**Labsheet13**

**Module 3 – Java Database Connectivity**

**Q3**. **Using JDBC perform the following database operations for user table created above**

**i) insert**

**ii) update**

**iii) delete**

**iv) select**

**Algorithm :**

**Step1: GET the DRIVER ready**

**Import** *java.sql*.\* to use JDBC interfaces and classes

**Invoke Class.forName(“driver name);**

Mysql driver

com.mysql.jdbc.Driver for mysql version below 8

com.mysql.cj.jdbc.Driver for mysql version 8 and above

**Step2: GET the Connection path**

**Invoke DriverManager.getConnection(“url to database”, “username”,”password”)**

For MySql

Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/db", “username”,”pwd”);

**Step3: GET the SQL prompt through createStatement() or prepareStatement()**

Statement sprompt = con.createStatement(); // for static query

PreparedStatement dprompt = con.prepareStatement(“dml query”);

// for dynamic query

**Step4: Execute Query through SQL Prompt**

int result=sprompt.execute(“DDL query”); or

ResultSet rs=sprompt.executeQuery(“DQL query”); or

int result = sprompt.executeUpdate(“DML query”); or

int result = dprompt.executeUpdate(); // for DML

**Step5: Process ResultSet or result to console**

**Solution :**

**i. Implementing Insert Statement**

// Java program to illustrate inserting to the Databasepackage studentsBCA;

**package** studentsBCA;

**import** java.sql.Connection;

**import** java.sql.DriverManager;

**import** java.sql.SQLException;

**import** java.sql.Statement;

**public** **class** TestInsert {

**public** **static** **void** main(String[] args) **throws** ClassNotFoundException, SQLException {

//user values

String id = "131";

String pwd = "apple";

String fullname = "Rithik Kumar";

String email = "rithik@pu.in";

//1,Loading your driver

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

//2. Register the driver

//3.Create connection object

Connection con = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/userdb", "root", "root");

//4.Prepare statement object

Statement stmt=con.createStatement();

//5.Prepare query

String q1 = "insert into user values('"+id+"', '"+pwd+"', '"+fullname+ "', '"+email+"')";

**int** x = stmt.executeUpdate(q1);

**if** (x > 0)

System.***out***.println("Successfully Inserted");

**else**

System.***out***.println("Insert Failed");

con.close();

}

}

**Output :**

Successfully Inserted

**ii) Implementing Update Statement**

// Java program to illustrate updating the Database

**package** studentsBCA;

//Java program to illustrate updating the Database

**import** java.sql.\*;

**public** **class** TestUpdate{

**public** **static** **void** main(String args[]) **throws** Exception {

String id = "123";

String pwd = "123456";

String newPwd = "tiger";

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

Connection con = DriverManager.*getConnection*

("jdbc:mysql://localhost:3306/userdb", "root", "root");

Statement stmt = con.createStatement();

String q1 = "UPDATE user set pwd = '" + newPwd +"' WHERE id = '" +id+ "'AND pwd = '" + pwd + "'";

**int** x = stmt.executeUpdate(q1);

**if** (x > 0)

System.***out***.println("Password Successfully Updated");

**else**

System.***out***.println("ERROR OCCURED :(");

con.close();

}

}

**Output :**

Password Successfully Updated

**iii) Implementing Delete Statement**

// Java program to illustrate deleting from Database

**package** studentsBCA;

//Java program to illustrate deleting from Database

**import** java.sql.\*;

**public** **class** TestDelete{

**public** **static** **void** main(String args[]) **throws** Exception {

String id = "123";

String pwd = "tiger";

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

Connection con=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/userdb", "root", "root");

Statement stmt = con.createStatement ();

//Deleting from database

String q1 = "DELETE from user WHERE id = '" + id +"' AND pwd = '" + pwd + "'";

**int** x = stmt.executeUpdate(q1);

**if** (x > 0)

System.***out***.println("One User Successfully Deleted");

**else**

System.***out***.println("ERROR OCCURED :(");

con.close();

}

}

Output :

One User Successfully Deleted

**iv) Implementing Select Statement**

**package** studentsBCA;

**import** java.sql.\*;

**public** **class** TestSelect{

**public** **static** **void** main(String args[]) **throws** Exception {

String id = "124";

String pwd = "apple";

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

Connection con = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/userdb", "root", "root");

Statement stmt = con.createStatement();

// SELECT query

String q1 = "select \* from user WHERE id = '" + id +"' AND pwd = '" + pwd + "'";

ResultSet rs = stmt.executeQuery(q1);

**if** (rs.next()) {

System.***out***.println("User-Id : " + rs.getString(1));

System.***out***.println("Full Name :" + rs.getString(3));

System.***out***.println("E-mail :" + rs.getString(4));

}

**else**

System.***out***.println("No such user id is already registered");

con.close();

}

}

Output:

User-Id : 124

Full Name :Rithik Kumar

E-mail :rithik@pu.in