* **User registration using servlet ………..**
* **Create a *“tbl\_registration“*table with columns *“username”*,*“ password”*and *“emaild*” in database.**
* **Create an html file *“register.html”*having a form with three text boxes for username, password, email id and one submit button.**
* **Now create a class *“RegistrationServlet”* which implements Servlet interface.**
* **Inside this class override all five methods of Servlet interface.**
* **Now in init method, load the driver class and get the connection object.**
* **In service method, get the three request parameter values(username, password and emailId) using getParameter() method of request object and store in some string variables.**
* **Create a insert query which inserts record into registration table.**

***Eg: String insertQuery = “insert into registration values(?, ?, ?)”;***

* **Now create *PreparedStatement* object using above insert query and set the respective values for the place holders and execute the above *PreparedStatement* using proper method.**
* **Now set the MIME type as “text/html” as follows:**

**response.setContentType(“text/html”);**

* **Then create a PrintWriter object “out” using *getWriter()* method of response object which connects to the browser stream.**
* **Now display some message to the end user that your registration is successful as follows:**

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

**out.println("<body bgcolor=orange>");**

**out.println("<h1>hello "+user+"!you are registered successfully. </h1>");**

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

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

* **Close the printwriter object as out.close():**
* **In getServletInfo()method and in getServletConfig() method return null.**
* **Handle the exceptions properly and finally generate .class file by compiling this class.**
* **Now create a deployment descriptor i.e web.xml file as follows:**

**<web-app>**

**<servlet>**

**<servlet-name>one</servlet-name>**

**<servlet-class>RegistrationServlet</servlet-class>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>one</servlet-name>**

**<url-pattern>/hello</url-pattern>**

**</servlet-mapping>**

**</web-app>**

* **Now copy  *‘ojdbc14.jar’* file into web-inf>>*‘lib’* folder. Now start the tomcat server(by double clicking on service runner file).**
* **Now Execute HTML page and display output**

**Solution:-**

**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.Servlet;**

**import javax.servlet.ServletConfig;**

**import javax.servlet.ServletException;**

**import javax.servlet.ServletRequest;**

**import javax.servlet.ServletResponse;**

**public class RegistrationServlet implements Servlet{**

**@Override**

**public void destroy() {**

**System.out.println("this is detroy method");**

**}**

**@Override**

**public ServletConfig getServletConfig() {**

**System.out.println("this is config method");**

**return null;**

**}**

**@Override**

**public String getServletInfo() {**

**System.out.println("this is getservlet method");**

**return null;**

**}**

**@Override**

**public void init(ServletConfig arg0) throws ServletException {**

**System.out.println("this is init method");**

**}**

**String user=null;**

**String email=null;**

**String pswd=null;**

**@Override**

**public void service(ServletRequest request, ServletResponse response) throws ServletException, IOException {**

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

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

**email=request.getParameter("mail");**

**try {**

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

**Connection con =DriverManager.getConnection("jdbc:oracle:thin:system/raju@localhost:1522:orcl");**

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

**ps.setString(1, email);**

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

**ps.setString(3, pswd);**

**ps.execute();**

**} catch (ClassNotFoundException e) {**

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

**e.printStackTrace();**

**} catch (SQLException e) {**

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

**e.printStackTrace();**

**}**

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

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

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

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

**out.println("<h1>hello "+user+"!you are registered successfully. </h1>");**

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

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

**out.close();**

**}**

**}**

**Register.html**

**<html>**

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

**<h2> Welocome to Register Page</h2>**

**<form action=*"./rs"* method=*'post'*>**

**<pre>**

**Email : <input type=*'text'* name=*'mail'*/><br>**

**UserName : <input type=*'text'* name=*'name'*/><br>**

**Password : <input type=*'text'* name=*'pswd'*/><br><br>**

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

**</pre>**

**</form>**

**</body>**

**</html>**

**Web.xml:**

**<web-app>**

**<servlet>**

**<servlet-class>RegistrationServlet3</servlet-class>**

**<servlet-name>rs</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>rs</servlet-name>**

**<url-pattern>/rs</url-pattern>**

**</servlet-mapping>**

**</web-app>**

* **User Registration using GenericServlet …………**
* **Modify the above servlet as per the following instructions.**
* **Inherit the servlet class from GenericServlet class.**
* **No need of implementing getServletInfo() and getServletConfig() methods.**

**Solution:-**

**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.GenericServlet;**

**import javax.servlet.ServletException;**

**import javax.servlet.ServletRequest;**

**import javax.servlet.ServletResponse;**

**public class RegistrationServlet2 extends GenericServlet{**

**String user=null;**

**String email=null;**

**String pswd=null;**

**public void service(ServletRequest request, ServletResponse response) throws ServletException, IOException {**

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

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

**email=request.getParameter("mail");**

**try {**

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

**Connection con =DriverManager.getConnection("jdbc:oracle:thin:system/raju@localhost:1522:orcl");**

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

**ps.setString(1, email);**

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

**ps.setString(3, pswd);**

**ps.execute();**

**} catch (ClassNotFoundException e) {**

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

**e.printStackTrace();**

**} catch (SQLException e) {**

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

**e.printStackTrace();**

**}**

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

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

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

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

**out.println("<h1>hello "+user+"!you are registered successfully. </h1>");**

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

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

**out.close();**

**}**

**}**

**Register.html**

**<html>**

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

**<h2> Welocome to Register Page</h2>**

**<form action=*"./rs"* method=*'post'*>**

**<pre>**

**Email : <input type=*'text'* name=*'mail'*/><br>**

**UserName : <input type=*'text'* name=*'name'*/><br>**

**Password : <input type=*'text'* name=*'pswd'*/><br><br>**

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

**</pre>**

**</form>**

**</body>**

**</html>**

**Web.xml:**

**<web-app>**

**<servlet>**

**<servlet-class>RegistrationServlet2</servlet-class>**

**<servlet-name>rs</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>rs</servlet-name>**

**<url-pattern>/rs</url-pattern>**

**</servlet-mapping>**

**</web-app>**

* **User Registration using HttpServlet ………**
* **Modify the above servlet as per the following instructions.**
* **Inherit the servlet class from HttpServlet class.**
* **If the request is of type “GET”, then write the service code of the above servlet in doGet() method. Else if the request is of type “POST”, then write the service code of the above servlet in doPost() method.**

**Solution:-**

**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.ServletException;**

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

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

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

**public class RegistrationServlet3 extends HttpServlet{**

**String user=null;**

**String email=null;**

**String pswd=null;**

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

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

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

**email=request.getParameter("mail");**

**try {**

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

**Connection con =DriverManager.getConnection("jdbc:oracle:thin:system/raju@localhost:1522:orcl");**

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

**ps.setString(1, email);**

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

**ps.setString(3, pswd);**

**ps.execute();**

**} catch (ClassNotFoundException e) {**

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

**e.printStackTrace();**

**} catch (SQLException e) {**

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

**e.printStackTrace();**

**}**

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

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

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

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

**out.println("<h1>hello "+user+"!you are registered successfully. </h1>");**

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

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

**out.close();**

**}**

**}**

**Register.html**

**<html>**

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

**<h2> Welocome to Register Page</h2>**

**<form action=*"./rs"* method=*'post'*>**

**<pre>**

**Email : <input type=*'text'* name=*'mail'*/><br>**

**UserName : <input type=*'text'* name=*'name'*/><br>**

**Password : <input type=*'text'* name=*'pswd'*/><br><br>**

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

**</pre>**

**</form>**

**</body>**

**</html>**

**Web.xml:**

**<web-app>**

**<servlet>**

**<servlet-class>RegistrationServlet3</servlet-class>**

**<servlet-name>rs</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>rs</servlet-name>**

**<url-pattern>/rs</url-pattern>**

**</servlet-mapping>**

**</web-app>**

* **User authentication……………**
* **Prepare a web.xml file with public url name as “/authenticate”.**
* **Prepare a html form which takes username and password along with a submit button.**

**In the <form> tag, mention the value as “./authenticate” for “action” attribute and method as “post” type.**

* **Now create a servlet class “LoginServlet” which extends HttpServlet.**
* **In init() method, load the driver class, get the connection object and create a prepared statement object with a select query with place holders for user name and password . In destroy method close the prepare statement object and connection object.**
* **Now override doPost() method as follows:**
* **Get the user name and password from html form and store in some string variables.**
* **Now set the MIME type as “text/html” and get the writer object.**
* **Then set the place holder values with user name and password. Obtain ResultSet object and check whether record exists with the given user name and password.**
* **If record exists, then display some message with user name. If record doesn’t exists then display some message such as login failed because of invalid username or password. Handle all the exceptions properly.**

**Solution:-**

**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 LoginServlet extends HttpServlet {**

**PreparedStatement ps=null;**

**Connection con=null;**

**ResultSet rs=null;**

**String username=null;**

**String password=null;**

**@Override**

**public void init(ServletConfig arg0) throws ServletException {**

**try {**

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

**con=DriverManager.getConnection("jdbc:oracle:thin:system/raju@localhost:1522:orcl");**

**ps=con.prepareStatement("select username,password from register where username=? and password=?");**

**} catch (SQLException e) {**

**System.out.println("exception raised in try block");**

**e.printStackTrace();**

**} catch (ClassNotFoundException e) {**

**// TODO Auto-generated catch block**

**e.printStackTrace();**

**}**

**}**

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

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

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

**try {**

**ps.setString(1, user);**

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

**rs=ps.executeQuery();**

**while(rs.next()) {**

**username=rs.getString("username");**

**password=rs.getString("password");**

**}**

**System.out.println("username:"+username);**

**System.out.println("password:"+password);**

**} catch (SQLException e) {**

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

**e.printStackTrace();**

**}**

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

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

**if(user.equalsIgnoreCase(username) && pswd.equalsIgnoreCase(password)) {**

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

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

**out.println("<h2> You are a valid user");**

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

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

**}else {**

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

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

**out.println("<h2> invalid username or password");**

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

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

**}**

**}**

**@Override**

**public void destroy() {**

**System.out.println("this is detroy method");**

**try {**

**ps.close();**

**con.close();**

**} catch (SQLException e) {**

**// TODO Auto-generated catch block**

**e.printStackTrace();**

**}**

**}**

**}**

**LoginForm.html:-**

**<html>**

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

**<h2> Welocome to LoginForm Page</h2>**

**<form action=*"./ls"* method=*'post'*>**

**<pre>**

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

**Password : <input type=*'text'* name=*'pswd'* required=*'required'*/><br><br>**

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

**</pre>**

**</form>**

**</body>**

**</html>**

**Web.xml:-**

**<web-app>**

**<servlet>**

**<servlet-class>LoginServlet</servlet-class>**

**<servlet-name>ls</servlet-name>**

**</servlet>**

**<servlet-mapping>**

**<servlet-name>ls</servlet-name>**

**<url-pattern>/ls</url-pattern>**

**</servlet-mapping>**

**</web-app>**