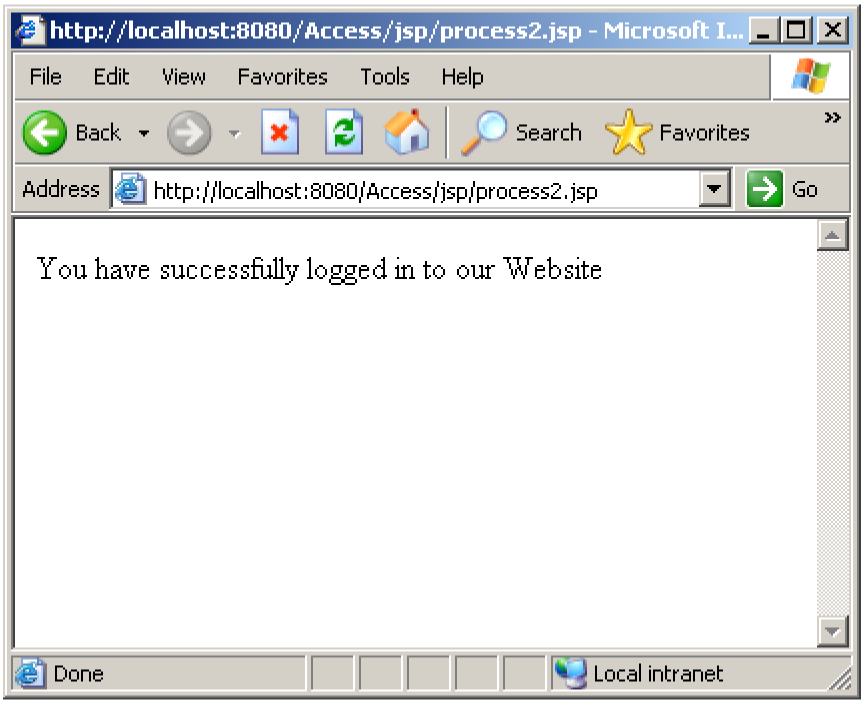
Account ID

Pin Number

Login

Figure 14.1: Login Form

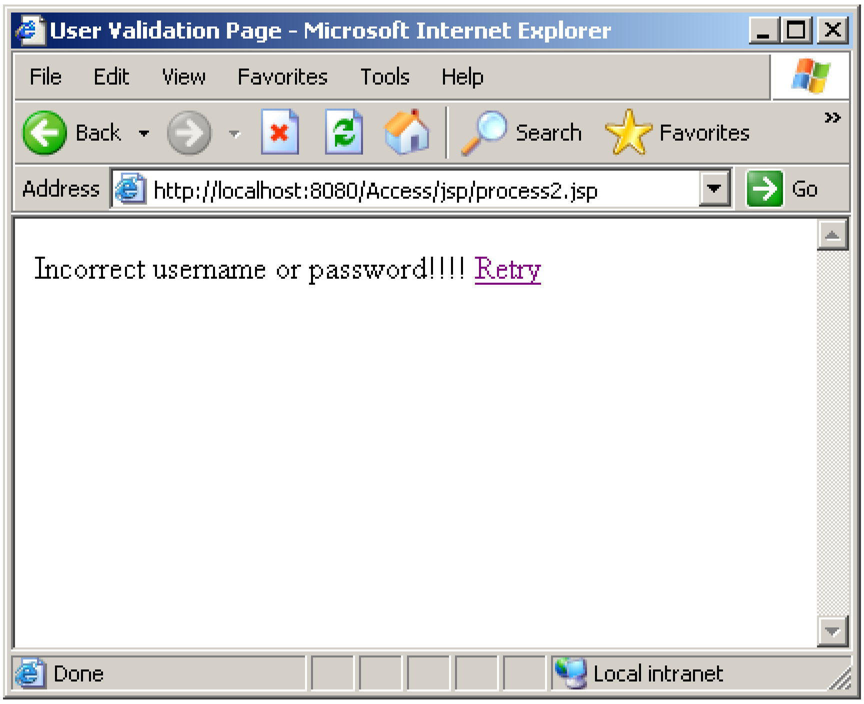
After entering valid details, when the user clicks on `Login` button, a message is displayed to the user as shown in Figure 14.2.


http://localhost:8080/Access/jsp/process2.jsp - Microsoft I...
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/Access/jsp/process2.jsp Go
Done Local intranet

You have successfully logged in to our Website

Figure 14.2: Logon Success Message

If the user enters invalid details in the login form, a message is displayed to the user informing that the details entered are invalid. The message appears as shown in Figure 14.3.


User Validation Page - Microsoft Internet Explorer
File
Edit
View
Favorites
Tools
Help
Back
Search
Favorites
Address
http://localhost:8080/Access/jsp/process2.jsp
Go
Done
Local intranet

Incorrect username or password!!!! Retry

Figure 14.3: Invalid Login Message

Do It Yourself

4. Write a program to display a user details form to the user. After the user clicks Submit button, the details entered should be saved in the database. Display a message to the user after the data is saved to the database. The DSN name is **user**. The database name is **Details.** Identify the structure of **UserDetails** table:

```
    CNo Number,
    Fname Text,
    Lname Text,
    Email Text
```

The files used to run the application are:

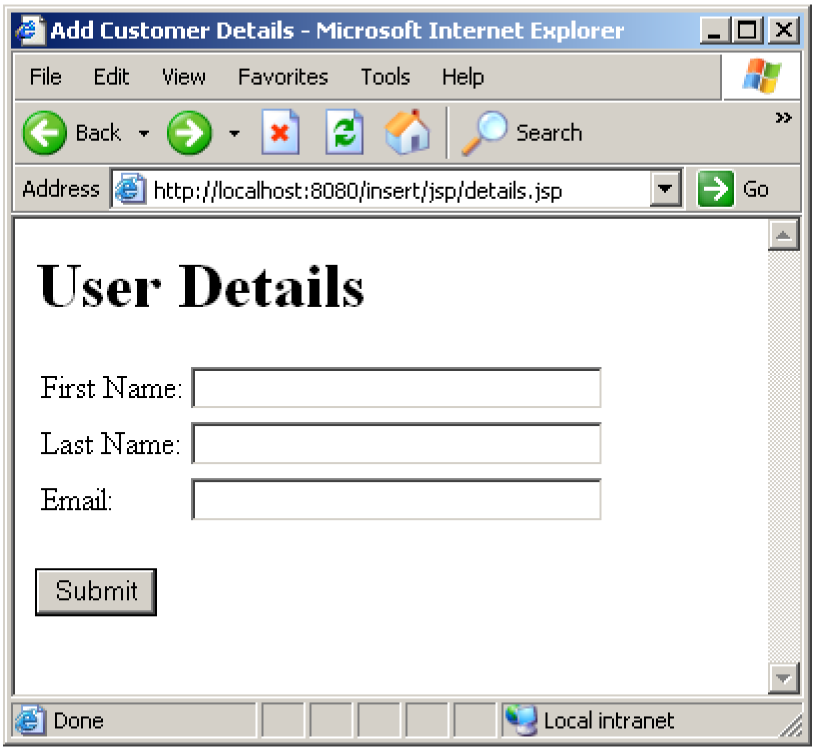
1. Details.jsp
2. insert.jsp

Solution:

```
//Details.jsp
<html>
   <head>
   <title>Add Customer Details</title>
   </head>

   <body>
      <h1> User Details</h1>
      <form action="insert.jsp" method="post">
         <table>
         <tr>
            <td align="right">First Name:</td>
            <td><input type="text" name="first" size="30"></td>
         </tr>
         <tr>
            <td>Last Name:</td>
            <td> <input type="text" name="last" size="30" /></td>
         </tr>

         <tr>
            <td>Email:</td>
            <td> <input type="text" name="email" size="30" /></td>
         </tr>
         </table><br/>
         <input type="submit" value="Submit" />
      </form>

   </body>

</html>
```

```
//insert.jsp


<html>

<head><title>Adding customer details</title></head>

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

<body>

   <center>


   <%

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

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

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

      try

         {

            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

            Connection connection =

            DriverManager.getConnection("jdbc:odbc:Details");


            Statement Stmt = connection.createStatement();

            String insert = "insert into UserDetails values ('" +
first + "','" + last + "','" + email + "');";


            int stmtInt = Stmt.executeUpdate(insert);

            out.println("Your Information is Added in our
            Database”);
   %>


   <%
      }
      catch (ClassNotFoundException cnfe)
         {
            System.err.println(cnfe);
         }
      catch (SQLException ex )
         {
            System.err.println( ex);
         }
      catch (Exception er)
         {
            er.printStackTrace();
         }
   %>
</body>
</html>
```

The output of the program is as shown in the Figure 14.4.


Add Customer Details - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search
Address http://localhost:8080/insert/jsp/details.jsp Go
Submit
Done Local intranet

User Details

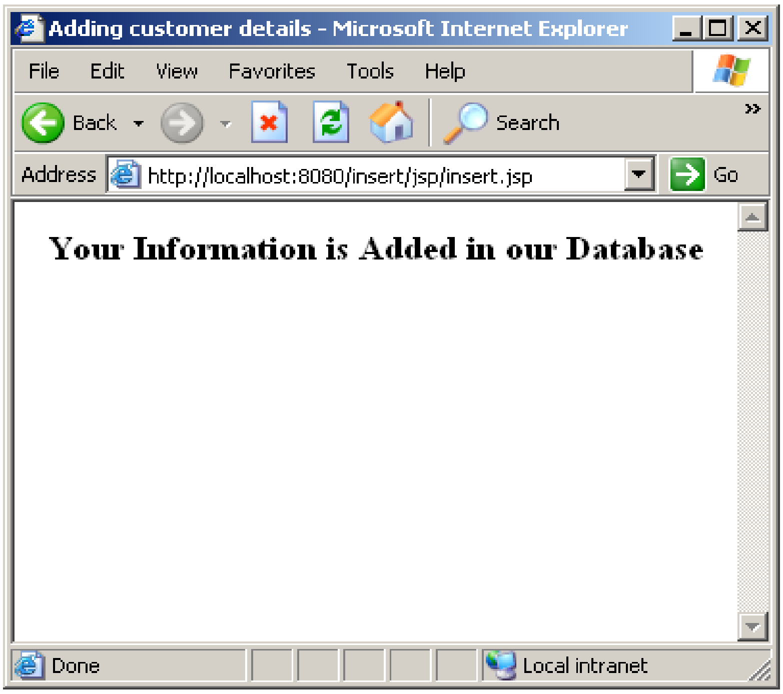
First Name:

Last Name:

Email:

Figure 14.4: User Details Form

After entering the details, when the user clicks on Submit button, the details are saved in database, and a message is displayed to the user as shown in Figure 14.5.


Adding customer details - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search
Address http://localhost:8080/insert/jsp/insert.jsp Go
Done Local intranet

Your Information is Added in our Database

Figure 14.5: Message

2. Write a program to display the user details, with delete button for each detail. The details get deleted from the database after clicking the corresponding delete button.

The files used to run the application are:

1. delete.jsp
2. Main.jsp

Solution:

```
//delete.jsp


<html>
   <head><title>Details</title></head>
   <%@ page import="java.io.*, java.sql.*"%>
   <body>
      <center>
      <H3>Details</h3>
      <table border="1">
      <tr><th>CusNr</th><th>First Name</th><th>Last
Name</th><th>Email</th><th>Delete</th></tr>
      <%
         try
            {
               Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
               Connection connection =
               DriverManager.getConnection("jdbc:odbc:Details");
               Statement statement = connection.createStatement();
               String query = "Select * from UserDetails";
```

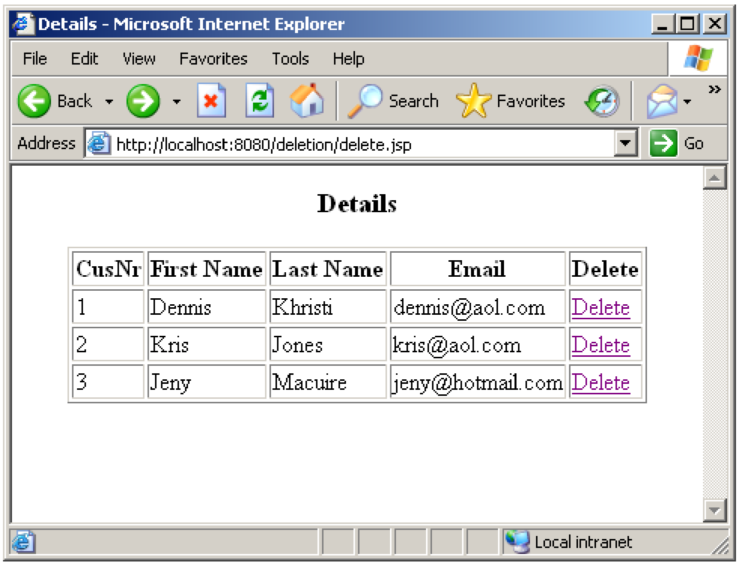
```
        ResultSet resCar = statement.executeQuery(query);

        while(res.next())

           {

              int cno = resCar.getInt("CusNr");

              String first = res.getString("Fname");

              String last = res.getString("Lname");

              String email = res.getString("Email");

%>

              <TR>

              <TD><%= cno %></TD>

              <TD><%= first %></TD>

              <TD><%= last %></TD>

              <TD><%= email %></TD>

              <TD><A HREF='Main.jsp?cusnr=<%= cno

              %>'>Delete</A></TD>

              </TR>

<%

           }// end while loop

      }

   catch (ClassNotFoundException cnfe)

      {

        System.err.println(cnfe);

      }

   catch (SQLException ex )

      {

        System.err.println( ex);

      }

   catch (Exception er)

      {
              er.printStackTrace();

           }

      %>

      </table>

      </center>

   </body>

</html>
```

```
//Main.jsp


<html>

<head><title>Details</title></head>

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

<body>

   <center>

   <%

      String inCusNr = request.getParameter("cusnr");

      String delete_cus = "delete from UserDetails where
CusNr="+inCusNr;

   %>


   <%

      try

         {

           Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

           Connection connection =

           DriverManager.getConnection("jdbc:odbc:banking");

           Statement statement = connection.createStatement();
```

```
            int rowsGone = statement.executeUpdate(delete_cus);
            if (rowsGone==1)
         {
   %>
   <H2>Details of User <%= inCusNr %> deleted.</H2>
   <%
      }
      else
      {
   %>
   <h2>Insertion failure</h2>
   <%
      }
      }
      catch (ClassNotFoundException cnfe)
         {
            System.err.println(cnfe);
         }
      catch (SQLException ex )
         {
            System.err.println( ex);
         }
      catch (Exception er)
         {
            er.printStackTrace();
         }
   %>
   </center>
</body>
```

```
</html>
```

The output of the program is as shown in the Figure 14.6.



Details - Microsoft Internet Explorer

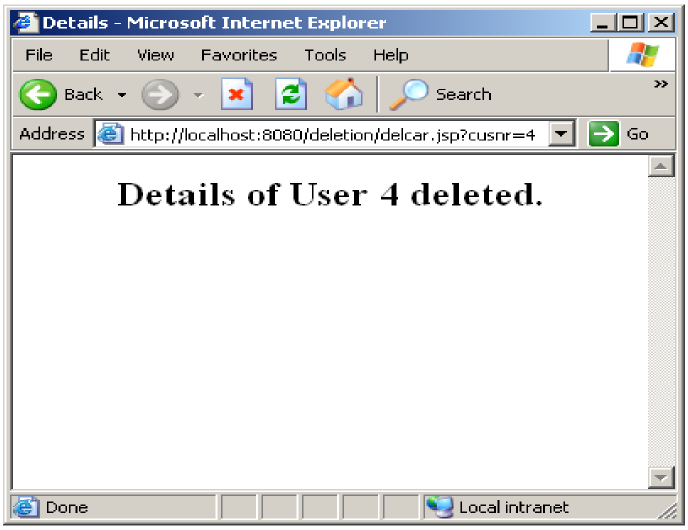
Address http://localhost:8080/deletion/delete.jsp

Details

CusNr	First Name	Last Name	Email	Delete
1	Dennis	Khristi	dennis@aol.com	Delete
2	Kris	Jones	kris@aol.com	Delete
3	Jeny	Macuire	jeny@hotmail.com	Delete

Figure 14.6: User Details in Database

When the user clicks on Delete button for any detail, the corresponding user detail will be deleted from the database, and a message will be displayed to the user, as shown in Figure 14.7.



Details - Microsoft Internet Explorer

Address http://localhost:8080/deletion/delcar.jsp?cusnr=4

Details of User 4 deleted.

Figure 14.7: Deletion Message

4. Lab Guide 08: Creating Web Applications

1. Write a program to add a link requesting for a bank chequebook. Extend example 3 to add a link to the welcome page. A page should be created to display to the user that the request for the chequebook has been placed.

Solution:

```
   The files used to run the application are:

   1. home.jsp
   2. chq.jsp
   3. acclosure.jsp
   4. MainServlet.java
```

```
<html>
   <head>
      <title> Home </title>
   </head>
   <body>
      <%
      String userName = (String)session.getAttribute("UserName");
      %>
      <h3 align ='center'>Welcome <%=userName%> </h3>

      While you are at the home page of MARKO Bank, please select
      any of the options given below<br>
      <br><br>
      <a href="redirecterServlet?action=Withdrawal">Withdrawal<a>
      <br>
      <a href="redirecterServlet?action=deposit">Deposit<a><br>
      <a href="redirecterServlet?action=chq">Request for cheque
      book</a>
      <br>
   </body>
```

```
</html>
```

Update the home.jsp page with hyperlinks for requesting the chequebook and account closure. Save the file in `%TOMCAT_HOME%/webapps/Application`.

```
<html>
   <head>
   <title> checque </title>
   </head>
   <body>
      <%
         String userName = (String)session.getAttribute("UserName");
         java.util.Date date = new java.util.Date();
         try
         {
            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
            java.sql.Connection connection =
            java.sql.DriverManager.getConnection("jdbc:odbc:userdb
            ");
            java.sql.Statement statement =
            connection.createStatement();
            String query_car = "update userdetails set ChqStatus =
            'Requested for checque on" + date.toString() + "'
            where UserName = '" + userName + "'" ;
            statement.execute(query_car);
         }
         catch(Exception e)
         {
            e.printStackTrace();
```

```
        }

     %>

     <h1 align='center'>Your Request is Recorded on
<%=date.toString()%>...</h1>

     <br><br>

     <a href="redirecterServlet?action=home">Marko Home</a><br>

     <a href="redirecterServlet?action=Withdrawal">Withdrawal<a>

     <br>

     <a href="redirecterServlet?action=deposit">Deposit<a>

     <br>

   </body>

   </html>
```

Enter the code in Notepad and save the file as chq.jsp in `%TOMCAT_HOME%/webapps/ Application.`

```
package MARKO;


import java.io.*;

import javax.servlet.*;

import javax.servlet.http.*;




public class MainServlet extends HttpServlet

{

   public void doPost(HttpServletRequest request,

   HttpServletResponse response) throws ServletException,

   IOException {doGet(request,response);

}
```

```
public void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException
{
   PrintWriter out = response.getWriter();
   response.setContentType("text/html");
   String action;
   HttpSession ses = request.getSession(true);
   action = request.getParameter("action");
   if (action == null)
   {
      return;
   }
   else if (action.equals("home"))
   {
      RequestDispatcher dis =
      request.getRequestDispatcher("/home.jsp");
      dis.include(request, response);
   }
   else if (action.equals("chq"))
   {
      RequestDispatcher dis =
      request.getRequestDispatcher("/chq.jsp");
      dis.include(request, response);
   }
   else if (action.equals("Withdrawal"))
   {
      RequestDispatcher dis =
      request.getRequestDispatcher("/Withdrawal.jsp");
      dis.include(request, response);
   }
   else if (action.equals("deposit"))
   {
      RequestDispatcher dis =
      request.getRequestDispatcher("/deposit.jsp");
      dis.include(request, response);
   }
   else
   {
      out.println("Error in Accessing the Site");
   }
   out.close();
   }
}
```

Update the MainServlet.java page to redirect the request to the new chequebook page. Save the file in `%TOMCAT_HOME%/webapps/Application`.

Do It Yourself

1. Write a program to add a link requesting for an Account closure. Extend example 3 to add a link to the welcome page. A page should be created to display to the user that the request for the Account closure has been placed.

Solution:

```
   The files used to run the application are:

   1. home.jsp
   2. acclosure.jsp
   3. MainServlet.java
```

```
<html>

   <head>

   <title> home </title>

   </head>

   <body>

      <%

         String userName = (String)session.getAttribute("UserName");

      %>

      <h3 align ='center'>Welcome <%=userName%> </h3>


      While you are at the home page of MARKO Bank, please select

      any of the option given below<br>

      <br><br>

      <a href="redirecterServlet?action=Withdrawal">Withdrawal<a>

      <br>

      <a href="redirecterServlet?action=deposit">Deposit<a>

      <br>
      <a href="redirecterServlet?action=chq">Request for cheque
      book</a>
      <br>
      <a href="redirecterServlet?action=acclosure">Request for
      Account Closure</a>
      <br>
   </body>
</html>
```

Update the home.jsp page with hyperlinks for requesting the chequebook and account closure. Save the file in `%TOMCAT_HOME%/webapps/Application`.

```
<html>
   <head>
   <title> Account Closure </title>
   </head>
   <body>

   <%
   String userName = (String)session.getAttribute("UserName");
   java.util.Date d = new java.util.Date();

   try
      {
         Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
         java.sql.Connection connection =
         java.sql.DriverManager.getConnection("jdbc:odbc:userdb");
         java.sql.Statement statement =
         connection.createStatement();
```

```
        String query_car = "update userdetails set ClosureStatus

        ChqStatus= 'Requested for Account Closure on" +

        d.toString() + "' where UserName = '" + userName + "'" ;

        statement.execute(query_car);

      }

        catch(Exception e)

        {

           e.printStackTrace();

        }

   %>

   <h1 align='center'>Your Request is Recorded on
<%=d.toString()%>...</h1>

   <br><br>

   <a href="redirecterServlet?action=home">Marko Home</a><br>

   <a href="redirecterServlet?action=Withdrawal">Withdrawal<a><br>

   <a href="redirecterServlet?action=deposit">Deposit<a><br>

   <a href="redirecterServlet?action=chq">Request for cheque
book</a><br>

   </body>

</html>
```

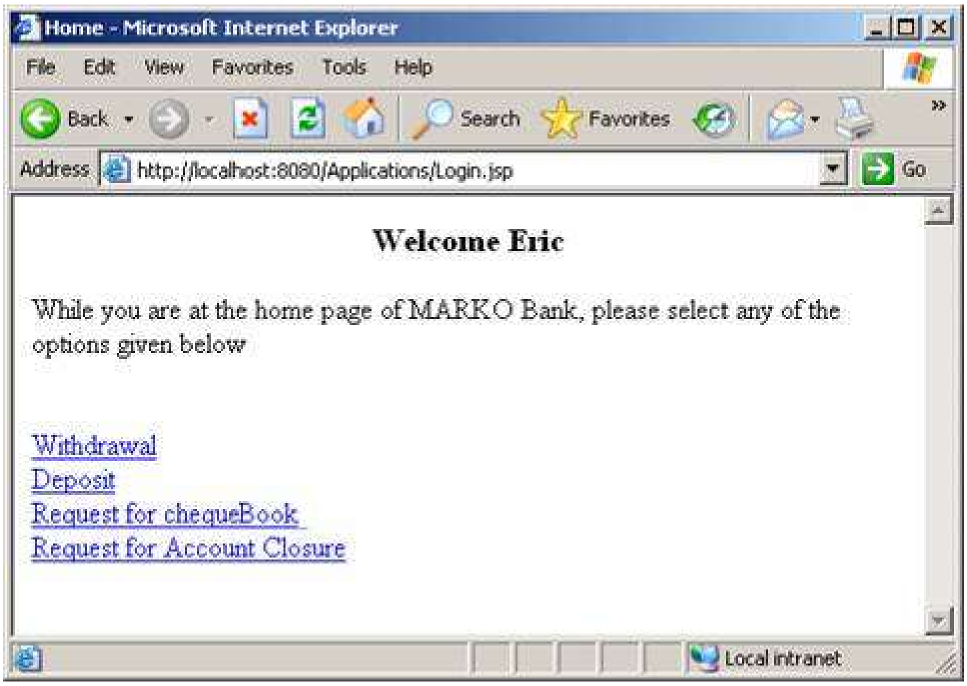
Enter the code in Notepad and save the file as acclosure.jsp in `%TOMCAT_HOME%/webapps/ Application.`

```
package MARKO;



import java.io.*;

import javax.servlet.*;

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

```
public class MainServlet extends HttpServlet

{

   public void doPost(HttpServletRequest request,

   HttpServletResponse response) throws ServletException,

   IOException {doGet(request,response);

}

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

   {


      PrintWriter out = response.getWriter();

      response.setContentType("text/html");

      String action;

      HttpSession ses = request.getSession(true);

      action = request.getParameter("action");

      if (action == null)

      {

         return;

      }

      else if (action.equals("home"))

      {

         RequestDispatcher dis =

         request.getRequestDispatcher("/home.jsp");

         dis.include(request, response);

      }

      else if (action.equals("chq"))

      {

         RequestDispatcher dis =
         request.getRequestDispatcher("/chq.jsp");
         dis.include(request, response);
      }
      else if (action.equals("acclosure"))
      {
         RequestDispatcher dis =
         request.getRequestDispatcher("/acclosure.jsp");
         dis.include(request, response);
      }
      else if (action.equals("Withdrawal"))
      {
         RequestDispatcher dis =
         request.getRequestDispatcher("/Withdrawal.jsp");
         //Withdrawal.jsp is created in LG
         dis.include(request, response);
      }
      else if (action.equals("deposit"))
      {
         RequestDispatcher dis =
         request.getRequestDispatcher("/deposit.jsp");
         //deposit.jsp is created in LG
         dis.include(request, response);
      }
      else
      {
         out.println("Error in Accessing the Site");
      }
      out.close();
      }
      }
```

Update the MainServlet.java page, to redirect the request to the new chequebook page. Save the file in `%TOMCAT_HOME%/webapps/Application`.

The output of the program is as shown in the Figure 15.1.


Home - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/Applications/Login.jsp
Go
Local intranet

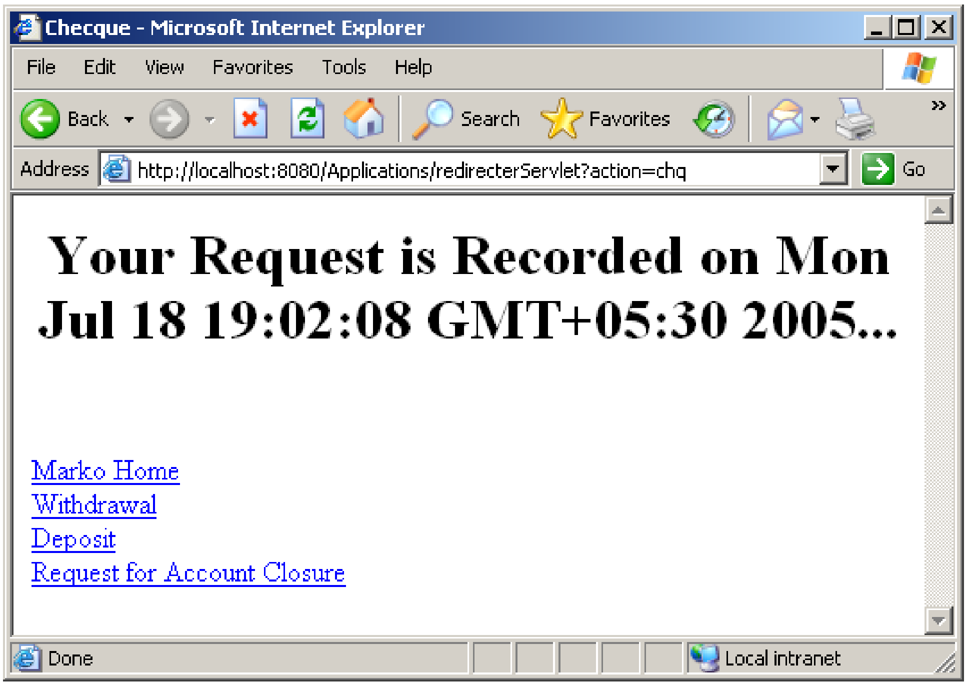
Welcome Eric

While you are at the home page of MARKO Bank, please select any of the options given below

Withdrawal
Deposit
Request for chequeBook
Request for Account Closure

Figure 15.1: Welcome Page

The output of the user request for the new chequebook is shown in Figure 15.2.

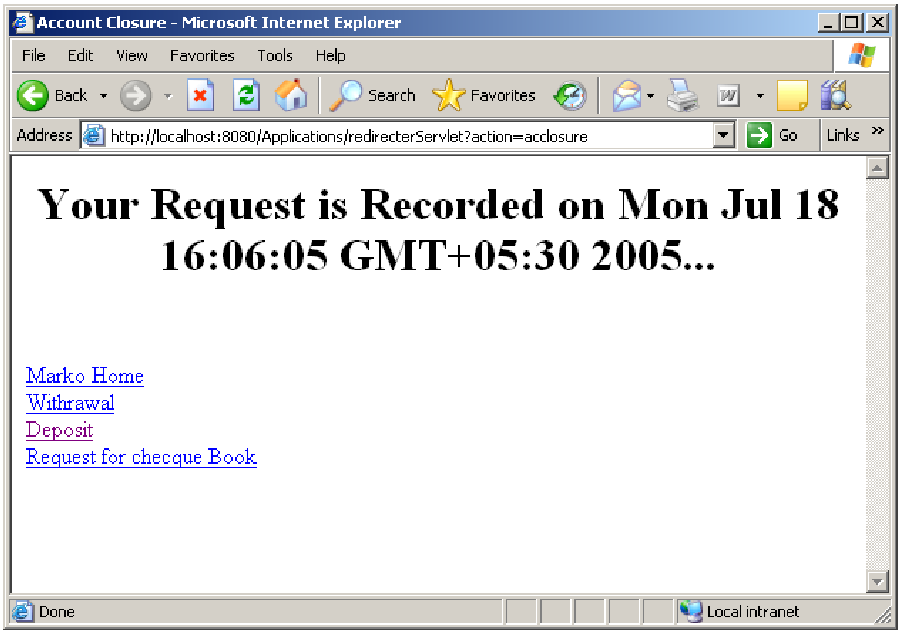

Checque - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/Applications/redirecterServlet?action=chq
Go
Done
Local intranet

Your Request is Recorded on Mon Jul 18 19:02:08 GMT+05:30 2005...

Marko Home
Withdrawal
Deposit
Request for Account Closure

Figure 15.2: Request ChequeBook Screen

The output of the user request for the account closure is shown in Figure 15.3.


Account Closure - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:8080/Applications/redirecterServlet?action=acclosure
Go Links
Done
Local intranet

Your Request is Recorded on Mon Jul 18 16:06:05 GMT+05:30 2005...

Marko Home
Withrawal
Deposit
Request for checque Book

Figure 15.3: Request Account Closure Screen