# **Enterprise Java**

**Practical**

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**########################## Practical\_1a ###################################**

**Q)** Create a simple calculator application using servlet.

**Index.html –**

**Code: -**

<html><head><title>Calculator App </title></head><body>

<form action="CalculateServlet" >

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="+">ADDTION

<input type="radio" name="opr" value="-">SUBSTRACTION

<input type="radio" name="opr" value="\*">MULTIPLY

<input type="radio" name="opr" value="/">DIVIDE <br>

<input type="reset">

<input type="submit" value="Calculate" >

</form></body></html>

################################

**CalculateServlet.java –**

**Code: -**

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 CalculateServlet 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("<htmi><head><title>Serviet CalculatorServiet</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;

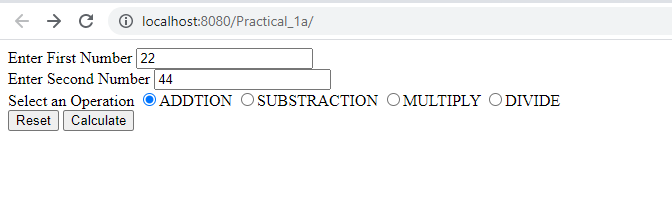
out.println("<h1> Result = "+result); out.println("</body></html>");

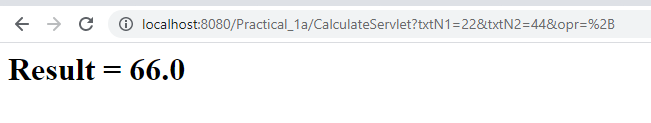
}

}

**Output: - Practical 1a)**

**Input value**





**########################### Practical 1b #################################**

**Q) Create a servlet for a Login page. If the username and password are correct then it says message "Hello<username>" else a message "login failed".**

**Code:**

**Index.html**

<html>

<head>

<title>Login Form </title>

</head>

<body>

<form action="LoginServlet" >

Enter User ID <input type="text" name="username" ><br>

Enter Password <input type="Password" name="Password"><br>

<input type="reset">

<input type="submit" value="Click to Login" >

</form>

</body

</html>Top of Form

**LoginServlet.java**

import java.io.PrintWriter;

import java.io.IOException;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

public class LoginServlet extends HttpServlet {

public void doGet(HttpServletRequest request, HttpServletResponse response)

throws IOException{

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

try (PrintWriter out = response.getWriter()) {

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

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

if(uname.equals("admin") && Password.equals("12345"))

{

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

out.println("<h1>Welcome !!! " + uname);

}

else

{

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

out.println("<h1>Login Failed");

}

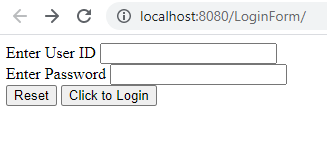
}

}

}

**Output:**

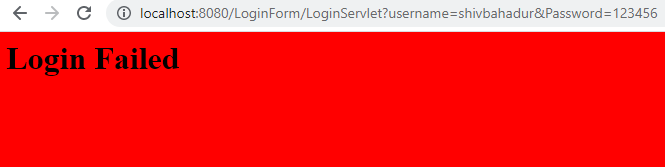
**Login form**



**Login successful**



**Login failed**



############################ Practical -1c #################################

**Q. Create a registration servlet in java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database.**

**Code:-**

**Index.html -**

<!DOCTYPE html>

<html><head><title>Registration Page</title></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 -**

import java.io.IOException;

import java.io.PrintWriter;

import java.sql.\*;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

public class RegisterServlet extends HttpServlet {

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");

try{

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

Connection con =DriverManager.getConnection("jdbc:mysql://192.168.59.129:3306/LoginDB?useSSL=false","shiv","shiv@123");

PreparedStatement pst = con.prepareStatement("insert into user values(?,?,?,?)");

pst.setString(1,id);

pst.setString(2,ps);

pst.setString(3,em);

pst.setString(4,co);

int row = pst.executeUpdate();

out.println("<h1>"+row+ " Inserted Succesfullyyyyy");

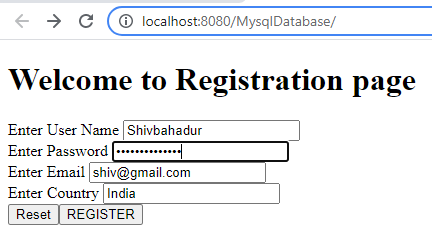
}catch(Exception e){out.println(e);}

}

}

**Output: -**

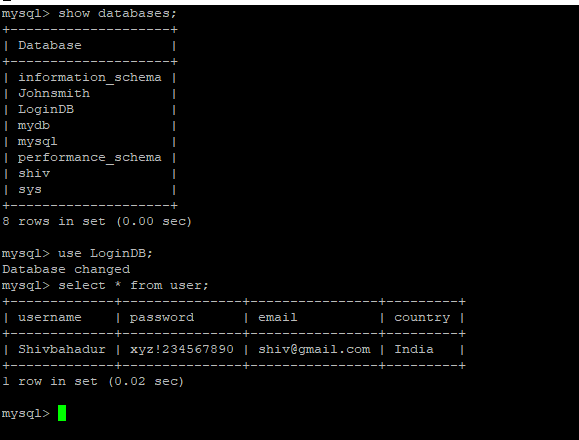
**Input Page-**

****

**Successful entry in MySQL Database -**

****

**MySQL Database Entry Output: -**



#################### **Practical\_2a** ###########################

**Q. Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed.**

**Code :-**

**index.html –**

<!DOCTYPE html>

<html>

<head>

<title>Login Form</title></head>

<form action="LoginServlet">

Enter User ID<input type="text" name="uname"><br>

Enter Password<input type="password" name="upass"><br>

<input type="reset">

<input type="submit" value="CLick to Login">

</form>

</html>

**LoginServlet.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;

import javax.servlet.RequestDispatcher;

public class LoginServlet 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>");

out.println("<title>Servlet LoginServlet</title></head>");

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

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

if(uname.equals("shivbahadur") && upass.equals("password123")){

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 –**

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.servlet.RequestDispatcher;

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><head>");

out.println("<title>Servlet LoginServlet</title></head>");

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

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

out.println("<h1> Welcome to the Servlet page !!!!!!! </h1>" + u + "Roll number 44");

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

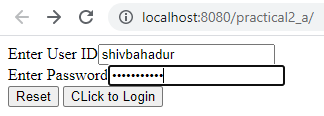
out.println("</html>");

}

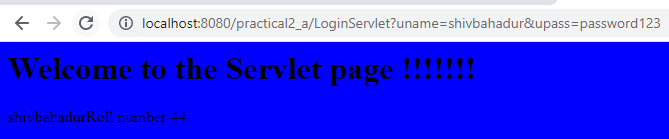
}

**Output –**

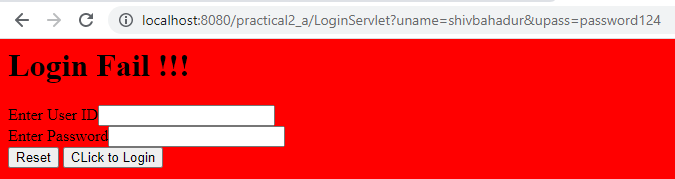
**Login page-**



**Login Success-**



**Login Failed –**



######################### Practical\_2b ########################

**Q) Create a servlet that uses Cookies to store the number of times a user has visited servlet.**

**Code:**

**Index.html**

<! DOCTYPE html>

<html>

<head>

<title>Cookie Demo</title></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**

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.servlet.http.Cookie;

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("<html><head><title>Page1</title></head>");

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

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

out.println("<h1>~ Welcome "+uname+"</h1>");

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**

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.servlet.http.Cookie;

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("<html><head><title>Page2</title></head>");

out.println("<body bgcolor=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=Page3 >Click to visit Page 3 </a></h1>");

out.println("<h1><a href=Page4 >Click to visit Page 4 </a></h1>");

out.println("<h1><a href=Page5 >Click to visit Page 5 </a></h1>");

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

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

}

}

}

**Page3.java**

Top of Form

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.servlet.http.Cookie;

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("<html><head><title>Page3</title></head>");

out.println("<body bgcolor=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=Page2 >Click to visit Page 2 </a></h1>");

out.println("<h1><a href=Page4 >Click to visit Page 4 </a></h1>");

out.println("<h1><a href=Page5 >Click to visit Page 5 </a></h1>");

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

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

}

}

}

**Page4.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;

import javax.servlet.http.Cookie;

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("<html><head><title>Page4</title></head>");

out.println("<body bgcolor=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=Page2 >Click to visit Page 2 </a></h1>");

out.println("<h1><a href=Page3 >Click to visit Page 3 </a></h1>");

out.println("<h1><a href=Page5 >Click to visit Page 5 </a></h1>");

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

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

}

}

}

**Page5.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;

import javax.servlet.http.Cookie;

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("<html><head><title>Page5</title></head>");

out.println("<body bgcolor=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=Page2 >Click to visit Page 2 </a></h1>");

out.println("<h1><a href=Page3 >Click to visit Page 3 </a></h1>");

out.println("<h1><a href=Page4 >Click to visit Page 4 </a></h1>");

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

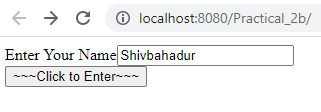
out.println("</html>");

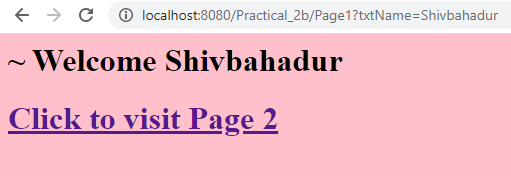
}

}

}

**Output:**









######################### Practical\_3a ###########################

**Q 3a)** . Create a Servlet application to upload and download a file.

**FileUpload -**

**Index.html -**

<!DOCTYPE html>

<html>

<head>

<form action="FileUploadServlet" method="post" enctype="multipart/form-data">

Select File to Upload:<input type="file" name ="file" id="file">

Destination <input type="text" value="D:\Shiv\Sem-5\TYBsc.IT" name="destination">

<br>

<input type="submit" value="Upload file" name="upload" id="upload">

</form>

</body>

</html>

**FileUploadServlet-**

import java.io.IOException;

import java.io.\*;

import javax.servlet.\*;

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.servlet.annotation.MultipartConfig;

import javax.servlet.http.\*;

@MultipartConfig

public class FileUploadServlet extends HttpServlet {

public void doPost(HttpServletRequest req,HttpServletResponse res) throws ServletException,

IOException

{

res.setContentType("text/html");

PrintWriter out = res.getWriter();

String path=req.getParameter("destination");

Part filePart=req.getPart("file");

String filename=filePart.getSubmittedFileName().toString();

out.print("<br><br><hr> file name: "+filename);

OutputStream os=null;

InputStream is=null;

try {

os=new FileOutputStream(new File(path+File.separator+filename));

is=filePart.getInputStream();

int read=0;

while ((read = is.read()) != -1) {

os.write(read);

}

out.println("<br>file uploaded sucessfully...!!!");

}

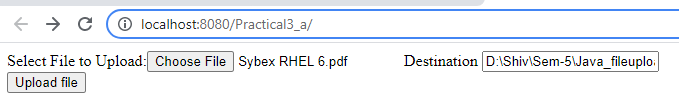
catch(FileNotFoundException e){out.print(e);}

}

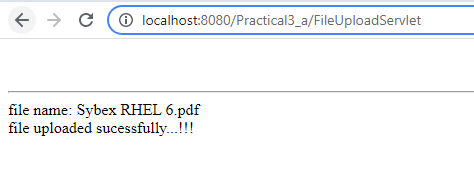
}

**Output –**

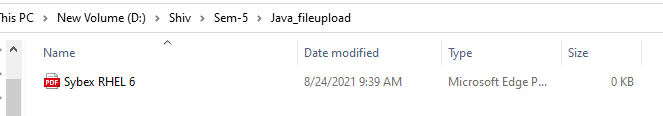
**select file and upload file -**



**Upload successfully -**



**Uploading artifacts where file been uploaded-**



**FileDownload-**

**Index.html-**

<!DOCTYPE html>

<html>

<head>

<title>File Download Page</title>

</head>

<body>

<h1>File Download Application</h1>

Click <a href="DownloadServlet?filename=IOTassignment.txt">Sample Chapter</a>

<br/><br/>

Click <a href="DownloadServlet?filename=python\_assignment1.pdf">Table Of Contents</a>

</body>

</html>

**FileDownloadServlet-**

import java.io.IOException;

import java.io.InputStream;

import java.io.PrintWriter;

import javax.servlet.ServletContext;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

public class DownloadServlet extends HttpServlet {

public void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("APPLICATION/OCTET-STREAM");

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

ServletContext context = getServletContext();

InputStream is = context.getResourceAsStream("/" + filename);

//ServletOutputStream out = response.getOutputStream(); // any of the two works

PrintWriter out=response.getWriter();

response.setHeader("Content-Disposition","attachment; filename=\"" + filename + "\""); //if comment this statement then it wl ask you about the editor with which you want to open the file

int i;

while ((i=is.read()) != -1) {

out.write(i);

}

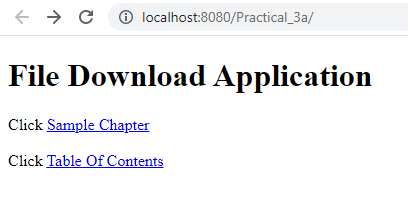
is.close();

out.close();

}

}

**Output:-**



**File Download Sucssesfully**

