

CS313, Lab – 6

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Q.1]

Code Screenshot:

```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.ResultSet;
4 import java.sql.SQLException;
5 import java.sql.Statement;
6 public class first {
7     public static void main(String[] args) {
8         try (Connection connection =
9             DriverManager.getConnection("jdbc:postgresql://localhost:5432/university", "postgres",
10 "123456")) {
11             System.out.println("Java JDBC PostgreSQL Example");
12             System.out.println("Connected to PostgreSQL database!");
13             Statement statement = connection.createStatement();
14             System.out.println("Reading student records...");
15             System.out.printf("%s %s %s %s\n", "id", "name", "grade", "course_id");
16             ResultSet resultSet = statement.executeQuery("SELECT student.ID, student.name, takes.course_id, takes.grade FROM takes, "
17                 + "student WHERE takes.id = student.ID AND takes.semester = 'Fall' AND takes.year = '2009' AND takes.grade = 'A+'");
18
19             while (resultSet.next()) {
20                 System.out.printf("%s %s %s %s\n", resultSet.getString("id"), resultSet.getString("name"), resultSet.getString("grade"),
21                     resultSet.getString("course_id"));
22             }
23         } catch (SQLException e) {
24             System.out.println("Connection failure.");
25             e.printStackTrace();
26         }
27     }
28 }
```

Output:

```
Problems @ Javadoc Declaration Console
<terminated> first [Java Application] C:\Program Files\Java\jre1.8.0_261\bin\javaw.exe (10 Oct, 2020 4:06:21 PM – 4:06:22 PM)
Java JDBC PostgreSQL Example
Connected to PostgreSQL database!
Reading student records...
id name grade course_id
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
31337 Graziano A+ 242
22620 Lykin A+ 237
57334 Roeder A+ 960
98563 Yen A+ 486
64259 Busch A+ 237
56 Kameda A+ 105
31486 Okubo A+ 242
72177 Eller A+ 304
74672 Eggers A+ 486
91580 Cabr A+ 242
96324 Sudirm A+ 486
64196 Rioult A+ 237
56499 Zarpell A+ 105
```

Q.2]

Code Screenshot:

```

1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.PreparedStatement;
4 import java.sql.ResultSet;
5 import java.sql.SQLException;
6 import java.sql.Statement;
7
8 public class second {
9     public static void main(String[] args) {
10
11         try (Connection connection =
12             DriverManager.getConnection("jdbc:postgresql://localhost:5432/university", "postgres",
13             "123456")) {
14             System.out.println("Java JDBC PostgreSQL Example");
15             System.out.println("Connected to PostgreSQL database!");
16             Statement statement = connection.createStatement();
17             // System.out.println("Reading student records...");
18             PreparedStatement smt = connection.prepareStatement("INSERT INTO instructor VALUES(?, ?, ?, ?)");
19             smt.setInt(1, 10102);
20             smt.setString(2, "Rishit");
21             smt.setString(3, "Comp. Sci.");
22             smt.setInt(4, 45445);
23
24             int count = smt.executeUpdate();
25             System.out.println(count + " Records Inserted");
26
27         } catch (SQLException e) {
28             System.out.println("Connection failure.");
29             e.printStackTrace();
30         }
31     }
32 }

```

Output:

Problems	Javadoc	Declaration	Console
<terminated> second [Java Application] C:\Program Files\Java\jre1.8.0_261\bin\javaw.exe (10 Oct, 2020 3:54:00 PM – 3:54:01 PM)			
Java JDBC PostgreSQL Example			
Connected to PostgreSQL database!			
1 Records Inserted			

Q.3]

Code Screenshot:

```

1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.PreparedStatement;
4 import java.sql.ResultSet;
5 import java.sql.SQLException;
6 import java.sql.Statement;
7
8 public class third {
9     public static void main(String[] args) {
10
11         try (Connection connection =
12             DriverManager.getConnection("jdbc:postgresql://localhost:5432/university", "postgres",
13             "123456")) {
14             System.out.println("Java JDBC PostgreSQL Example");
15             System.out.println("Connected to PostgreSQL database!");
16             Statement statement = connection.createStatement();
17             // System.out.println("Reading student records...");
18             PreparedStatement stmt = connection.prepareStatement("UPDATE instructor SET dept_name = ? WHERE name = ?");
19             stmt.setString(1, "Math");
20             stmt.setString(2, "Levine");
21
22             int count = stmt.executeUpdate();
23             System.out.println(count + " Record Updated");
24
25         } catch (SQLException e) {
26             System.out.println("Connection failure.");
27             e.printStackTrace();
28         }
29     }
30 }

```

Output:

```

Problems @ Javadoc Declaration Console
<terminated> third [Java Application] C:\Program Files\Java\jre1.8.0_261\bin\javaw.exe (10 Oct, 2020 3:55:52 PM – 3:55:53 PM)
Java JDBC PostgreSQL Example
Connected to PostgreSQL database!
1 Record Updated

```