SERVLET CHAINING

Index.html

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<form method=*"get"* action =*"S1"*>

<input type=*"text"* name=*"name"*/>

<input type=*"submit"* value=*"Send Request"*/>

</form>

</body>

</html>

Create new servlets s1 and s2

package com.verizon.day5;

import java.io.IOException;

import java.io.PrintWriter;

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("/S1")

public class S1 extends HttpServlet {

private static final long serialVersionUID = 1L;

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

PrintWriter out=response.getWriter();

out.println("hello from s1");

response.sendRedirect("S2");

}

}

**package** com.verizon.day5;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**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("/S2")

**public** **class** S2 **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

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

PrintWriter out=response.getWriter();

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

out.println("hello from s2"+ name);

}

}

Op:

Hello from s2 null

For include:

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<form method=*"get"* action =*"S1"*>

<input type=*"text"* name=*"name"*/>

<input type=*"submit"* value=*"Send Request"*/>

</form>

</body>

</html>

package com.verizon.day5;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

import javax.servlet.RequestDispatcher;

import javax.servlet.ServletConfig;

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("/S1")

public class S1 extends HttpServlet {

private static final long serialVersionUID = 1L;

Connection con;

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

PrintWriter out=response.getWriter();

out.println("hello from s1");

// response.sendRedirect("S2");

RequestDispatcher rd=request.getRequestDispatcher("S2");

rd.include(request, response);

}

@Override

public void init(ServletConfig config) throws ServletException {

try {

Class.forName("oracle.jdbc.driver.OracleDriver");

con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl","hr","Admin");

} catch (ClassNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

**package** com.verizon.day5;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**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("/S2")

**public** **class** S2 **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

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

PrintWriter out=response.getWriter();

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

out.println("hello from s2"+ name);

}

}

Op:

hello from s1

hello from s2krithi

**forward**

**one** change**:**

rd.forward(request,response);

Op:

hello from s2sammy

CHANGES IN LOGIN SERVLET:

package com.verizon.servlets.day4;

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import javax.servlet.ServletConfig;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

public class LoginServelet extends HttpServlet {

private static final long serialVersionUID = 1L;

Connection con;

String title;

public void init(ServletConfig config) throws ServletException {

try {

String driver=config.getInitParameter("driver");

String url=config.getInitParameter("url");

String username=config.getInitParameter("username");

String password=config.getInitParameter("password");

title=config.getServletContext().getInitParameter("companytitle");

Class.forName(driver);

con=DriverManager.getConnection(url,username,password);

} catch (ClassNotFoundException e) {

// TODO Auto-generated catch block

e.printStackTrace();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

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

response.setContentType("text/html");

PrintWriter out=response.getWriter();

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

String PASSWORD= request.getParameter("pass");

try {

PreparedStatement pst=con.prepareStatement("select \* from USERS where USERNAME=? and PASSWORD=?");

pst.setString(1, USERNAME);

pst.setString(2, PASSWORD);

ResultSet rs=pst.executeQuery();

if(rs.next())

{

// out.println("<h1 style=color:green> Vanakkam to " +title + ": " + USERNAME + " </h1>");

response.sendRedirect("Welcome.html");

}

else{

// out.println("<h1 style=color:green>Sorry Invalid username </h1>");

response.sendRedirect("Error.html");

}

rs.close();

pst.close();

} catch (SQLException e) {

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<p> Enter valid credentials </p>

</body>

</html>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<p> Welcome user </p>

</body>

</html>

OP:

Welcome user

REQUEST ATTRIBUTE:

CREATING A BILL

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Sale Sale Sale !</title>

</head>

<body>

<H1>Shop till you drop</H1>

<form method=*"post"* action=*"BillServlet"*>

Books<select name= *"books"* multiple=*"multiple"*>

<option value=*"twilight"*>The twilight Saga </option>

<option value=*"inferno"*>Inferno</option>

<option value=*"lovestory"*>love story</option>

<option value=*"kiterunner"*>kite runner</option>

</select>

series <select name= *"series"* multiple=*"multiple"*>

<option value=*"friends"*>friends </option>

<option value=*"arrow"*>arrow</option>

<option value=*"bigbang"*>bigbang</option>

<option value=*"howimym"*>how i metym</option>

</select>

<input type=*"submit"* value=*"Buy Items"*/>

</form>

</body>

</html>

BILL SERVLET

**package** com.verizon.day5;

**import** java.io.IOException;

**import** java.util.HashMap;

**import** java.util.Map;

**import** javax.servlet.RequestDispatcher;

**import** javax.servlet.ServletConfig;

**import** javax.servlet.ServletException;

**import** javax.servlet.annotation.WebServlet;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

//version 3 includes annotation

@WebServlet("/BillServlet")

**public** **class** BillServlet **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

Map<String,Integer> items=**new** HashMap<>();

// all users use the same map,it's an instance variable

**public** BillServlet() {

**super**();

}

@Override

**public** **void** init(ServletConfig config) **throws** ServletException {

**super**.init(config);

items.put("twilight",300);

items.put("inferno",300);

items.put("lovestory",300);

items.put("kiterunner",300);

items.put("friends",300);

items.put("arrow",300);

items.put("bigbang",300);

items.put("howimym",300);

}

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

String bookList[]=request.getParameterValues("books");

String seriesList[]=request.getParameterValues("series");

**int** bookBill=0;

**int** seriesBill=0;

**for** (String book: bookList)

{

bookBill+=items.get(book);

}

**for** (String series: seriesList)

{

seriesBill+=items.get(series);

}

// to make data available for the next servlet

request.setAttribute("bookBill", bookBill);

request.setAttribute("seriesBill", seriesBill);

RequestDispatcher rd=request.getRequestDispatcher("DiscountServlet");

rd.forward(request,response);

}

}

DISCOUNT SERVLET

**package** com.verizon.day5;

**import** java.io.IOException;

**import** javax.servlet.RequestDispatcher;

**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("/DiscountServlet")

**public** **class** DiscountServlet **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

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

**int** totalBookBill=(**int**) request.getAttribute("bookBill");

// return type og get attribute method is object ,so casting is done

**int** totalSeriesBill=(**int**) request.getAttribute("seriesBill");

**double** bookDiscount=totalBookBill\*0.30;

**double** seriesDiscount=totalSeriesBill\*0.50;

request.setAttribute("bDiscount", bookDiscount);

request.setAttribute("sDiscount", seriesDiscount);

RequestDispatcher rd=request.getRequestDispatcher("TaxServlet");

rd.forward(request,response);

}

}

TAX SERVLET

package com.verizon.day5;

import java.io.IOException;

import java.io.PrintWriter;

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("/TaxServlet")

public class TaxServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

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

PrintWriter out=response.getWriter();

String bookselected[]=request.getParameterValues("books");

String seriesselected[]=request.getParameterValues("series");

int bookBillAmt=(int) request.getAttribute("bookBill");

int seriesBillAmt=(int) request.getAttribute("seriesBill");

double bookDiscount=(double) request.getAttribute("bDiscount");

double seriesDiscount=(double) request.getAttribute("sDiscount");

double totalBookBill=bookBillAmt-bookDiscount;

double totalSeriesBill=seriesBillAmt-seriesDiscount;

double grossBill=totalBookBill+totalSeriesBill;

double tax=grossBill\*0.1;

double finalBill=grossBill+tax;

out.println("<html> <body bgcolor=pink>");

out.println("<h1> thank you for shopping with us </h1>");

out.println( "<h2>the items you purchased are </h2> <ul> ");

for (String b :bookselected)

out.println("<li>" + b + "</li>");

out.println("</ul> </br> <ul> series ");

for (String s :seriesselected)

out.println("<li>" + s + "</li>");

out.println("</ul> </br> ");

out.println("total book bill" + bookBillAmt);

out.println(" <br> total series bill" + seriesBillAmt);

out.println(" <br> discount on books" + bookDiscount);

out.println(" <br> discount on series" + seriesDiscount);

out.println(" <br> Tax Applicable" + tax);

out.println(" <br> Final Amount Payable" + finalBill);

}

}

OUTPUT:

**thank you for shopping with us**

**the items you purchased are**

* twilight
* inferno
* lovestory
* kiterunner

series

* friends
* arrow
* bigbang
* howimym

total book bill1200   
total series bill1200   
discount on books360.0   
discount on series600.0   
Tax Applicable144.0   
Final Amount Payable1584.0

**JSP**

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<!--declaration tag-->

<%! **int** x=10;

**public** **int** add(**int** n1,**int** n2)

{

**return** n1+n2;

}

%>

<!--scriptlet tag-->

this is the output of the scriplet tag <br>

<%

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

out.println(i+1 + "<br/>");

**int** result=add(5,5);

out.println("the result of add(5,5) is :" +result + "<br>");

%>

this is the output of the expression tag<br>

<%= "the result of add(10,29) : " + add(10,29) %>

</body>

</html>

this is the output of the scriplet tag   
1  
2  
3  
4  
5  
the result of add(5,5) is :10  
this is the output of the expression tag  
the result of add(10,29) : 39

**multiple imports are allowed**

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"* import=*"java.util.\*"* %>

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

<%

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

out.println(i+1 + "<br/>");

**int** result=add(5,5);

out.println("the result of add(5,5) is :" +result + "<br>");

out.println(**new** java.util.Date());

%>

ASSIGNMENT

LOGIN.JSP

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<form action=*"LoginServlet"* method=*"post"* >

username <input type=*"text"* name=*"uname"*/>

password <input type=*"password"* name=*"pass"*/>

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

</form>

</body>

</html>

LOGIN SERVLET

package com.verizon.day5.servlets;

import java.io.IOException;

import javax.servlet.RequestDispatcher;

import javax.servlet.ServletConfig;

import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import javax.servlet.http.HttpSession;

import com.verizon.day5.DAO.BankCustomerDAO;

import com.verizon.day5.model.BankCustomer;

import com.verizon.day5.model.User;

import java.util.List;

@WebServlet("/LoginServlet")

public class LoginServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

BankCustomerDAO dao;

@Override

public void init(ServletConfig config) throws ServletException {

dao=new BankCustomerDAO();

}

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

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

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

HttpSession session=request.getSession();

try {

User user=dao.validateUser(uname, pass);

if(user!=null)

{

session.setAttribute("user", user);

if(user.getRole().equals("S"))

{

List<BankCustomer> allCust=dao.getAllCustomers();

session.setAttribute("allCustomers", allCust);

RequestDispatcher rd=request.getRequestDispatcher("Transact.jsp");

rd.forward(request, response);

}

}

} catch (Exception e) {

// TODO: handle exception

}

}

}

**Transact.jsp**

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"com.verizon.day5.model.\*,java.util.\*"* %>

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">

<html>

<head>

<meta http-equiv=*"Content-Type"* content=*"text/html; charset=ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body bgcolor=*"pink"*>

<% User u=(User)session.getAttribute("user");

List<BankCustomer> customers=(List<BankCustomer>)session.getAttribute("allCustomers");

%>

<h1>Welcome <%= u.getUsername() %></h1>

<table border=*"2"* >

<tr>

<th>CustomerId </th>

<th>customer name </th>

<th>account number </th>

<th> balance </th>

</tr>

<%

**for** (BankCustomer bc:customers)

{

%>

<tr>

<td><%=bc.getCustId() %></td>

<td><%=bc.getCustName() %></td>

<td><%=bc.getAccNo() %></td>

<td><%=bc.getBalance() %></td>

</tr>

<%} %>

</table>

</body>

</html>

Bank customer

**package** com.verizon.day5.model;

**public** **class** BankCustomer {

**int** custId;

String custName;

**int** accNo;

**double** Balance;

**public** **int** getCustId() {

**return** custId;

}

**public** **void** setCustId(**int** custId) {

**this**.custId = custId;

}

**public** String getCustName() {

**return** custName;

}

**public** **void** setCustName(String custName) {

**this**.custName = custName;

}

**public** **int** getAccNo() {

**return** accNo;

}

**public** **void** setAccNo(**int** accNo) {

**this**.accNo = accNo;

}

**public** **double** getBalance() {

**return** Balance;

}

**public** **void** setBalance(**double** balance) {

Balance = balance;

}

**public** BankCustomer(**int** custId, String custName, **int** accNo, **double** balance) {

**super**();

**this**.custId = custId;

**this**.custName = custName;

**this**.accNo = accNo;

Balance = balance;

}

**public** BankCustomer() {

**super**();

}

}

BANK CUSTOMERDAO

package com.verizon.day5.DAO;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.util.ArrayList;

import java.util.List;

import com.verizon.day5.model.BankCustomer;

import com.verizon.day5.model.User;

public class BankCustomerDAO {

Connection con;

public BankCustomerDAO() {

try {

Class.forName("oracle.jdbc.driver.OracleDriver");

con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl","hr","Admin");

} catch (ClassNotFoundException e) {

e.printStackTrace();

} catch (SQLException e) {

e.printStackTrace();

}

}

public List<BankCustomer> getAllCustomers()

{

try{

PreparedStatement pst=con.prepareStatement("select \* from bankcustomer");

ResultSet rs=pst.executeQuery();

List<BankCustomer> bcList =new ArrayList<>();

while(rs.next())

{

BankCustomer bc=new BankCustomer();

bc.setCustId(rs.getInt(1));

bc.setCustName(rs.getString(2));

bc.setAccNo(rs.getInt(3));

bc.setBalance(rs.getDouble(4));

bcList.add(bc);

}

return bcList;

}

catch (SQLException e) {

e.printStackTrace();

}

return null;

}

public BankCustomer getCustomerDetails(int accNo)

{

try{

PreparedStatement pst =con.prepareStatement("select \* from bankcustomer where accNo=?");

pst.setInt(1, accNo);

ResultSet rs=pst.executeQuery();

BankCustomer bc=new BankCustomer();

if(rs.next())

{

bc.setCustId(rs.getInt(1));

bc.setCustName(rs.getString(2));

bc.setAccNo(rs.getInt(3));

bc.setBalance(rs.getDouble(4));

}

return bc;

}

catch (SQLException e) {

e.printStackTrace();

}

return null;

}

public boolean withdraw(int accno ,double amt) throws Exception{

try{

BankCustomer b1=getCustomerDetails(accno);

if(b1.getBalance() >amt)

{

PreparedStatement pst=con.prepareStatement("update bankcustomer set balance=balance-? where accno=?");

pst.setDouble(1,amt);

pst.setInt(2, accno);

int rows=pst.executeUpdate();

if(rows>0)

return true; else

{

throw new Exception("Insufficient balance for withdrawal");

}

}

}

catch (SQLException e) {

e.printStackTrace();

}

return false;

}

public boolean deposit(int accno ,double amt){

try{

BankCustomer b1=getCustomerDetails(accno);

PreparedStatement pst=con.prepareStatement("update bankcustomer set balance=balance+? where accno=?");

pst.setDouble(1,amt);

pst.setInt(2, accno);

int rows=pst.executeUpdate();

if(rows>0)

return true;

}

catch (SQLException e) {

e.printStackTrace();

}

return false;

}

public User validateUser(String username,String password) throws Exception

{

try {

PreparedStatement pst =con.prepareStatement("select \* from USERS where username=? and password=?");

pst.setString(1,username);

pst.setString(2,password);

ResultSet rs=pst.executeQuery();

User u =new User();

if(rs.next())

{

u.setUsername(rs.getString(1));

u.setPassword(rs.getString(2));

u.setRole(rs.getString(3));

return u;

}

else {

throw new Exception ("invalid username or password");

}

}

catch ( SQLException e) {

e.printStackTrace();

}

return null;

}

}

USER

**package** com.verizon.day5.model;

**public** **class** User {

String username;

String password;

String role;

**public** String getUsername() {

**return** username;

}

**public** **void** setUsername(String username) {

**this**.username = username;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getRole() {

**return** role;

}

**public** **void** setRole(String role) {

**this**.role = role;

}

**public** User(String username, String password, String role) {

**super**();

**this**.username = username;

**this**.password = password;

**this**.role = role;

}

**public** User() {

**super**();

}

}