

Practical 1

a)

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Calculator App</title>
  </head>
  <body>
    <form action = "CalculatorServlet">
      Enter First Number <input type="text" name="txtN1"><br>
      Enter Second Number <input type="text" name="txtN2"><br>
      Select an Operation
      <input type="radio" name="opr" value="+">ADDITION
      <input type="radio" name="opr" value="-">SUBTRACTION
      <input type="radio" name="opr" value="*">MULTIPLY
      <input type="radio" name="opr" value="/">DIVIDE
      <input type="reset">
      <input type="submit" value="Calculate">
    </form>
  </body>
</html>
```

CalculatorServlet.java

package Mypack;

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

@WebServlet("/CalculatorServlet")

public class CalculatorServlet extends HttpServlet {

```
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<html><head><title>Servlet CalculatorServlet</title></head><body>");
        double n1 = Double.parseDouble(request.getParameter("txtN1"));
        double n2 = Double.parseDouble(request.getParameter("txtN2"));

        double result = 0;
        String opr = request.getParameter("opr");
```

```

        if (opr.equals("+")) {
            result = n1 + n2;
        }
        if (opr.equals("-")) {
            result = n1 - n2;
        }
        if (opr.equals("*")) {
            result = n1 * n2;
        }
        if (opr.equals("/")) {
            result = n1 / n2;
        }
        out.println("<h1> Result = " + result);
        out.println("</body></html>");
    }
}

```

b)

Index.html

```

<!DOCTYPE html>
<html>
    <head>
        <title>Login Form</title>
    </head>
    <form action="LoginServlet">
        Enter User ID<input type="text" name="txtId"><br>
        Enter Password<input type="password" name="txtPass"><br>
        <input type="reset">
        <input type="submit" value=" Click to Login " >
    </form>
</html>

```

LoginServlet.java

```

package MyPack;

```

```

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(name = "LoginServlet", urlPatterns = {"/LoginServlet"})
public class LoginServlet extends HttpServlet {

```

```

    @Override

```

```

public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    PrintWriter out = response.getWriter();
    out.println("<html><head><title>Servlet LoginServlet</title></head>");
    String uname = request.getParameter("txtId");
    String upass = request.getParameter("txtPass");
    if (uname.equals("admin") && upass.equals("12345")) {
        out.println("<body bgcolor=blue >");
        out.println("<h1> Welcome !!! " + uname + "</h1>");
    } else {
        out.println("<body bgcolor=red >");
        out.println("<h1> Login Fail !!! </h1>");
    }
    out.println("</body></html>");
}
}

```

c)

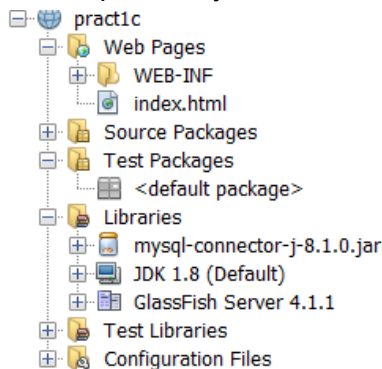
Create table in Sql

```

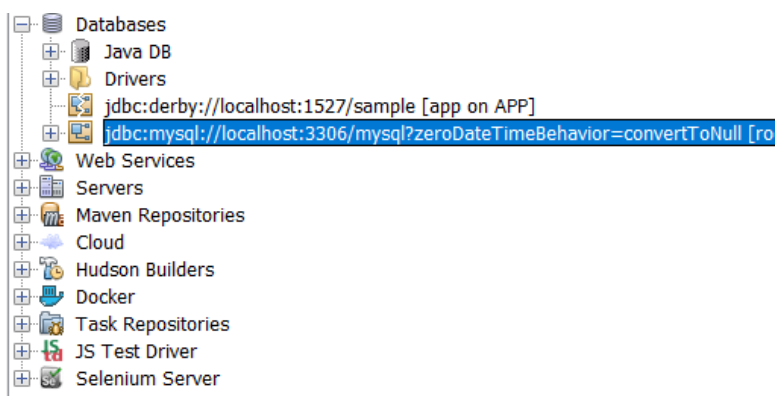
mysql> use mydb;
Database changed
mysql> create table user(username varchar(20) primary key, password varchar(20), email varchar(20), country varchar(20))
;
Query OK, 0 rows affected (0.16 sec)

```

Add Dependency



Make Connection



For mysql remember this

```
String url = "jdbc:mysql://localhost:3306/mydb?autoReconnect=true&useSSL=false";
String username = "root";
String password = "omkar";
Class.forName("com.mysql.cj.jdbc.Driver");
Connection con = DriverManager.getConnection(url, username, password);
```

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Registration Page</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="RegisterServlet" >
      <H1>Welcome to Registration page</H1>
      Enter User Name <input type="text" name="txtUid"><br>
      Enter Password <input type="password" name="txtPass"><br>
      Enter Email <input type="text" name="txtEmail" ><br>
      Enter Country <input type="text" name="txtCon" ><br>
      <input type="reset" ><input type="submit" value="REGISTER" >
    </form>
  </body>
</html>
```

RegisterServlet.java

```
package MyPack;
```

```
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;
import java.sql.*;
```

```
@WebServlet(name = "RegisterServlet", urlPatterns = {"/RegisterServlet"})
public class RegisterServlet extends HttpServlet {
```

```
    @Override
```

```
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
```

```

String id = request.getParameter("txtUid");
String ps = request.getParameter("txtPass");
String em = request.getParameter("txtEmail");
String co = request.getParameter("txtCon");
String url = "jdbc:mysql://localhost:3306/mydb?autoReconnect=true&useSSL=false";
String username = "root";
String password = "omkar";
try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    Connection con = DriverManager.getConnection(url, username, password);

    PreparedStatement pst = con.prepareStatement("insert into user values(?,?,?,?)");
    pst.setString(1, id);
    pst.setString(2, ps);
    pst.setString(3, em);
    pst.setString(4, co);
    pst.executeUpdate();
    out.println("<h1> Inserted Succesfullyyyyy</h1>");
} catch (ClassNotFoundException | SQLException e) {
    out.println(e);
}
}
}

```

Practical 2

a)

Index.html

```

<!DOCTYPE html>
<html><head><title>Login Form</title> </head>
  <form action="LoginValidate">
    Enter User ID<input type="text" name="txtId"><br>
    Enter Password<input type="password" name="txtPass"><br> <input type="reset">
    <input type="submit" value=" Click to Login">
  </form>
</html>

```

LoginValidate.java

```

package MyPack;

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;
import javax.servlet.RequestDispatcher;

```

```

@WebServlet(urlPatterns = "/LoginValidate")
public class LoginValidate extends HttpServlet {

    @Override
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<html><head><title>Servlet LoginServlet</title></head>");
        String uname = request.getParameter("txtId");
        String upass = request.getParameter("txtPass");
        if (uname.equals("admin") && upass.equals("servlet")) {
            RequestDispatcher rd = request.getRequestDispatcher("/WelcomeServlet");
            rd.forward(request, response);
        } else {
            out.println("<body bgcolor=red>");
            out.println("<h1> Login Fail !!! </h1>");
            RequestDispatcher rd = request.getRequestDispatcher("index.html");
            rd.include(request, response);
        }
        out.println("</body>");
        out.println("</html>");
    }
}

```

WelcomeServlet.java

```

package MyPack;
import javax.servlet.RequestDispatcher;
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(urlPatterns = "/WelcomeServlet")
public class WelcomeServlet extends HttpServlet {

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet LoginServlet</title>");
        out.println("</head>");
        out.println("<body bgcolor=orange text=blue >");
    }
}

```

```

        out.println("<h1>Welcome to the world of Servlet</h1>");
        out.println("</body>");
        out.println("</html>");

    }
}

```

b)

Index.html

```
<!DOCTYPE html>
```

```

<html>
  <head>
    <title>Cookie Demo</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="Page1">
      Enter your name <input type="text" name="txtName"><br>
      <input type="submit" value="~~~Click to Enter~~~">
    </form>
  </body>
</html>

```

Page1.java

```
package MyPack;
```

```

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;
import javax.servlet.http.Cookie;

```

```

@WebServlet(name = "Page1", urlPatterns = {"/Page1"})
public class Page1 extends HttpServlet {

```

```

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Page1</title>");
    }
}

```

```

        out.println("</head>");
        out.println("<body bgcolor=pink text=blue>");
        String uname = request.getParameter("txtName");
        out.println("<h1>Welcome " + uname + "</h>");
        Cookie ck1 = new Cookie("Username", uname);
        Cookie ck2 = new Cookie("visit", "1");
        response.addCookie(ck1);
        response.addCookie(ck2);
        out.println("<h1><a href=Page2>Click to visit Page 2</a>"
            + "</h1>");
        out.println("</body>");
        out.println("</html>");
    }
}

```

Page2.Java

```
package MyPack;
```

```

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;
import javax.servlet.http.Cookie;

```

```
@WebServlet(name = "Page2", urlPatterns = {"/Page2"})
```

```
public class Page2 extends HttpServlet {
```

```

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Page2</title>");
        out.println("</head>");
        out.println("<body bgcolor=yellow text=green>");
        Cookie[] ck = request.getCookies();
        for (int i = 0; i < ck.length; i++) {
            if (ck[i].getName().equals("visit")) {
                int count = Integer.parseInt(ck[i].getValue()) + 1;
                out.println("<h1>Visit No:" + count + "</h1>");
                ck[i] = new Cookie("visit", count + "");
                response.addCookie(ck[i]);
            }
        }
    }
}

```



```

        } else {
            out.println(ck[i].getName() + "=" + ck[i].getValue());
        }
    }
    out.println("<h1><a href=Page3>Click to visit Page 3</a></h1>");
    out.println("</body>");
    out.println("</html>");

}
}

```

Page3.java

```
package MyPack;
```

```

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;
import javax.servlet.http.Cookie;

```

```

@WebServlet(name = "Page3", urlPatterns = {"/Page3"})
public class Page3 extends HttpServlet {

```

```

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Page3</title>");
        out.println("</head>");
        out.println("<body bgcolor=red text=yellow>");
        Cookie[] ck = request.getCookies();
        for (int i = 0; i < ck.length; i++) {
            if (ck[i].getName().equals("visit")) {
                int count = Integer.parseInt(ck[i].getValue()) + 1;
                out.println("<h1>Visit No:" + count + "</h1>");
                ck[i] = new Cookie("visit", count + "");
                response.addCookie(ck[i]);
            } else {
                out.println(ck[i].getName() + "=" + ck[i].getValue());
            }
        }
        out.println("<h1><a href=Page4>Click to visit Page 4</a></h1>");
    }
}

```

```

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

    }
}

```

Page4.java

```
package MyPack;
```

```

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;
import javax.servlet.http.Cookie;

```

```

@WebServlet(name = "Page4", urlPatterns = {"/Page4"})
public class Page4 extends HttpServlet {

```

```

    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Page4</title>");
        out.println("</head>");
        out.println("<body bgcolor=orange text=blue>");
        Cookie[] ck = request.getCookies();
        for (int i = 0; i < ck.length; i++) {
            if (ck[i].getName().equals("visit")) {
                int count = Integer.parseInt(ck[i].getValue()) + 1;
                out.println("<h1>Visit No:" + count + "</h1>");
                ck[i] = new Cookie("visit", count + "");
                response.addCookie(ck[i]);
            } else {
                out.println(ck[i].getName() + "=" + ck[i].getValue());
            }
        }
        out.println("<h1><a href=Page5>Click to visit Page 5</a></h1>");
        out.println("</body>");
        out.println("</html>");

    }
}

```

Page5.java

```
package MyPack;
```

```
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;
import javax.servlet.http.Cookie;
```

```
@WebServlet(name = "Page5", urlPatterns = {"/Page5"})
```

```
public class Page5 extends HttpServlet {
```

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

```
        throws ServletException, IOException {
```

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

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

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

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

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

```
        out.println("<title>Page5</title>");
```

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

```
        out.println("<body bgcolor=cyan text=blue>");
```

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

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

```
            if (ck[i].getName().equals("visit")) {
```

```
                int count = Integer.parseInt(ck[i].getValue()) + 1;
```

```
                out.println("<h1>Visit No:" + count + "</h1>");
```

```
                ck[i] = new Cookie("visit", count + "");
```

```
                response.addCookie(ck[i]);
```

```
            } else {
```

```
                out.println(ck[i].getName() + "=" + ck[i].getValue());
```

```
            }
```

```
        }
```

```
        out.println("<h1><a href=Page1>Click to visit Page 1</a></h1>");
```

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

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

```
    }
```

```
}
```

c)

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Session Demo</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="Page1" method="get">
      Enter User ID<input type="text" name="txtName"><br>
      <input type="reset"><input type="submit">
    </form>
  </body>
</html>
```

Page1.java

```
package mypack;
```

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

```
@WebServlet(name = "Page1", urlPatterns = {"/Page1"})
```

```
public class Page1 extends HttpServlet {
```

```
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Page1</title>");
        out.println("</head>");
        HttpSession hs = request.getSession(true);
        if (hs.isNew()) {
            out.println("<body bgcolor=yellow>");
            String name = request.getParameter("txtName");
            hs.setAttribute("uname", name);
            hs.setAttribute("visit", "1");
            out.println("<h1>welcome 1st time</h1>");
        }
    }
}
```

```

    } else {
        out.println("<h1>welcome Again</h1>");
        int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
        out.println("<h1>You visited " + visit + "</h1>");
        hs.setAttribute("visit", "" + visit);
    }
    out.println("<h1>Your Session ID " + hs.getId() + "</h1>");
    out.println("<h1>You logged in at" + new java.util.Date(hs.getCreationTime()) + "</h1>");
    out.println("<h1><a href=Page2>Page2</a></h1>");
    out.println("<h1><a href=Page3>Page3</a></h1>");
    out.println("<h1><a href=Page4>Page4</a></h1>");
    out.println("<h1><a href=Logout>Logout</a></h1>");
    out.println("</body>");
    out.println("</html>");
}
}

```

Page2.java

```
package mypack;
```

```

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;
import javax.servlet.http.HttpSession;

```

```

@WebServlet(name = "Page2", urlPatterns = {"/Page2"})
public class Page2 extends HttpServlet {

```

```

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Page2</title>");
        out.println("</head>");
        HttpSession hs = request.getSession(false);
        out.println("<body bgcolor=yellow>");
        out.println("<h1>welcome Again on Page2</h1>");
        int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
        out.println("<h1>You visited " + visit + "</h1>");
        hs.setAttribute("visit", "" + visit);
        out.println("<h1>Your Session ID " + hs.getId() + "</h1>");
    }
}

```

```

        out.println("<h1>You logged in at" + new java.util.Date(hs.getCreationTime()) +
"</h1>");
        out.println("<h1><a href=Page1>Page1</a></h1>");
        out.println("<h1><a href=Page3>Page3</a></h1>");
        out.println("<h1><a href=Page4>Page4</a></h1>");
        out.println("<h1><a href=Logout>Logout</a></h1>");
        out.println("</body>");
        out.println("</html>");
    }
}

```

Page3.java

```
package mypack;
```

```

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;
import javax.servlet.http.HttpSession;

```

```

@WebServlet(name = "Page3", urlPatterns = {"/Page3"})
public class Page3 extends HttpServlet {

```

```

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Page3</title>");
        out.println("</head>");
        HttpSession hs = request.getSession(false);
        out.println("<body bgcolor=yellow>");
        out.println("<h1>welcome Again on Page3</h1>");
        int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
        out.println("<h1>You visited " + visit + "</h1>");
        hs.setAttribute("visit", "" + visit);
        out.println("<h1>Your Session ID " + hs.getId() + "</h1>");
        out.println("<h1>You logged in at" + new java.util.Date(hs.getCreationTime()) +
"</h1>");
        out.println("<h1><a href=Page1>Page1</a></h1>");
        out.println("<h1><a href=Page2>Page2</a></h1>");
        out.println("<h1><a href=Page4>Page4</a></h1>");
        out.println("<h1><a href=Logout>Logout</a></h1>");
    }
}

```

```

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

```

Page4.java

```
package mypack;
```

```

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;
import javax.servlet.http.HttpSession;

```

```

@WebServlet(name = "Page4", urlPatterns = {"/Page4"})
public class Page4 extends HttpServlet {

```

```

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Page4</title>");
        out.println("</head>");
        HttpSession hs = request.getSession(false);
        out.println("<body bgcolor=yellow>");
        out.println("<h1>welcome Again on Page4</h1>");
        int visit = Integer.parseInt((String) hs.getAttribute("visit")) + 1;
        out.println("<h1>You visited " + visit + "</h1>");
        hs.setAttribute("visit", "" + visit);
        out.println("<h1>Your Session ID " + hs.getId() + "</h1>");
        out.println("<h1>You logged in at " + new java.util.Date(hs.getCreationTime()) +
"</h1>");
        out.println("<h1><a href=Page1>Page1</a></h1>");
        out.println("<h1><a href=Page2>Page2</a></h1>");
        out.println("<h1><a href=Page3>Page3</a></h1>");
        out.println("<h1><a href=Logout>Logout</a></h1>");
        out.println("</body>");
        out.println("</html>");
    }
}

```

Logout.java

```
package mypack;

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;
import javax.servlet.http.HttpSession;

@WebServlet(name = "Logout", urlPatterns = {"/Logout"})
public class Logout extends HttpServlet {

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        out.println("<!DOCTYPE html>");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet Logout</title>");
        out.println("</head>");
        out.println("<body bgcolor=yellow>");
        HttpSession hs = request.getSession();
        if(hs!=null) hs.invalidate();
        out.println("<h1>You are logged out now</h1>");
        out.println("</body>");
        out.println("</html>");
    }
}
```

Practical 3

a)

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>File upload</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="FileUploadServlet" method="post" enctype="multipart/form-data">
      <h1>File Uploading</h1>
      Select File to upload<input type="file" name="file"><br>
```



```

        Destination<input type="text" value="C:\Users\omkar\Downloads"
name="destination"><br>
        <input type="submit" value="FileUpload" name="upload">
    </form>
</body>
</html>

```

FileUploadServlet.java

```

package mypack;

import java.io.*;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;
import javax.servlet.annotation.MultipartConfig;

@WebServlet(name = "FileUploadServlet", urlPatterns = {"/FileUploadServlet"})
@MultipartConfig
public class FileUploadServlet extends HttpServlet {

    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        String path = request.getParameter("destination");
        out.println(path);
        Part fp = request.getPart("file");
        String sfp = request.getPart("file").toString();
        out.print("<br>file part: " + sfp);
        String fn = fp.getSubmittedFileName();
        out.println("<br><br><hr>file name: " + fn);
        OutputStream os = null;
        InputStream is = null;
        try {
            os = new FileOutputStream(new File(path + File.separator + fn));
            is = fp.getInputStream();
            int r = 0;
            byte[] b = new byte[1024];
            while ((r = is.read(b)) != -1) {
                os.write(b, 0, r);
            }
            out.println("File Upoaded Successfully");
            out.close();
        } catch (FileNotFoundException e) {
            out.print(e);
        }
    }
}

```

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>File Download</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <h1>File Download Application</h1>
    Click <a href="DownloadServlet?filename=W5.jpg">W5</a><br>
    Click <a href="DownloadServlet?filename=W6.jpg">W6</a><br>
  </body>
</html>
```

DownloadServlet.java

```
package mypack;

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;

@WebServlet(name = "DownloadServlet", urlPatterns = {"/DownloadServlet"})
public class DownloadServlet extends HttpServlet {

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("APPLICATION/OCTET-STREAM");
        String filename = request.getParameter("filename");
        ServletContext sc = getServletContext();
        InputStream is = sc.getResourceAsStream("/") + filename);
        //ServletOutputStream out=response.getOutputStream();
        PrintWriter out = response.getWriter();
        response.setHeader("Content-Disposition", "attachement;filename=\"\" + filename + "\"");
        int i;
        while ((i = is.read()) != -1) {
            out.write(i);
        }
        is.close();
        out.close();
    }
}
```

b)

```
mysql> create table quiz(qno varchar(5),question varchar(100),op1 varchar(50),op2 varchar(50),op3 varchar(50),op4 varchar(50),ans varchar(50));
Query OK, 0 rows affected (0.03 sec)

mysql> insert into quiz values("1","What is Capital of India","Delhi","Mumbai","Chennai","Pune","1");
Query OK, 1 row affected (0.01 sec)

mysql> insert into quiz values("2","What is Largest Planet","Earth","Mars","Jupitar","Venus","3");
Query OK, 1 row affected (0.00 sec)

mysql> insert into quiz values("3","What is symbol of Nitrogen Dioxide","NO","NO2","N2O2","N2O","2");
Query OK, 1 row affected (0.00 sec)

mysql> insert into quiz values("4","Where is Great Barrier Reef","India","USA","China","Australia","4");
Query OK, 1 row affected (0.00 sec)

mysql> insert into quiz values("5","What do plants absorb during photosynthesis","Oxygen","CarbonDioxide","CarbonMonoxide","Nitrogen","2");
Query OK, 1 row affected (0.00 sec)

mysql>
```

QuizServlet.java

package mypack;

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.DriverManager;
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 java.sql.*;
```

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

```
public class QuizServlet extends HttpServlet {
```

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

```
        throws ServletException, IOException {
```

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

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

```
        out.println("<form action=ShowResult>");
```

```
        try {
```

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

```
            Connection con =
```

```
DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb?autoReconnect=true&&useSSL=false", "root", "omkar");
```

```
            Statement stmt = con.createStatement();
```

```
            ResultSet rs = stmt.executeQuery("select * from quiz");
```

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

```
            int qno = 0;
```

```
            while (rs.next()) {
```

```
                qno++;
```

```
                out.println("<tr><td>" + rs.getString(1) + "</td><td>" + rs.getString(2) + "</td></tr>");
```

```
                out.println("<tr><td><input type=radio name='" + qno + "'
```

```
value='" + 1 + "'></td><td>" + rs.getString(3) + "</td></tr>");
```

```

        out.println("<tr><td><input type=radio name='"+qno+"'
value='"+2+"'></td><td>"+rs.getString(4)+"</td></tr>");
        out.println("<tr><td><input type=radio name='"+qno+"'
value='"+3+"'></td><td>"+rs.getString(5)+"</td></tr>");
        out.println("<tr><td><input type=radio name='"+qno+"'
value='"+4+"'></td><td>"+rs.getString(6)+"</td></tr>");
    }
} catch (ClassNotFoundException | SQLException e) {
    out.println(e);
}
out.println("</table>");
out.println("<input type=reset>");
out.println("<input type=submit>");
out.println("</form>");
}
}

```

ShowResult.java
package mypack;

```

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;
import java.sql.*;

```

```

@WebServlet(name = "ShowResult", urlPatterns = {"/ShowResult"})
public class ShowResult extends HttpServlet {

```

```

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb?autoReconnect=true&&useSSL=false", "root", "omkar");
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery("select ans from quiz");
            int qno = 0;
            int c = 0;
            while (rs.next()) {
                if (rs.getString(1).equals(request.getParameter("'" + (++qno) + "'"))) {
                    c++;

```

```

        out.println("Correct<br>");
    } else {
        out.println("Incorrect<br>");
    }
}
} catch (ClassNotFoundException | SQLException e) {
    out.println(e);
}
}
}

```

c)

Index.html

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Non Blocking IO</title>
```

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

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

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

```
  </head>
```

```
  <body>
```

```
  </body>
```

```
</html>
```

NonBlockingIO.java

```
package mypack;
```

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

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

```
import javax.servlet.annotation.WebServlet;
```

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

```
import java.net.*;
```

```
import java.util.*;
```

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

```
public class NonBlockingServlet extends HttpServlet {
```

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

```
        throws ServletException, IOException {
```

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

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

```
        out.print("<h1>File Reader</h1>");
```

```
        String filename = "/WEB-INF/BookList.txt";
```

```
        ServletContext c = getServletContext();
```

```
        InputStream in = c.getResourceAsStream(filename);
```

```
        String path;
```

```

        path = "http://" + request.getServerName() + ":" +
            request.getServerPort() + request.getContextPath() + "/ ReadingNonBlocking
Servlet";
        URL url = new URL(path);
        HttpURLConnection conn = (HttpURLConnection) url.openConnection();
        conn.setChunkedStreamingMode(2);
        conn.setDoOutput(true);
        conn.connect();
        if (in != null) {
            InputStreamReader inr = new InputStreamReader(in);
            BufferedReader br = new BufferedReader(inr);
            String text = "";
            System.out.println("Reading started....");
            BufferedWriter bw = new BufferedWriter(new
OutputStreamWriter(conn.getOutputStream()));
            while ((text = br.readLine()) != null)
            {
                out.print(text + "<br>");
                try {
                    Thread.sleep(1000);
                    out.flush();
                }
                catch (InterruptedException ex)
                {
                }
            }
            out.print("reading completed....");
            bw.flush();
            bw.close();
        }
    }
}

```

ReadingNonBlockingIO.java

```
package mypack;
```

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;
```

```
@WebServlet(name = "ReadingNonBlockingServlet", urlPatterns =
{"/ReadingNonBlockingServlet"})
public class ReadingNonBlockingServlet extends HttpServlet {

```

```

protected void service(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    AsyncContext ac = request.startAsync();
    ServletInputStream in = request.getInputStream();
    in.setReadListener(new ReadingListener(in, ac));
}
}

```

ReadingListener.java
package mypack;

```

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.WebServlet;
@WebServlet(name = "ReadingListener", urlPatterns = {"/ReadingListener"})
public class ReadingListener implements ReadListener {

```

```

    ServletInputStream is = null;
    AsyncContext a = null;
    ReadingListener(ServletInputStream in, AsyncContext ac)
    {
        is = in;
        a = ac;
    }
    @Override
    public void onDataAvailable(){}
    public void onAllDataRead()
    {
        a.complete();
    }
    public void onError(Throwable t){
        a.complete();
        t.printStackTrace();
    }
}

```

Practical 4

a)

Index.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<html><head><title> JSP Page</title></head>
<body>
<h1>Use of Intrinsic Objects in JSP</h1>
<h1>Request Object </h1>
Query String <%= request.getQueryString()%><br>
Context Path <%= request.getContextPath()%><br>

```

```

Remote Host <%=request.getRemoteHost()%><br>
<hl>Response Object </hl>
Character Encoding Type <%=response.getCharacterEncoding()%><br>
Content Type <%=response.getContentType()%><br>
Locale <%=response.getLocale()%><br>
<hl>Session Object </hl>
ID =session.getid() <br>
Creation Time <%=new java.util.Date(session.getCreationTime())%><br>
Last Access Time<%=new java.util.Date(session.getLastAccessedTime())%><br>
</body>
</html>

```

b)

```

<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>
  <form action="Validate.jsp">
    Enter Your Name: <input type="text" name="name"><br>
    Enter Your Age: <input type="text" name="age"><br>
    Enter Your Email: <input type="text" name="email"><br>
    Select Hobbies:
    <input type="checkbox" name="hob" value="singing">Singing
    <input type="checkbox" name="hob" value="dancing">Dancing
    <input type="checkbox" name="hob" value="playing">Playing <br>
    Select Gender:
    <input type="radio" name="gender" value="male">Male
    <input type="radio" name="gender" value="female">Female
    <input type="radio" name="gender" value="other">Other <br>
    <input type="hidden" name="error" value="">
    <input type="submit" value="Submit">
  </form>
</body>
</html>

```

Successful.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  <title>JSP Page</title>
</head>
<body>
  <h1>Data Validated Successfully</h1>
</body>
</html>

```


Validate.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8" import="mypack.*"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <h1>Validation Page</h1>
    <jsp:useBean id="obj" scope="request" class="mypack.CheckerBean">
      <jsp:setProperty name="obj" property="*" />
    </jsp:useBean>
    <% if(obj.validate()) { %>
      <jsp:forward page="Successful.jsp" />
    <% } else { %>
      <jsp:include page="index.html" />
    <% } %>
    <%= obj.getError() %>
  </body>
</html>
```

c)

registerhtml

```
<!DOCTYPE html>
<html><head><title>New User Registration Page</title> </head>
  <body>
    <form action="Register.jsp">
      <h1> New User Registration Page</h1>
      Enter User Name <input type="text" name="txtName" ><br>
      Enter Password <input type="password" name="txtPass1 " ><br>
      Re-Enter Password<input type="password" name="txtPass2" ><br>
      Enter Email<input type="text" name="txtEmail" ><br>
      Enter Country Name <input type="text" name="txtCon" ><br>
      <input type="reset">
      <input type="submit" value="REGISTER"> </form>
    </body>
  </html>
```

loginhtml

```
<!DOCTYPE html>
<html>
  <body>
    <h1>Login Page</h1>
    <form action="Login.jsp" >
      Enter User Name <input type="text" name="txtName" ><br>
      Enter Password <input type="password" name="txtPass" ><br>
      <input type="reset" ><input type="submit" value="~-LOGIN~ " >
    </form>
```

```
</body>
</html>
```

```
<%@page contentType="text/html" import="java.sql.*"%>
<html><body>
  <hl>Registration JSP Page</hl>
  <%
    String uname = request.getParameter("txtName");
    String pass1 = request.getParameter("txtPass1");
    String pass2 = request.getParameter("txtPass2");
    String email = request.getParameter("txtEmail");
    String ctry = request.getParameter("txtCon");

    if (pass1.equals(pass2)) {
      try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con
          = DriverManager.getConnection("jdbc:mysql://localhost:3306/"
            + "mydb?autoReconnect=true&useSSL = false", "root", "omkar");
        PreparedStatement stmt = con.prepareStatement("insert into user values (?, ?,
?, ?)");
        stmt.setString(1, uname);
        stmt.setString(2, pass1);
        stmt.setString(3, email);
        stmt.setString(4, ctry);
        int row = stmt.executeUpdate();
        if (row == 1) {
          out.println("Registration Successful");

          } else {
            out.println("Registration FFFFFAAIIILLLL ! ! ! ! ");
          }
        } catch (Exception e) {
          out.println(e);
        }
      } else {
        out.println("<hl>Password Mismatch</hl>");
      }
    }
  <%><jsp:include page="Register.html" ></jsp:include>
  <%
    }
  } catch (Exception e) {
    out.println(e);
  }
  } else {
    out.println("<hl>Password Mismatch</hl>");
  }
  <%>
  <jsp:include page="Register.html" ></jsp:include>
  <% }
  <%>
</body>
</html>
```

```
<%@page contentType="text/html" import="java.sql.*"%>
<html><body>
```

```

<h1>Registration JSP Page</h1>
<%
    String uname = request.getParameter("txtName");
    String pass = request.getParameter("txtPass");
    ResultSet rs = null;
    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection con
            = DriverManager.getConnection(
                "Jdbc:mysql://localhost:3306/mydb?autoReconnect=true&useSSL =
false", "root", "omkar");
        Statement stmt = con.createStatement();
        rs = stmt.executeQuery("select password from user where username='"+uname+"'");
        rs.next();
        if (pass.equals(rs.getString(1))) {
            out.println("<h1>~LOGIN SUCCESSFULLL-----</h1>");
        } else {
            out.println("<h1>password does not match!!!! !</h1>");
        }
    } catch (Exception e) {
        out.println("<h1>User does not exist!!!! !</h1>");
    }
%>
<jsp:include page="Register.html" ></jsp:include>
<%
    }
%>
<jsp:include page="Register.html" ></jsp:include>
<%
    }
%>
</body>
</html>

```

Pr 5a

```

<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>
    <form action="UpdateEmp.jsp" method="post">
        <h1>Registration</h1>
        Enter Employee no. : <input type="text" name="n"><br>
        Name : <input type="text" name="en"><br>
        Enter Age : <input type="text" name="a"><br>
        Salary : <input type="text" name="s"><br>
        Designation : <input type="text" name="d"><br>
    </form>
</body>
</html>

```

```

        <input type="submit" value="SUBMIT">
        <input type="reset">
    </form>
</body>
</html>

```

```

<%@page contentType="text/html" pageEncoding="UTF-8" import="java.sql.*" %>
<!DOCTYPE html>
<html>

```

```

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

```

```

    <body>
        <%
            String eno = request.getParameter("n");
            String ename = request.getParameter("en");
            String esal = request.getParameter("s");

```

```

            try{
                Class.forName("com.mysql.cj.jdbc.Driver");
                Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb?autoReconnect=true&use
SSL=false", "root", "sakshi@1705");
                PreparedStatement ps = con.prepareStatement("select * from emp where eno=?");
                ps.setString(1, eno);
                ResultSet rs = ps.executeQuery();
                if(rs.next()){
                    out.println("<h1>Employee " + rs.getString(2) + " exists");
                    PreparedStatement psst = con.prepareStatement("update emp set esal=? where
eno=?");
                    psst.setString(1, esal);
                    psst.setString(2, eno);
                    psst.executeUpdate();
                    out.println("<h1>Employee record updated.</h1>");
                }
                else{
                    out.println("<h1>Employee does not exists</h1>");
                }
            }
            catch(Exception e){
                out.println(e);
            }

        %>
    </body>

```

</html>

Pr 5b

Index

```
SetDemo<html><body>
<a href="setDemo.jsp"> SetDemo</a>
<a href="Maxif.html"> MaxIF</a>
<a href="ForeachDemo.jsp"> ForEachDemo</a>
<a href="outDemo.jsp"> OutDemo</a>
<a href="URLDemo.jsp"> URLDemo</a>
<a href="choose_when_otherwise.jsp"> choose_when_otherwise</a>
</body></html>
```

setDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jstl/core" %>
<c:set var="pageTitle" scope="application" value="Dukes Soccer League: Registration" />
${pageTitle}
```

Maxif.html

```
<form action ="IFDemo.jsp">
x=<input type="text" name="x" /><br>
y=<input type="text" name="y" /><br>
<input type="submit" value="Check Max" />
</form>
```

IFDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:set var="x" value="${param.x}" />
<c:set var="y" value="${param.y}" />
<c:if test="${ x>y}" ">
<font color="blue"><h2>The Ans is:</h2></font>
<c:out value="${x} is greater than ${y}" />
</c:if>
<c:if test="${x<y}" ">
<font color="blue"><h2>The Ans is:</h2></font>
<c:out value="${x} is Less than ${y}" />
</c:if>
<c:if test="${x=y}" ">
<font color="blue"><h2>The Ans is:</h2></font>
<c:out value="${x} is equals ${y}" />
</c:if>
```

ForeachDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:forEach begin="1" end="10" var="i">
The Square of <c:out value=" ${i}=${i*i}" /><br>
</c:forEach>
```

outDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:set var="name" value="John"/>
My name is: <c:out value= "${name}" />
```

URLDemo.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:url value="/indexSc.html"/>
```

choose_when_otherwise.jsp

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:set var="income" value="${4000*4}" />
Your Income is: <c:out value= "${income}" />
<c:choose>
<c:when test="${income <=1000}">
Income is not good
</c:when>
<c:when test="${income > 10000}">
Income is Very Good
</c:when>
<c:otherwise>
Income is undetermined
</c:otherwise>
</c:choose>
```

Pr 6a

```
<!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>
```

```
    <title>Converter</title>
```

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

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

```
  </head>
```

```
  <body>
```

```
    <h1>Currency Converter</h1>
```

```
    <form action="CCServlet">
```

```
      Enter Amount : <input type="text" name="a"><br>
```

```
      select type:
```

```
      <input type="radio" name="type" value="r2d">Rupees to Dollars<br>
```

```
      <input type="radio" name="type" value="d2r">Dollars to Rupees<br>
```

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

```
    </form>
```

```
</body>
</html>
```

CCServlet

```
/*
 * 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 mypack;
```

```
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;
import javax.ejb.EJB;
import mypack.CCBean;
```

```
/**
 *
 * @author saksh
 */
@WebServlet(name = "CCServlet", urlPatterns = {"/CCServlet"})
public class CCServlet extends HttpServlet {
    @EJB CCBean obj;
```

 @Override

```
protected void doGet(HttpServletRequest req, HttpServletResponse res)
    throws ServletException, IOException {
    res.setContentType("text/html;charset=UTF-8");
    PrintWriter out = res.getWriter();
    double amt = Double.parseDouble(req.getParameter("a"));
```

```
    if(req.getParameter("type").equals("r2d")){
        out.println("<h1>Dollars: " + obj.r2d(amt) + "</h1>");
    }
    if(req.getParameter("type").equals("d2r")){
        out.println("<h1>Rupees: " + obj.d2r(amt) + "</h1>");
    }
}
```

```
}
```

```
}
```

CCbean

```
/*
 * 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 mypack;

import javax.ejb.Stateless;

/**
 *
 * @author saksh
 */
@Stateless
public class CCBean {

    public CCBean(){}
    public double r2d(double a){
        return a / 88.80;
    }
    public double d2r(double a){
        return a * 88.80;
    }
}
```

Pr 6b

```
mysql> Create table roombook(Roomid varchar(4) PRIMARY KEY, RoomType varchar(20), charges numeric(10,2),cust varchar(20),mob varchar(20), Status varchar(20));
Query OK, 0 rows affected (0.08 sec)

mysql> insert into roombook values('1001','Delux',5000.00,"","Not Booked');
ERROR 1136 (21501): Column count doesn't match value count at row 1
mysql> insert into roombook values('1001','Delux',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.01 sec)

mysql> insert into roombook values('1002','SuperDelux',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.01 sec)

mysql> insert into roombook values('1003','Suit',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.01 sec)

mysql> insert into roombook values('2001','Delux',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.00 sec)

mysql> insert into roombook values('2002','SuperDelux',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.01 sec)

mysql> insert into roombook values('2003','Suit',5000.00,'','','Not Booked');
Query OK, 1 row affected (0.01 sec)

mysql> |
```

Index

<!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>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="RBServlet">
      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<br>

      Enter Your Name: <input type="text" name="txtCust"><br>
      Enter Mobile No: <input type="text" name="txtMob"><br>

      <input type="reset">
      <input type="submit" value="BookRoom">
    </form>

  </body>
</html>
```

RBServlet

```
package mypack;
```

```
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;
import javax.ejb.EJB;
import mypack.RBBean;

@WebServlet(name = "RBServlet", urlPatterns = {"/RBServlet"})
public class RBServlet extends HttpServlet {

    @EJB RBBean obj;

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

```

throws ServletException, IOException {

    PrintWriter out = response.getWriter();

    // Form se data le rahe hain
    String rt = request.getParameter("txtType");    // Room type
    String cn = request.getParameter("txtCust");    // Customer name
    String cm = request.getParameter("txtMob");    // Mobile number

    // EJB method call kar rahe hain
    String msg = obj.roomBook(rt, cn, cm);

    // Result display kar rahe hain
    out.println("<html><body bgcolor='yellow text='red'>");
    out.println("<h1>" + msg + "</h1>");
    out.println("<h1><body></html>");
}

}

```

RBean

```

/*
 * 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 mypack;
import javax.ejb.LocalBean;
import javax.ejb.Stateless;
import java.sql.*;

@LocalBean
@Stateless
public class RBean {

    public RBean(){}
    public String roomBook(String rt, String cn, String cm){
        String msg = "";
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con = DriverManager.getConnection(
                "jdbc:mysql://localhost:3306/mydb?autoReconnect=true&useSSL=false",
                "root", "omkar");
            PreparedStatement ps = con.prepareStatement("select * from roombook where
RoomType=? and Status='Not Booked'");

```

```

        ps.setString(1, rt);
        ResultSet rs = ps.executeQuery();

        if(rs.next()){
            String rno = rs.getString(1);
            PreparedStatement ps1 = con.prepareStatement("update roombook set mob=?
where roomid=?");
            ps1.setString(1, cm);
            ps1.setString(2, rno);
            ps1.executeUpdate();

            PreparedStatement ps2 = con.prepareStatement("update roombook set status=?
where roomid=?");
            ps2.setString(1, "Booked");
            ps2.setString(2, rno);
            ps2.executeUpdate();

            PreparedStatement ps3 = con.prepareStatement("update roombook set cust=?
where roomid=?");
            ps3.setString(1, cn);
            ps3.setString(2, rno);
            ps3.executeUpdate();
            msg = "Room " + rno + " Booked. The Charges are " + rs.getString(3);
        }
        else{
            msg = "Room " + rt + " currently Not available";
        }

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

```

Pr7a

index

<!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>
  <title>TODO supply a title</title>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
<body>
  <div>TODO write content</div>
</body>
</html>

```

```
package servlet;
```

```

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;
import ejb.CountServletHitsBean;
import javax.ejb.EJB;

```

```

@WebServlet(name = "ServletClient", urlPatterns = {"/ServletClient"})
public class ServletClient extends HttpServlet {

```

```

    @EJB
    CountServletHitsBean obj;

```

```

    @Override
    protected void service(HttpServletRequest req, HttpServletResponse res) throws
ServletException, IOException {
        res.setContentType("text/html");
        PrintWriter out= res.getWriter();
        out.print("<b>Number of times this Servlet is accessed </b>: " + obj.getCount());
    }
}

```

```

package ejb;
import javax.ejb.Singleton;
import javax.ejb.LocalBean;

```

```

@Singleton
@LocalBean
public class CountServletHitsBean {

```

```

private int hitCount ;

public synchronized int getCount() {
    return hitCount++;
}
}

```

Pr 7b

```

<%@page import="ejb.MarksEntryBean"%>
<%@page import="javax.naming.InitialContext"%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<%!
    private static MarksEntryBean obj;

    public void jsplnit() {
        try {
            InitialContext ic = new InitialContext();
            obj = (MarksEntryBean) ic.lookup("java:global/prac7b/MarksEntryBean");
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
%> <%
    if (request.getParameter("InsertMarks") != null) {
        String sname;
        String marks1, marks2, marks3;
        sname = request.getParameter("sname");
        marks1 = request.getParameter("m1");
        marks2 = request.getParameter("m2");
        marks3 = request.getParameter("m3");
        obj.addMarks(sname, marks1, marks2, marks3);
        out.print("Marks entered successfully..!!!!");
    }
%> <html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8"> <title>JSP
Page</title>
    </head>
    <body>
        <h2>Enter Details</h2>
        <form name="result" method="post">

```

```

        Enter student's name: <input type='text' name="sname" /><br>
        Enter subject 1 marks: <input type="text" name="m1" /><br>
        Enter subject 2 marks: <input type="text" name="m2" /><br>
        Enter subject 3 marks: <input type='text' name="m3" /><br>
        <input type='submit' name="InsertMarks" /><br>
    </form>
</body>
</html>
marksentrybean

package ejb;

import java.sql.*;
import javax.ejb.Stateful;

@Stateful
public class MarksEntryBean {

    String sname;
    String m1, m2, m3;
    Connection con = null;
    PreparedStatement st = null;
    String query = "";
    int row = 0;
    public boolean addMarks(String sname, String m1, String m2, String m3) {
        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "root",
"omkar");
            st = con.prepareStatement(query);
            query = "insert into marks (?, ?, ?, ?)";
            st.setString(1, sname);
            st.setString(2, m1);
            st.setString(3, m2);
            st.setString(4, m3);
            row = st.executeUpdate();
            if(row > 0) {
                return true;
            } else {
                return false;
            }
        } catch (Exception e) {
            System.out.println(e);
        }
        return false;
    }
}

```

