

**UNIVERSITI MALAYSIA TERENGGANU**

**CSM3023 – WEB PROGRAMMING 2**

**BACHELOR OF COMPUTER SCIENCE (MOBILE COMPUTING) WITH HONORS**

**LAB 6 – JSP: Saving and Retrieving Data from Database**

**SEMESTER II 2023/2024**

**Prepared for:**

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**Prepared by:**

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(S66355)

Link Github :

<https://github.com/arifhaikal2001/CSM3023-LAB-6.git>

**Task 1**

Code :

SampleInsertionRecord.jsp

|  |
| --- |
| <%--  Document : SampleInsertionRecord  Created on : 31 May 2024, 11:44:17 am  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page language="java"%>  <%@page import="java.sql.\*"%>  <!DOCTYPE html>  <html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Lab 6 - Task 1</title>  </head>  <body>  <h1> Lab 6 - Task 1 - Sample Insertion records into MySQL through JSP's page</h1>    <%  int result;    //Step 1: Load JDBC driver...  Class.forName("com.mysql.jdbc.Driver");  out.println("Step 1: MySQL driver loaded...!");  %>  <br>  <%  //Step 2: Establish the connection...  String myURL = "jdbc:mysql://localhost:3306/csm3023";  Connection myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  out.println("Step 2: Database is connected...!");  %>  <br>  <%  //Step 3: Create a PreparedStatement object...  out.println("Step 3: Prepared Statements created...!");    //Prepared SQL query as a String...  String sInsertQry = "INSERT INTO FirstTable VALUE(?)";    //Call method preparedStatement  PreparedStatement myPS = myConnection.prepareStatement(sInsertQry);  %>  <br>  <%  //Assign each value to respective columns for Book's table...(C-Create)  out.println("Step 4: Perform insertion of record...!");  String name = "Welcome to access MySQL database with JSP. ...!";  myPS.setString(1, name);    result = myPS.executeUpdate();    if (result > 0){  %>  <br>  <%  out.println("Step 5: Close database connection...!");    out.println("");  out.println("Database connection is closed...!");    out.print("<p><font color=\"blue\">" + "The record : (" + name + ") is successfully created..!" + "</font></p>"); }  //Step 5: Close database connection...!  myConnection.close();  %>  </body>  </html> |

Create table on workbench



Output :





**Task 2**

Code :

insertAuthor.jsp

|  |
| --- |
| <%--  Document : insertAuthor  Created on : 31 May 2024, 12:36:52 pm  Author : McBois  --%>  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Lab 6 - Task 2</title>  </head>  <body>  <h2>Lab 6 - Task 2 - Perform creating and retrieving records via JSP page</h2>  <form action="processAuthor.jsp" method="post">  <fieldset>  <legend>Author Registration</legend>  <table>  <tr>  <td>Author No:</td>  <td><input type="text" name="authno" required></td>  </tr>  <tr>  <td>Name:</td>  <td><input type="text" name="name" required></td>  </tr>  <tr>  <td>Address:</td>  <td><input type="text" name="address" required></td>  </tr>  <tr>  <td>City:</td>  <td><input type="text" name="city" required></td>  </tr>  <tr>  <td>State:</td>  <td><input type="text" name="state" required></td>  </tr>  <tr>  <td>Zip:</td>  <td><input type="text" name="zip" required></td>  </tr>  </table>  <br>  <input type="submit" value="Submit">  <input type="reset" value="Cancel">  </form>  </body>  </fieldset>    <br><br>  <footer>  &copy;2024 ARIF HAIKAL  </footer>  </html> |

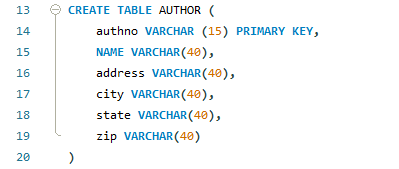
processAuthor.jsp

|  |
| --- |
| <%--  Document : processAuthor  Created on : 31 May 2024, 12:54:52 pm  Author : McBois  --%>  <%@ page contentType="text/html" pageEncoding="UTF-8"%>  <%@ page language="java"%>  <%@ page import="java.sql.\*" %>  <jsp:useBean id="myAuthor" class="lab6.com.Author" scope="request"/>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Process Author</title>  </head>  <body>  <h1>Lab 6 - Task 2 - Perform creating and retrieving records via JSP page</h1>    <jsp:setProperty name="myAuthor" property="\*"/>    <%  int result;  Class.forName("com.mysql.jdbc.Driver");  String myURL = "jdbc:mysql://localhost:3306/csm3023";  Connection myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  String sInsertQry = "INSERT INTO author(authno, name, address, city, state, zip) VALUES(?, ?, ?, ?, ?, ?)";  PreparedStatement myPS = myConnection.prepareStatement(sInsertQry);  myPS.setString(1, myAuthor.getAuthno());  myPS.setString(2, myAuthor.getName());  myPS.setString(3, myAuthor.getAddress());  myPS.setString(4, myAuthor.getCity());  myPS.setString(5, myAuthor.getState());  myPS.setString(6, myAuthor.getZip());  result = myPS.executeUpdate();  if (result > 0){  out.println("<p style='color:blue;'>\tRecord successfully added into Author table...!</p>");  out.print("<p style='color:blue;'>" + "Record with author no " + myAuthor.getAuthno() + " successfully created..!" + "</p>");  out.print("<p style='color:blue;'>" + "Details of record are; " + "</p>");  out.print("<p style='color:blue;'>Name : " + myAuthor.getName() + "</p>");  out.print("<p style='color:blue;'>Address : " + myAuthor.getAddress() + "</p>");  out.print("<p style='color:blue;'>City : " + myAuthor.getCity() + "</p>");  out.print("<p style='color:blue;'>State : " + myAuthor.getState() + "</p>");  out.print("<p style='color:blue;'>Zip : " + myAuthor.getZip() + "</p>");  //Step 5: Close database connection...!  System.out.println("Step 5: Close database connection...!");  myConnection.close();  System.out.println(" ");  System.out.println("Database connection is closed...!");  }  %>  </body>  </html> |

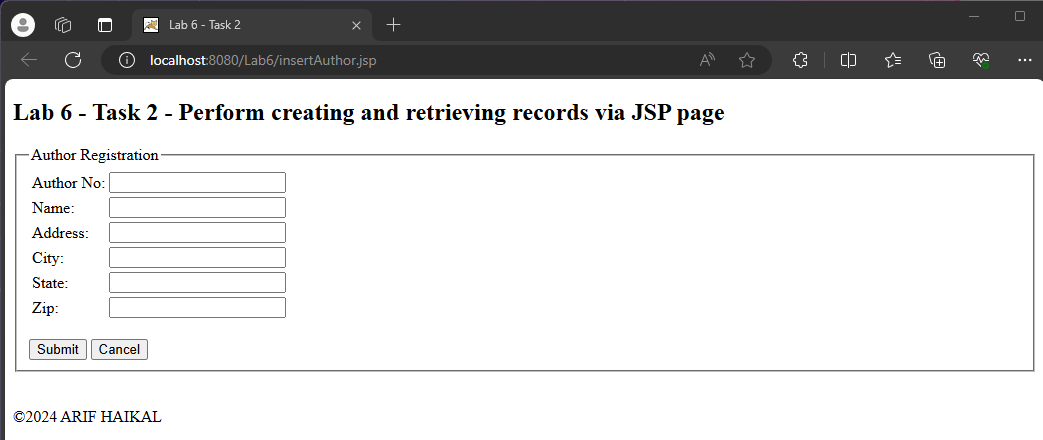
Author.java

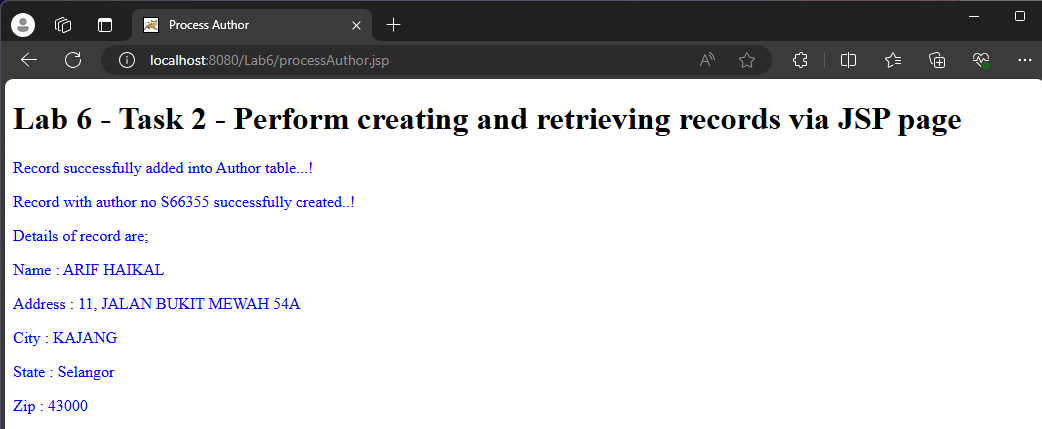
|  |
| --- |
| package lab6.com;  /\*\*  \*  \* @author McBois  \*/  public class Author {    private String authno;  private String name;  private String address;  private String city;  private String state;  private String zip;  public String getAuthno() {  return authno;  }  public void setAuthno(String authno) {  this.authno = authno;  }  public String getName() {  return name;  }  public void setName(String name) {  this.name = name;  }  public String getAddress() {  return address;  }  public void setAddress(String address) {  this.address = address;  }  public String getCity() {  return city;  }  public void setCity(String city) {  this.city = city;  }  public String getState() {  return state;  }  public void setState(String state) {  this.state = state;  }  public String getZip() {  return zip;  }  public void setZip(String zip) {  this.zip = zip;  }  } |

Create table on workbench



Output :







**Task 3**

Code :

insertStudent.jsp

|  |
| --- |
| <%--  Document : insertStudent  Created on : 1 Jun 2024, 4:14:38 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Student Registration</title>  </head>  <body>  <fieldset>  <legend>Student Registration</legend>  <form action="processStudent.jsp" method="post">  <table>  <tr>  <td>  <label for="stuno">Student No</label>  </td>  <td>  <input type="text" id="stuno" name="stuno" placeholder="E.g.: UKXXXXXX">  </td>  </tr>  <tr>  <td>  <label for="name">Name</label>  </td>  <td>  <input type="text" id="name" name="name" placeholder="Enter your name">  </td>  </tr>  <tr>  <td><label for="program">Program</label></td>  <td>  <select id="program" name="program">  <option value="BSc. Soft. Eng.">BSc. Soft. Eng.</option>  <option value="BSc. with IM">BSc. with IM</option>  <option value="BSc. in Networking">BSc. in Networking</option>  <option value="BSc. in Robotics">BSc. in Robotics</option>  </select>  </td>  </tr>  <tr>  <td>  <br>  <button type="submit" value="Submit">Submit</button>  <button type="reset" value="Reset">Cancel</button>  </td>  </tr>  </table>  </form>  </fieldset>  <br>  <footer>  &copy;2024 ARIF HAIKAL  </footer>  </body>  </html> |

processStudent.jsp

|  |
| --- |
| <%--  Document : processStudent  Created on : 1 Jun 2024, 4:37:38 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page language="java"%>  <%@page import="java.sql.\*"%>  <%@page errorPage="errorStudent.jsp"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>processStudent</title>  </head>  <body>  <jsp:useBean id="myStudent" class="lab6.com.Student" scope="request"/>  <jsp:setProperty name="myStudent" property="\*"/>    <%  int result;    //Step 1: Load JDBC driver..  Class.forName("com.mysql.cj.jdbc.Driver");  System.out.println("Step 1: MySQL driver loaded...!");    //Step 2: Establish the connection  String myURL = "jdbc:mysql://localhost:3306/csm3023";  Connection myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  System.out.println("Step 2: Database is connected...!");    //Step 3: Create a PreparedStatement object...  System.out.println("Step3: Prepared Statements created...!");  String sInsertQry = "INSERT INTO student(stuno, stuname, stuprogram) VALUES(?, ?, ?)";  System.out.println("\tSQL Query: " + sInsertQry);    //Call method preparedStatement  PreparedStatement myPS = myConnection.prepareStatement(sInsertQry);    //Assign each value to respective columns for Student's table.. (C-Create)  myPS.setString(1, myStudent.getStuno());  myPS.setString(2, myStudent.getName());  myPS.setString(3, myStudent.getProgram());    result = myPS.executeUpdate();  if (result > 0){  out.println("\tRecord successfully added into Student table...!");  out.print("<p style='color:blue;'>" + "Record with student no " + myStudent.getStuno()  + " successfully created..!" + "</p>");  out.print("<p style='color:blue;'>" + "Details of record are; " + "</p>");  out.print("<p style='color:blue;'>Student ID : " + myStudent.getStuno() + "</p>");  out.print("<p style='color:blue;'>Name : " + myStudent.getName() + "</p>");  out.print("<p style='color:blue;'>Program : " + myStudent.getProgram() + "</p>");  }  //Step5: close database connection..!  System.out.println("Step 5: Close database connection..!");  myConnection.close();  System.out.println(" ");  System.out.println("Database connection is closed..!");  %>  </body>  </html> |

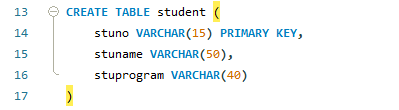
errorStudent.jsp

|  |
| --- |
| <%--  Document : errorStudent.jsp  Created on : 1 Jun 2024, 4:41:04 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>errorStudent</title>  </head>  <body>  <form id="errorFrm" action="insertStudent.jsp" method="post">  <h1>Lab 6 - Task 1 - Perform creating and retrieving records via JSP page</h1>  <p>Error occur when inserting record...!</p>  <p>Error Message: ${exception.getMessage()}</p>  <br>  </form>  </body>  </html> |

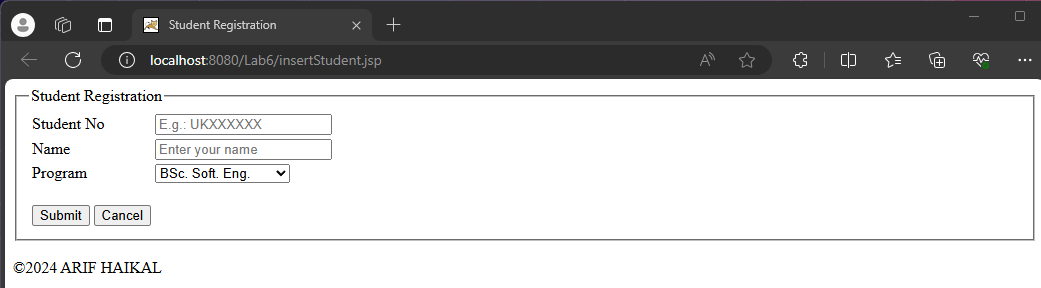
student.java

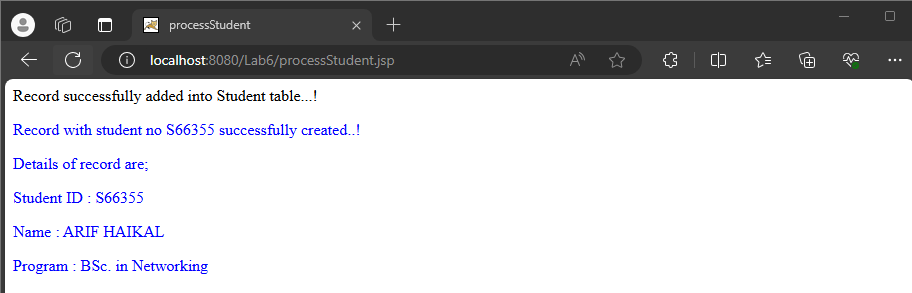
|  |
| --- |
| package lab6.com;  import java.util.regex.Matcher;  import java.util.regex.Pattern;  /\*\*  \*  \* @author McBois  \*/  public class Student {    private String stuno;  private String name;  private String program;  public String getStuno() {  Pattern pt = Pattern.compile("[A-Z0-9]\*");  Matcher mt = pt.matcher(stuno);  boolean bl = mt.matches();  String valid = "";  String invalid = "Invalid input please re-enter!";  if(bl == true){  valid = stuno;  }else{  valid = invalid;  }  return valid;  }  public void setStuno(String stuno) {  this.stuno = stuno;  }  public String getName() {  return name;  }  public void setName(String name) {  this.name = name;  }  public String getProgram() {  return program;  }  public void setProgram(String program) {  this.program = program;  }  } |

Create table on workbench

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Output :







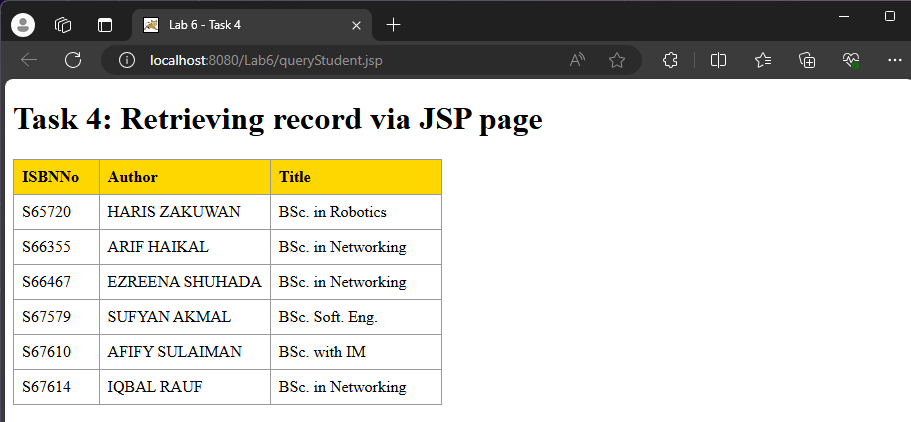
**Task 4**

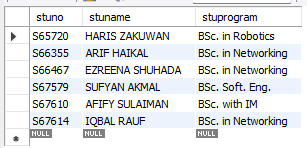
Code :

queryStudent.jsp

|  |
| --- |
| <%--  Document : queryStudent  Created on : 1 Jun 2024, 5:11:38 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page import="java.sql.\*"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Lab 6 - Task 4</title>  <style>  table{  border-collapse: collapse;  }  td, th{  border: 1px solid #999;  padding: 0.5rem;  text-align: left;  }  th{  background: gold;  }  </style>  </head>  <body>  <h1>Task 4: Retrieving record via JSP page</h1>    <%  out.print("<table>");  out.print("<thead>");  out.print("<tr>");  out.print("<th>" + "ISBNNo" + "</th>");  out.print("<th>" + "Author" + "</th>");  out.print("<th>" + "Title" + "</th>");  out.print("</tr>");  out.print("</thead>");  out.print("<tbody>");  %>  <%  Class.forName("com.mysql.cj.jdbc.Driver");  System.out.println("Step 1: MySQL driver loaded...!");    String myURL = "jdbc:mysql://localhost:3306/csm3023";  Connection myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  System.out.println("Step 2: Database is connected...!");    Statement myStatement = myConnection.createStatement();    String myQuery = "SELECT \* FROM student";  ResultSet myResultSet = myStatement.executeQuery(myQuery);    while(myResultSet.next()){  out.print("<tr>");  out.print("<td width=\"20%\">" + myResultSet.getString(1) + "</td>");  out.print("<td width=\"40%\">" + myResultSet.getString(2) + "</td>");  out.print("<td width=\"40%\">" + myResultSet.getString(3) + "</td>");  out.print("</tr>");  }  System.out.println("Step 5: Close database connection..!");  myConnection.close();  System.out.println(" ");  System.out.println("Database connection is closed..!");    out.print("</tbody>");  out.print("</table>");  %>  </body>  </html> |

Output :





**Task 5**

Code :

registerMarathon.jsp

|  |
| --- |
| <%--  Document : registerMarathon  Created on : 1 Jun 2024, 10:33:42 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Marathon Registration</title>  </head>  <body>  <h1>Marathon Registration</h1>  <fieldset>  <legend>Marathon Registration</legend>  <form action="processMarathon.jsp" method="post">  <table>  <tr>  <td>  <label for="icno">IC No</label>  </td>  <td>  <input type="text" id="icno" name="icno" placeholder="E.g.: 921110-10-2514">  </td>  </tr>  <tr>  <td>  <label for="name">Name</label>  </td>  <td>  <input type="text" id="name" name="name" placeholder="Enter your name">  </td>  </tr>  <tr>  <td>  <label for="category">Category</label>  </td>  <td>  <select id=category name="category">  <option value="5 KM">5 KM</option>  <option value="7 KM">7 KM</option>  <option value="10 KM">10 KM</option>  </select>  </td>  </tr>  <tr>  <td>  <br>  <button type="submit" value="Submit">Submit</button>  <button type="reset" value="Reset">Cancel</button>  </td>  </tr>  </table>  </form>  </fieldset>  <br>  <footer>  &copy;2024 ARIF HAIKAL  </footer>  </body>  </html> |

processMarathon.jsp

|  |
| --- |
| <%--  Document : processMarathon  Created on : 1 Jun 2024, 10:42:55 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page language="java"%>  <%@page import="java.sql.\*"%>  <%@page import="lab6.com.Database"%>  <%@page import="lab6.com.Marathon"%>  <%@page import="lab6.com.MarathonDAO"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Marathon</title>  </head>  <body>  <jsp:useBean id="myMarathon" class="lab6.com.Marathon" scope="request"/>  <jsp:setProperty name="myMarathon" property="\*"/>    <%  int result;  //Step 1: create Database object...  Database myDB = new Database();    MarathonDAO object1 = new MarathonDAO();    //Step 2: Add the records...  result = object1.addDetails(myMarathon);    //Step 3: Determine whether the transactions is success..  if(result > 0){  System.out.println("\tRecord successfully added into Book's table...!");  out.print("<p style='color:red;'>" + "Record with IC No " + myMarathon.getIcno() +  " successfully created..!" + "</p>");  out.print("<p style='color:red;'>" + "Details of record are: " + "</p>");  out.print("<p style='color:red;'>Ic NO : " + myMarathon.getIcno() + "</p>");  out.print("<p style='color:red;'>Name : " + myMarathon.getName() + "</p>");  out.print("<p style='color:red;'>Category : " + myMarathon.getCategory() + "</p>");  }else{  out.print("<p style='color:red;'>Crazyy this is an error! maybe you already registered before?</p>");  }    //Step 4: Close database connection..!  System.out.println("Step 5: Close database connection...!");  myDB.closeConnection();  System.out.println(" ");  System.out.println("Database connection is closed...!");  %>  </body>  <br>  <footer>  &copy;2024 ARIF HAIKAL  </footer>  </html> |

Marathon.java

|  |
| --- |
| package lab6.com;  /\*\*  \*  \* @author McBois  \*/  public class Marathon {    private String icno;  private String name;  private String category;  public String getIcno() {  return icno;  }  public void setIcno(String icno) {  this.icno = icno;  }  public String getName() {  return name;  }  public void setName(String name) {  this.name = name;  }  public String getCategory() {  return category;  }  public void setCategory(String category) {  this.category = category;  }  } |

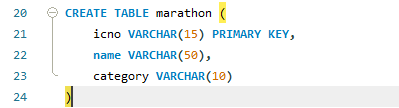
Database.java

|  |
| --- |
| package lab6.com;  import java.sql.Connection;  import java.sql.DriverManager;  import java.sql.SQLException;  import java.util.logging.Level;  import java.util.logging.Logger;  import lab6.com.Marathon;  /\*\*  \*  \* @author McBois  \*/  public class Database {    private static Connection myConnection = null;  private static String myURL = myURL = "jdbc:mysql://localhost:3306/csm3023";  private int result = 0;    public static Connection getConnection() throws ClassNotFoundException{  if(myConnection != null){  return myConnection;  }  else try{  Class.forName("com.mysql.cj.jdbc.Driver");  myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  }  catch(SQLException e){  e.printStackTrace();  }  return myConnection;  }    public void closeConnection() throws ClassNotFoundException  {  try{  myConnection.close();  }  catch(SQLException e){  e.printStackTrace();  }  }  } |

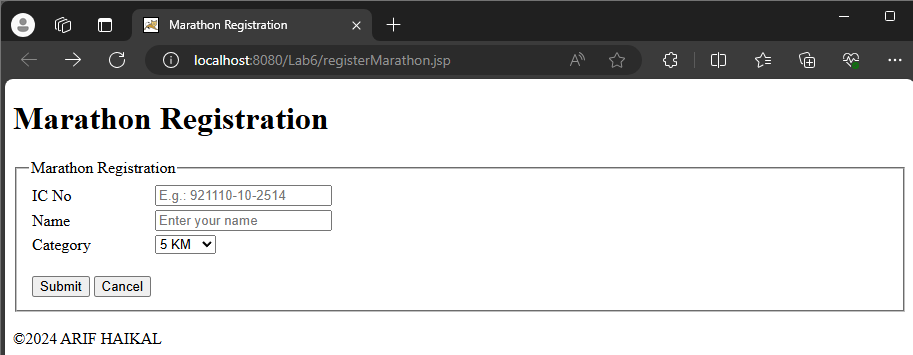
MarathonDAO.java

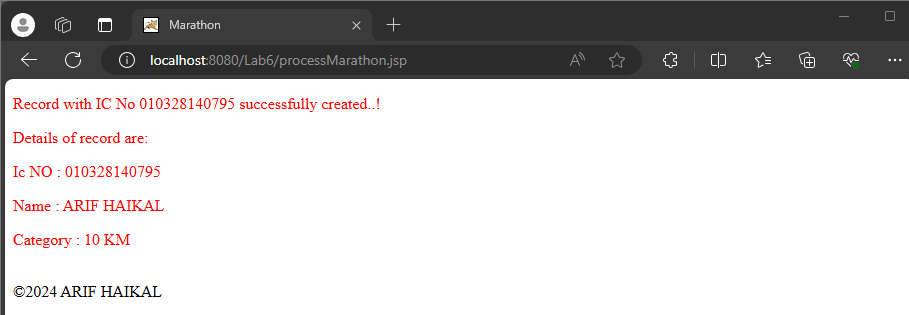
|  |
| --- |
| package lab6.com;  import java.sql.Connection;  import java.sql.PreparedStatement;  import java.sql.SQLException;  import lab6.com.Database;  /\*\*  \*  \* @author McBois  \*/  public class MarathonDAO {    private Connection connection;  private int result = 0;  public MarathonDAO() throws ClassNotFoundException{  connection = Database.getConnection();  }  public int addDetails(Marathon marathon){  try{  String mySQL = "INSERT INTO marathon(icno, name, category) VALUES (?, ?, ?)";  PreparedStatement preparedStatement = connection.prepareStatement(mySQL);    System.out.println("IC no = " + marathon.getIcno());  System.out.println("Name = " + marathon.getName());  System.out.println("Category= " + marathon.getCategory());    //Parameters  preparedStatement.setString(1, marathon.getIcno());  preparedStatement.setString(2, marathon.getName());  preparedStatement.setString(3, marathon.getCategory());  result = preparedStatement.executeUpdate();  }catch(SQLException e){  e.printStackTrace();  }  return result;  }  } |

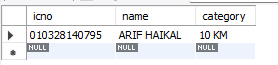
Create table on workbench



Output :

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**Exercise**

Code :

insertUser.html

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>  <title>Exercise</title>  <meta charset="UTF-8">  <meta name="viewport" content="width=device-width, initial-scale=1.0">  </head>  <body>  <h1>User Registration</h1>  <fieldset>  <legend>User Registration</legend>  <form action="processUser.jsp">  <table>  <tr>  <td>  <label for="username">Username</label>  </td>  <td>  <input type="text" id="username" name="username" placeholder="Enter a username">  </td>  </tr>  <tr>  <td>  <label for="password">Password</label>  </td>  <td>  <input type="password" id="password" name="password" placeholder="Enter a password">  </td>  </tr>  <tr>  <td>  <label for="firstname">Firstname</label>  </td>  <td>  <input type="text" id="firstname" name="firstname" placeholder="E.g.:Jamal">  </td>  </tr>  <tr>  <td>  <label for="lastname">Lastname</label>  </td>  <td>  <input type="text" id="lastname" name="lastname" placeholder="E.g.:bin Abdullah">  </td>  </tr>  <tr>  <td>  <br>  <button type="submit" value="Submit">Submit</button>  <button type="reset" value="Reset">Cancel</button>  </td>  </tr>  </table>  </form>  </fieldset>  </body>  <br>  <footer>  &copy;2024 ARIF HAIKAL  </footer>  </html> |

processUser.jsp

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| --- |
| <%--  Document : processUser  Created on : 1 Jun 2024, 11:51:34 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page language="java"%>  <%@page import="java.sql.\*"%>  <%@page errorPage="login.jsp"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Exercise</title>  </head>  <body>  <jsp:useBean id="myUser" class="lab6.com.User" scope="request"/>  <jsp:setProperty name="myUser" property="\*"/>    <%  int result;    //Step 1: Load JDBC driver..  Class.forName("com.mysql.cj.jdbc.Driver");  System.out.println("Step 1: MySQL driver loaded...!");    //Step 2: Establish the connection  String myURL = "jdbc:mysql://localhost:3306/csm3023";  Connection myConnection = DriverManager.getConnection(myURL, "root", "admin@123");  System.out.println("Step 2: Database is connected...!");    //Step 3: Create a PreparedStatement object...  System.out.println("Step3: Prepared Statements created...!");  String sInsertQry = "INSERT INTO userprofile(username, password, firstname, lastname) VALUES(?, ?, ?, ?)";  System.out.println("\tSQL Query: " + sInsertQry);    //Call method preparedStatement  PreparedStatement myPS = myConnection.prepareStatement(sInsertQry);    //Assign each value to respective columns for Student's table.. (C-Create)  myPS.setString(1, myUser.getUsername());  myPS.setString(2, myUser.getPassword());  myPS.setString(3, myUser.getFirstname());  myPS.setString(4, myUser.getLastname());    result = myPS.executeUpdate();  if (result > 0){  out.println("\tRecord successfully added into User table...!");  out.print("<p>" + "Record with Username " +myUser.getUsername()  + " successfully created..!" + "</p>");  out.print("<p>" + "Details of record are; " + "</p>");  out.print("<p>Username : " + myUser.getUsername() + "</p>");  out.print("<p>Firstname : " + myUser.getFirstname() + "</p>");  out.print("<p>Lastname : " + myUser.getLastname() + "</p>");  }  //Step5: close database connection..!  System.out.println("Step 5: Close database connection..!");  myConnection.close();  System.out.println(" ");  System.out.println("Database connection is closed..!");  %>  </body>  </html> |

login.jsp

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| <%--  Document : login  Created on : 1 Jun 2024, 11:51:43 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Exercise</title>  </head>  <body>  <h1>Login</h1>  <fieldset>  <legend>User Login</legend>  <form action="doLogin.jsp">  <table>  <tr>  <td>  <label for="username">Username</label>  </td>  <td>  <input type="text" id="username" name="username" placeholder="Enter a username">  </td>  </tr>  <tr>  <td>  <label for="password">Password</label>  </td>  <td>  <input type="password" id="password" name="password" placeholder="Enter a password">  </td>  </tr>  <tr>  <td>  <button type="submit" value="Submit">Submit</button>  <button type="reset" value="Reset">Cancel</button>  </td>  </tr>  </table>  </form>  </fieldset>  <%  String errorMessage = request.getParameter("error");  if (errorMessage != null && !errorMessage.isEmpty()) {  out.println("<p style='color: red'>" + errorMessage + "</p>");  }  %>  </body>  </html> |

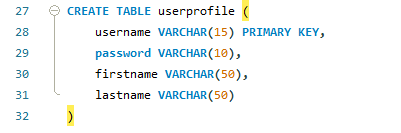
doLogin.jsp

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| <%--  Document : doLogin  Created on : 1 Jun 2024, 11:51:48 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@ page import="java.sql.\*, lab6.com.User" %>  <%@ page import="java.io.\*, java.util.\*" %>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Exercise</title>  </head>  <body>  <h1>Login</h1>  <%  // Retrieve username and password from the request  String username = request.getParameter("username");  String password = request.getParameter("password");  // Check if username and password are not null and not empty  if (username != null && !username.isEmpty() && password != null && !password.isEmpty()) {  // Establish database connection  Connection conn = null;  PreparedStatement pstmt = null;  ResultSet rs = null;  try {  Class.forName("com.mysql.cj.jdbc.Driver");  String myURL = "jdbc:mysql://localhost:3306/csm3023";  conn = DriverManager.getConnection(myURL, "root", "admin");  // Query to check if the username and password are valid  String query = "SELECT \* FROM userprofile WHERE username = ? AND password = ?";  pstmt = conn.prepareStatement(query);  pstmt.setString(1, username);  pstmt.setString(2, password);  rs = pstmt.executeQuery();  if (rs.next()) {  // If user exists and credentials are valid, redirect to main.jsp  User user = new User();  user.setUsername(rs.getString("username"));  user.setFirstname(rs.getString("firstname"));  user.setLastname(rs.getString("lastname"));  // Set user object in session for later use  session.setAttribute("user", user);  response.sendRedirect("main.jsp");  } else {  // If invalid username or password, redirect back to login.jsp with error message  response.sendRedirect("login.jsp?error=Invalid+username+or+password");  }  } catch (Exception e) {  e.printStackTrace();  } finally {  // Close resources  if (rs != null) rs.close();  if (pstmt != null) pstmt.close();  if (conn != null) conn.close();  }  } else {  // If username or password is empty, redirect back to login.jsp with error message  response.sendRedirect("login.jsp?error=Username+and+password+are+required");  }  %>  </body>  </html> |

main.jsp

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| <%--  Document : main  Created on : 1 Jun 2024, 11:51:57 pm  Author : McBois  --%>  <%@page contentType="text/html" pageEncoding="UTF-8"%>  <%@page language="java"%>  <%@ page import="lab6.com.User" %>  <%@ page import="java.io.\*, java.util.\*" %>  <!DOCTYPE html>  <html>  <head>  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  <title>Exercise</title>  </head>  <body>  <%  // Retrieve user object from session  lab6.com.User user = (lab6.com.User) session.getAttribute("user");  // Check if user object exists in session  if (user != null) {  %>  <h1>Welcome, <%= user.getFirstname() %> <%= user.getLastname() %></h1>  <p>Your username is: <%= user.getUsername() %></p>  <p><a href="logout.jsp">Logout</a></p>  <%  } else {  // If user object does not exist in session, redirect to login page  response.sendRedirect("login.jsp");  }  %>  </body>  </html> |

Create table on workbench



Output :

