CS313 - Lab 6

1. Select id,name,grade,course_id of the students who have secured A+ grade in the semester Fall and year 2009.

```java
2  * @author shiru
5
6  import java.sql.*;
7
8  public class Lab6Q1 {
9      public static void main(String[] args) {
10
11         String dbURL = "jdbc:postgresql://localhost:5432/university";
12         String user = "postgres";
13         String pass = "#######";
14
15         try (Connection connection = DriverManager.getConnection(dbURL,user,pass))
16         {
17  //        System.out.println("Connected to PostgreSQL database!");
18
19         Statement statement = connection.createStatement();
20
21         String query = "Select student.ID, student.name, takes.grade, takes.course_id"
22                 + " FROM student,takes"
23                 + " WHERE student.ID=takes.ID AND takes.semester='Fall' AND takes.year= 2009 AND takes.grade='A+' ";
24
25         System.out.println(query);
26         ResultSet resultSet = statement.executeQuery(query);
27
28         while (resultSet.next())
29         {
30             System.out.printf("%s %s %s %s \n", resultSet.getString("id"), resultSet.getString("name"), resultSet.getString("grade"
31         }
32
33         }
34         catch (SQLException e)
35         {
36             System.out.println("Connection failure.");
37
38             e.printStackTrace();
39         }
40     }
41 }
```

```
Console
<terminated> Lab6Q1 [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (10-Oct-2020, 3:42:41 pm – 3:42:43 pm)
Select student.ID, student.name, takes.grade, takes.course_id FROM student,takes WHERE student.
20985 Wunderli A+ 304
94569 Yip A+ 960
27094 Gur A+ 304
1232 Marcus A+ 304
16528 Angs A+ 105
61127 Tuki A+ 237
19342 Bouzeghoub A+ 242
79210 Sanchez A+ 237
92040 Alexandri A+ 334
85575 Lal A+ 242
58413 Xiong A+ 334
4173 Erol A+ 237
18809 Benson A+ 960
60984 Emms A+ 304
3005 Ibrahim A+ 237
43981 Quimby A+ 960
66763 Wilks A+ 486
9183 Sutter A+ 304
56755 Paul A+ 242
8140 Paddock A+ 105
```

2. Insert a new row into the instructor table using preparedStatement.

```java
2  * @author shiru
5
6  import java.sql.*;
7
8  public class Lab6Q2 {
9      public static void main(String[] args) {
10
11         String dbURL = "jdbc:postgresql://localhost:5432/university";
12         String user = "postgres";
13         String pass = "#######";
14
15         try (Connection connection = DriverManager.getConnection(dbURL,user,pass))
16         {
17 //         System.out.println("Connected to PostgreSQL database!");
18
19             PreparedStatement statement = connection.prepareStatement("insert into instructor values(?, ?, ?, ?)")
20             statement.setInt(1, 55555);
21             statement.setString(2, "WhiteHatJr");
22             statement.setString(3, "Comp. Sci.");
23             statement.setInt(4, 200000);
24
25             int count = statement.executeUpdate();
26             System.out.println(count + " records inserted");
27
28
29         }
30         catch (SQLException e)
31         {
32             System.out.println("Connection failure.");
33
34             e.printStackTrace();
35         }
36     }
37 }
```

Console

```
<terminated> Lab6Q2 [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java  (10-Oct-2020, 3:41:15 pm – 3:41:16 pm)
1 records inserted
```

3. Update the instructor named 'Levine' with the new department name "Math"

```java
/**
 * @author shiru
 *
 */
import java.sql.*;

public class Lab6Q3 {
    public static void main(String[] args) {

        String dbURL = "jdbc:postgresql://localhost:5432/university";
        String user = "postgres";
        String pass = "#######";

        try (Connection connection = DriverManager.getConnection(dbURL,user,pass))
        {
//          System.out.println("Connected to PostgreSQL database!");

            PreparedStatement statement = connection.prepareStatement("UPDATE instructor SET dept_name = ? WHERE n

            statement.setString(1, "Math");
            statement.setString(2, "Levine");

            int count = statement.executeUpdate();
            System.out.println(count + " records updated");

        }
        catch (SQLException e)
        {
            System.out.println("Connection failure.");

            e.printStackTrace();
        }
    }
}
```

Console

<terminated> Lab6Q3 [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (10-Oct-2020, 3:49:33 pm – 3:49:33 pm)
```
1 records updated
```