**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 Database

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

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

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

String id = "20211COM0001";

String pwd = "Forest#321";

String fullname = "Akash Mishra";

String email = "akash@pu.in";

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

Connection con = DriverManager.*getConnection*

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

Statement stmt = con.createStatement();

// Inserting data in database

String q1 = "insert into userid 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 Registered

**ii) Implementing Update Statement**

// Java program to illustrate updating the Database

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

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

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

String id = "20211COM0001";

String pwd = "Forest#321";

String newPwd = "Zia123";

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

Connection con = DriverManager.*getConnection*

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

Statement stmt = con.createStatement();

// Updating database

String q1 = "UPDATE userid 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

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

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

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

String id = "20211COM0001";

String pwd = "Zia123";

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

Connection con=DriverManager.*getConnection*

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

Statement stmt = con.createStatement();

// Deleting from database

String q1 = "DELETE from userid 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