Name: Rohan Babulnath Kamble

PRN: 2020420004

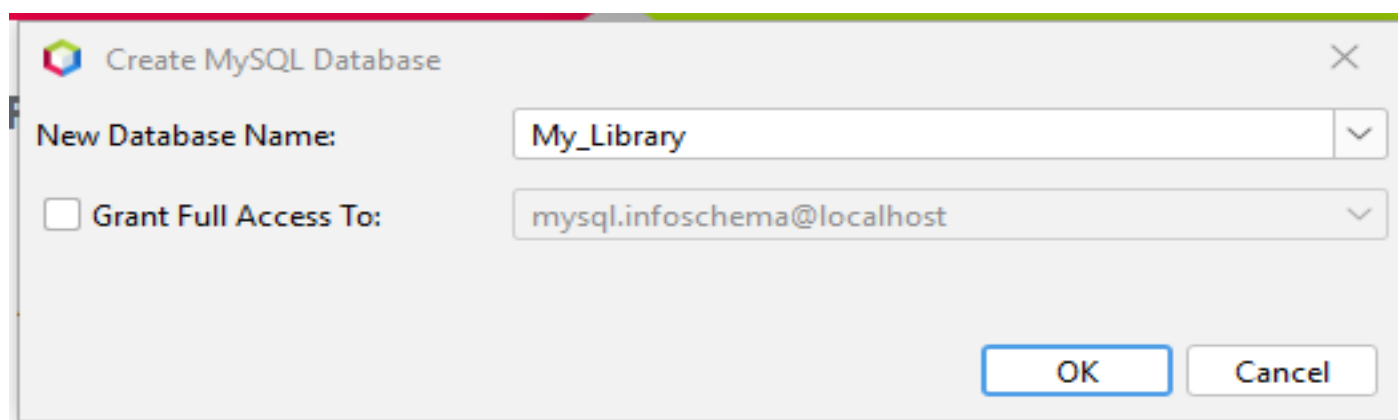**Class: S.Y.B.Sc Computer Science**

Subject Code: USCS402

Subject Name: Advanced Java Practical Journal
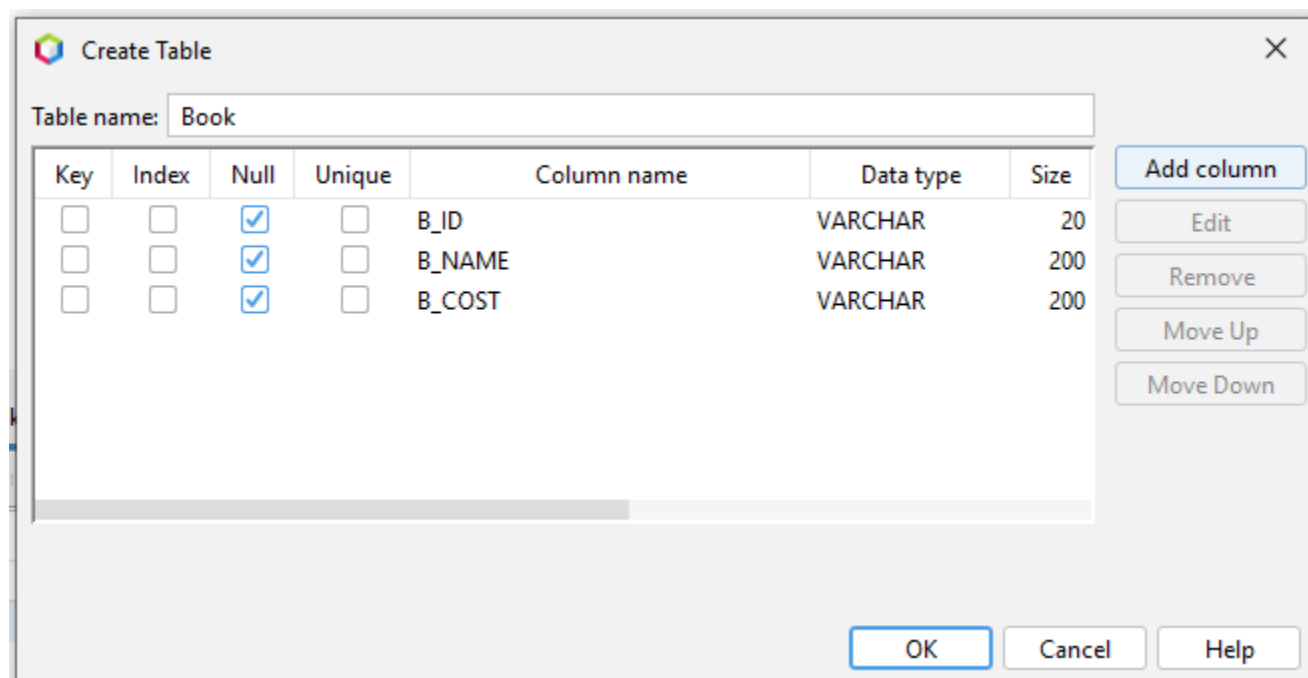
Practical 1

Aim: Design suitable database for Library Management System.

Step 1 : Create Database

Step 2 : Create Table

Add Columns(B_ID , B_NAME , B_COST)

Step 3: Insert Records

Final Output:

Practical 2

Aim: Write a Java application to demonstrate servlet life cycle.

HTML Code:

```html
<!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="clac" method="post">
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
```

```html
<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>
```

Program Code:

(Servlet Calculator Program)

```java
/*
 * 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 test;

import java.io.IOException;
```

```java
import java.io.PrintWriter;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/**
 *
 * @author user
 */
public class clac extends HttpServlet {

    /**
     * Processes requests for both HTTP <code>GET</code> and <code>POST</code>
     * methods.
     *
     * @param request servlet request
     * @param response servlet response
     * @throws ServletException if a servlet-specific error occurs
     * @throws IOException if an I/O error occurs
     */
    @Override
    protected void doPost(HttpServletRequest request,
HttpServletResponse response)
```

```java
        throws ServletException, IOException {

        double n1 = Double.parseDouble(request.getParameter("txtN1"));
        double n2 = Double.parseDouble(request.getParameter("txtN2"));
        String opr=request.getParameter("opr");

        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {

        double result =0;
        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);

            /* TODO output your page here. You may use following sample code. */
            out.println("<!DOCTYPE html>");
            out.println("<html>");
```

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

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

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

        out.println("<body>");

        out.println("<h1>Servlet clac at " +
request.getContextPath() + "</h1>");

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

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

    }

  }


}
```

Output:

Calculator Web APP

Enter First Number : 15
Enter Second Number : 5
Select an Operation ◉ ADDITION ○ SUBSTRACTION ○ MULTIPLY ○ DIVIDE
Reset   Calculate

localhost

Result = 20.0

Do you want AutoComplete to remember web form entries?
Learn about AutoComplete

Yes   No

Practical 3

Aim: Design database for student administration. Develop servlet(s) to perform CRUD operations.

Program Code:

(Develop a simple JSP application to display values obtained from the use of intrinsic(implicit/ready made) objects of various types)

```jsp
<%--
    Document   : newjsp
    Created on : Mar 14, 2022, 12:37:36 PM
    Author     : user
--%>

<%@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>
```

Use of Intrinsic Objects in JSP

Request Object

Query String <%=request.getQueryString() %>

Context Path <%=request.getContextPath() %>

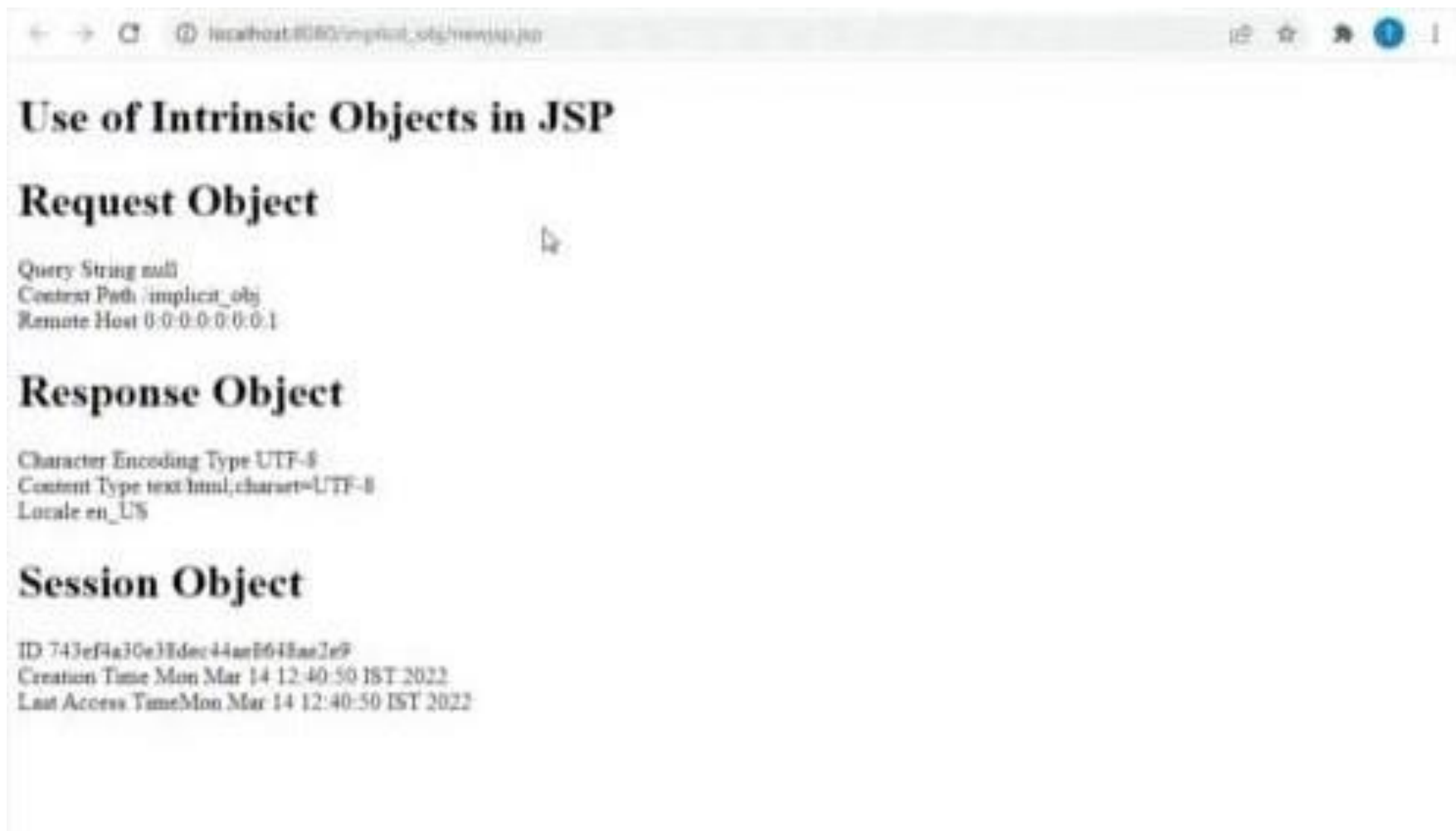Remote Host <%=request.getRemoteHost() %>

Response Object

Character Encoding Type <%=response.getCharacterEncoding() %>

Content Type <%=response.getContentType() %>

Locale <%=response.getLocale() %>

Session Object

ID <%=session.getId() %>

Creation Time <%=new java.util.Date(session.getCreationTime()) %>

Last Access Time<%=new java.util.Date(session.getLastAccessedTime()) %>

    </body>
</html>

Output:

Practical 4

Aim: Create Employees table in EMP database. Perform select, insert, update, and delete operations on Employee table using JSP.

Program Code:

steps:

Create LoginDB

```
create table user(
username varchar(20) ,
```

```
password varchar(20),
email varchar(20),
country varchar(20));
```

html code:

```
<!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="RegisterServlet" method="get">
<H1>Welcome to Registration page</H1>
Enter User Name
<input type="text" name="txtUid"><br>
```

Enter Password

<input type="password" name="txtPass">

Enter Email

<input type="text" name="txtEmail" >

Enter Country

<input type="text" name="txtCon" >

<input type="reset" >

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

</form>

   </body>

</html>

java servlet code:


```
/*

 * 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 test1;


import java.io.IOException;

import java.io.PrintWriter;

import static java.lang.System.out;
```

```java
import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import java.sql.*;

/**

 *

 * @author user

 */

public class RegisterServlet extends HttpServlet {


    /**

     * Processes requests for both HTTP <code>GET</code> and
<code>POST</code>

     * methods.

     *

     * @param request servlet request

     * @param response servlet response

     * @throws ServletException if a servlet-specific error occurs

     * @throws IOException if an I/O error occurs

     */

    @Override

    protected void doGet(HttpServletRequest request,
HttpServletResponse response)

            throws ServletException, IOException {
```

```java
        String id = request.getParameter("txtUid");
String ps = request.getParameter("txtPass");
String em = request.getParameter("txtEmail");
String co = request.getParameter("txtCon");



        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {



        Class.forName("com.mysql.jdbc.Driver");
Connection con
=DriverManager.getConnection("jdbc:mysql://localhost:3306/login
db","root","root123");
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){
```

```java
            out.println(e);


        /* TODO output your page here. You may use following
sample code. */
        out.println("<!DOCTYPE html>");

        out.println("<html>");

        out.println("<head>");

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

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

        out.println("<body>");

        out.println("<h1>Servlet RegisterServlet at " +
request.getContextPath() + "</h1>");

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

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


}
```

Output:

Welcome to Registration page

Enter User Name abc
Enter Password ••••
Enter Email abc@gmail.com
Enter Country INDIA
Reset   REGISTER

username	password	email	country
abc	1234	abc@gmail.com	INDIA

user 4

Read Only