1. **Request dispatcher using forward mechanism…….**

**This application takes the salary from the user, increments the salary by 35% and finally displays the incremented salary to the end user.**

1. **Create an html file “salary.html” with a text field which takes basic salary from end user. Also create a submit button. In <form> tag give action value as “./source”.**
2. **Create two servlets by name “SourceServlet” and “TargetServlet” which extends HttpServlet.**
3. **Now override the doGet() method in “SourceServlet” as follows:**
4. **Get the value of the text field from the html form and parse the value into integer as the getParameter() method returns the value as string. Increment the value by 35%.**
5. **Set the salary value in request scope using setAttribute() method of request object as follows:**

**request.setAttribute(“value”, salary); where salary is the incremented slary.**

1. **Then get the “RequestDispatcher” object using getRequestDispatcher() method by passing the string which takes path of the second servlet as follows:**

**RequestDispatcher rd=getRequestDispatcher(“/target”);**

**Then forward the request to the other servlet using forward() method.**

1. **Now in “TargetServlet”, get the value of the incremented salary using get attribute method as follows:**

**request.getAttribute(“value”);**

**Then set the content type as MIME and display the value on the browser using writer object. Handle the exceptions properly.**

1. **Now create a deployment descriptor as follows:**
2. **Register the “SourceServlet” with the web container by giving the public url name as “/source”. Also register the “TargetServlet” with public url name as “/target”. Also make the “salary.html” as home page of the application using<welcome-file-list> tag.**
3. **Compile both the servlets, create the root folder with name “forwardapplication” , and place the respective source files in the respective folders. Finally, copy the root folder into webapps folder of the tomcat, start the server and type the following url into address bar of the browser:**

[**http://localhost:8081/forwardappliation**](http://localhost:8081/forwardappliation)

**Solution:**

**Salary.html**

**<html>**

**<body bgcolor=*'cyan'*>**

**<form action=*'./first'* method=*'get'*>**

**Name :<input type=*'text'* name=*'name'* ><br>**

**Salary :<input type=*'text'* name=*'salary'* ><br>**

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

**</form>**

**</body>**

**</html>**

**Source.java**

**import java.io.IOException;**

**import java.io.PrintWriter;**

**import javax.servlet.RequestDispatcher;**

**import javax.servlet.ServletException;**

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

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

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

**public class Source extends HttpServlet {**

**@Override**

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

**response.setContentType("text/html");**

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

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

**int salary =(Integer.parseInt(request.getParameter("salary")));**

**request.setAttribute("name", name);**

**request.setAttribute("salary", salary);**

**RequestDispatcher rd=request.getRequestDispatcher("./last");**

**rd.forward(request, response);**

**}**

**}**

**Target.java**

**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;**

**public class Target extends HttpServlet{**

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

**response.setContentType("text/html");**

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

**String name=(String) request.getAttribute("name");**

**int sal=(int) request.getAttribute("salary");**

**Double incsal=sal+sal\*0.35;**

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

**out.println("<body bgcolor='yellow'><h2>");**

**out.println(name+" increment salary is:"+incsal);**

**out.println("</h2></body>");**

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

**}**

**}**

**Web.xml**

**<web-app>**

**<servlet>**

**<servlet-class>Source</servlet-class>**

**<servlet-name>first</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>first</servlet-name>**

**<url-pattern>/first</url-pattern>**

**</servlet-mapping>**

**<servlet>**

**<servlet-class>Target</servlet-class>**

**<servlet-name>last</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>last</servlet-name>**

**<url-pattern>/last</url-pattern>**

**</servlet-mapping>**

**<welcome-file-list>**

**<welcome-file>salary.html</welcome-file>**

**</welcome-file-list>**

**</web-app>**

1. **Request dispatcher using include mechanism…….**

**Modify the previous application so as to implement it using include mechanism of request dispatcher. In this application increment the salary twice by 20% each time.**

1. **Salary.html and web.xml remains the same for this application as well.**
2. **In “SourceServlet”, increment the salary by 20%, set the value in request scope and send the control to “TargetServlet” using include() method of RequestDispatcher.**
3. **Now in “TargetServlet “, get the incremented salary from request scope, again increase the salary by 20% and again set the incremented salary value in request scope.**
4. **Now in “SourceServlet”, get the value from request scope and finally display the salary value.**

**Solution:**

**Salary.html**

**<html>**

**<body bgcolor=*'cyan'*>**

**<form action=*'./first'* method=*'get'*>**

**<h2>Welcome to Increment salary Application </h2>**

**Name :<input type=*'text'* name=*'name'* required ><br><br>**

**Salary :<input type=*'text'* name=*'salary'* required><br><br>**

**<input type=*'submit'* name=*'submit'* value=*'increment salary'*>**

**</form>**

**</body>**

**</html>**

**Source:**

**import java.io.IOException;**

**import java.io.PrintWriter;**

**import javax.servlet.RequestDispatcher;**

**import javax.servlet.ServletException;**

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

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

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

**public class Source extends HttpServlet {**

**double incsal2;**

**@Override**

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

**response.setContentType("text/html");**

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

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

**int salary=Integer.parseInt(request.getParameter("salary"));**

**double incsal=salary\*0.20+salary;**

**request.setAttribute("incsal", incsal);**

**RequestDispatcher rd=request.getRequestDispatcher("./last");**

**rd.include(request, response);**

**incsal2=(double) request.getAttribute("key");**

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

**out.println("<body bgcolor='yellow'><h2>");**

**out.println(name+" your increment salary is:"+incsal2);**

**out.println("</h2></body>");**

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

**}**

**}**

**Target:-**

**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;**

**public class Target extends HttpServlet{**

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

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

**response.setContentType("text/html");**

**Double incsal1=(Double) request.getAttribute("incsal");**

**double incsal2=incsal1+incsal1\*0.20;**

**request.setAttribute("key", incsal2);**

**out.println("<h2> Response from Target Servlet</h2>");**

**}**

**}**

**Web.xml:**

**<web-app>**

**<servlet>**

**<servlet-class>Source</servlet-class>**

**<servlet-name>first</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>first</servlet-name>**

**<url-pattern>/first</url-pattern>**

**</servlet-mapping>**

**<servlet>**

**<servlet-class>Target</servlet-class>**

**<servlet-name>last</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>last</servlet-name>**

**<url-pattern>/last</url-pattern>**

**</servlet-mapping>**

**<welcome-file-list>**

**<welcome-file>salary.html</welcome-file>**

**</welcome-file-list>**

**</web-app>**

1. **Passing dynamic values to servlet using Init parameters……………**

**Before running this application, create a table by name “account” in database with columns as account number, name and balance.**

1. **Create an html form by name ”account.html” with three text fields account number, name and balance. In <form> tag, method type should be post and action value should be url-pattern name of the servlet.**
2. **Create “success.html” and display some account success message.**
3. **Create “failure.html” and display some account failure message.**
4. **Inside <servlet> tag of a web.xml implement as follows:**

**<init-param>**

**< param-name>driver</param-name>**

**<param-value>oracle.jdbc.driver.OracleDriver</param-value>**

**</init-param>**

**Similarly, write three more tags for connection string, user name and password.**

**Make “account.html” as home page of the application.**

1. **Create a servlet by name “AccountOpeningServlet” which extends HttpServlet.**
2. **In init method, get the values of driver class, connection string, user name, password using getInitParameter() method using config object. Now create a prepared statement object which inserts values into account table.**
3. **In doPost() method, get the account number, name and balance from html form and set the values for place holders and execute the prepared statement.**
4. **If it is successful, then redirect the page to “success.html” as follows:**

**response.sendRedirect(“success.html”);**

1. **If it is failure, then redirect the page to “failure.html”. Handle the exceptions properly and deploy the application.**

**Solution:**

**Account.html**

**<html>**

**<head>**

**<body bgcolor=*'yellow'*>**

**<form action=*"./as "* method=*"post"*>**

**<h2>Welcome to Account Opening Form</h2>**

**<pre>**

**Enter Account Number:<input type=*'text'* name=*'account'* required /><br>**

**Enter Name :<input type=*'text'* name=*'name'* required /><br>**

**Enter Balance :<input type=*'text'* name=*'balance'* required/><br>**

**<input type=*'submit'* value=*'click'* />**

**</pre>**

**</form>**

**</body>**

**</head>**

**</html>**

**AccountOpening.java**

**import java.io.IOException;**

**import java.io.PrintWriter;**

**import java.sql.Connection;**

**import java.sql.DriverManager;**

**import java.sql.PreparedStatement;**

**import java.sql.SQLException;**

**import javax.servlet.ServletConfig;**

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

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

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

**public class AccountOpeningServlet extends HttpServlet {**

**String driver;**

**String url;**

**Connection con;**

**PreparedStatement ps;**

**public void init(ServletConfig sc) {**

**driver=sc.getInitParameter("driver");**

**url=sc.getInitParameter("url");**

**try {**

**Class.*forName*(driver);**

**con=DriverManager.*getConnection*(url);**

**ps=con.prepareStatement("insert into accounts values(?,?,?)");**

**} catch (ClassNotFoundException e) {**

**System.*out*.println("=================");**

**e.printStackTrace();**

**} catch (SQLException e) {**

**System.*out*.println("=================");**

**e.printStackTrace();**

**}**

**}**

**int accnum;**

**int bal;**

**String name;**

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

**accnum=Integer.*parseInt*(request.getParameter("account"));**

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

**bal=Integer.*parseInt*(request.getParameter("balance"));**

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

**response.setContentType("text/html");**

**try {**

**ps.setInt(1, accnum);**

**ps.setString(2, name);**

**ps.setInt(3, bal);**

**int s=ps.executeUpdate();**

**System.*out*.println(s+" records updated succesfully");**

**if(s==1) {**

**response.sendRedirect("succes.html");**

**} else {**

**response.sendRedirect("failure.html");**

**}**

**} catch (SQLException e) {**

**System.*out*.println("====================");**

**e.printStackTrace();**

**}**

**}**

**}**

**Succes.html**

**<html>**

**<head>**

**<body bgcolor=*'cyan'*>**

**<h2>Your account is open Succesfully</h2>**

**</body>**

**</head>**

**</html>**

**failure.html**

**<html>**

**<head>**

**<body bgcolor=*'cyan'*>**

**<h2>Your account is not open </h2>**

**<h2>Sorry Try Again.............</h2>**

**</body>**

**</head>**

**</html>**

**Web.xml:-**

**<web-app>**

**<servlet>**

**<servlet-class> AccountOpeningServlet </servlet-class>**

**<servlet-name>as</servlet-name>**

**<init-param>**

**<param-name>driver</param-name>**

**<param-value>oracle.jdbc.driver.OracleDriver</param-value>**

**</init-param>**

**<init-param>**

**<param-name>url</param-name>**

**<param-value>jdbc:oracle:thin:system/raju@localhost:1522:orcl</param-value>**

**</init-param>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>as</servlet-name>**

**<url-pattern>/as</url-pattern>**

**</servlet-mapping>**

**<welcome-file-list>**

**<welcome-file>account.html</welcome-file>**

**</welcome-file-list>**

**</web-app>**