

## LECTURE 4, SUBMITTING SQL QUERY

The screenshot shows the Eclipse IDE with the `SubmittingSQLQuery.java` file open. The code defines a `SubmittingSQLQuery` class with a `main` method that connects to a MySQL database, executes a `SELECT * FROM employees` query, and prints the results. The console output shows a list of 12 employees with their IDs, names, emails, departments, and salaries.

```
1 package com.java.dsa;
2
3 import java.sql.Connection;
4 import java.sql.DriverManager;
5 import java.sql.ResultSet;
6 import java.sql.SQLException;
7 import java.sql.Statement;
8
9 public class SubmittingSQLQuery {
10
11     private static final String url = "jdbc:mysql://localhost:3306/db_zabala";
12     private static final String user = "root";
13     private static final String password = "";
14     private static final String query = "SELECT * FROM employees";
15
16     public static void main(String[] args) {
17
18         try {
19             Connection connection = DriverManager.getConnection(url, user, password);
20             Statement statement = connection.createStatement();
21             ResultSet resultSet = statement.executeQuery(query);
22
23             System.out.println("List of Employees");
24             while(resultSet.next()) {
25                 int id = resultSet.getInt("id");
26                 String lastName = resultSet.getString("last_name");
27                 String firstName = resultSet.getString("first_name");
28             }
29         } catch (SQLException e) {
30             e.printStackTrace();
31         }
32     }
33 }
```

Console Output:

```
<terminated> SubmittingSQLQuery [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Oct 11, 2024, 8:49:05 AM - 8:49:07 AM) [pid: 11268]
id: 1, Name: John Doe, Email: john.doe@foo.com, Department: HR, Salary: 55000.0
id: 2, Name: Mary Public, Email: mary.public@foo.com, Department: Engineering, Salary: 75000.0
id: 3, Name: Susan Queue, Email: susan.queue@foo.com, Department: Legal, Salary: 130000.0
id: 4, Name: David Williams, Email: david.williams@foo.com, Department: HR, Salary: 120000.0
id: 5, Name: Lisa Johnson, Email: lisa.johnson@foo.com, Department: Engineering, Salary: 50000.0
id: 6, Name: Paul Smith, Email: paul.smith@foo.com, Department: Legal, Salary: 100000.0
id: 7, Name: Carl Adams, Email: carl.adams@foo.com, Department: HR, Salary: 50000.0
id: 8, Name: Bill Brown, Email: bill.brown@foo.com, Department: Engineering, Salary: 50000.0
id: 9, Name: Susan Thomas, Email: susan.thomas@foo.com, Department: Legal, Salary: 80000.0
id: 10, Name: John Davis, Email: john.davis@foo.com, Department: HR, Salary: 45000.0
id: 11, Name: Mary Fowler, Email: mary.fowler@foo.com, Department: Engineering, Salary: 65000.0
id: 12, Name: David Waters, Email: david.waters@foo.com, Department: Legal, Salary: 90000.0
```

## LECTURE 5, INSERTING DATA

The screenshot shows the Eclipse IDE with the `InsertingData.java` file open. The code defines an `InsertingData` class with a `main` method that connects to a MySQL database, inserts a new employee record, and then prints the updated list of employees. The console output shows the list of employees after the insertion, including the new employee 'Eric Wright'.

```
1 package com.java.dsa;
2
3 import java.sql.Connection;
4 import java.sql.DriverManager;
5 import java.sql.SQLException;
6 import java.sql.Statement;
7 import java.sql.ResultSet;
8
9 public class InsertingData {
10
11     private static final String url = "jdbc:mysql://localhost:3306/db_zabala";
12     private static final String user = "root";
13     private static final String password = "";
14     private static final String queryInsert =
15         "INSERT INTO employees(last_name, first_name, email, department, salary) VALUES('Wright', 'Eric', 'eric.wright@foo.com', 'HR', 33000.00)";
16     private static int resultSet;
17     private static final String queryOutput = "SELECT * FROM employees";
18
19     public static void main(String[] args) {
20
21         try {
22             Connection connection = DriverManager.getConnection(url, user, password);
23             Statement statement = connection.createStatement();
24             setResultSet(statement.executeUpdate(queryInsert));
25             ResultSet resultSet = statement.executeQuery(queryOutput);
26
27             System.out.println("List of Employees");
28             while(resultSet.next()) {
29                 int id = resultSet.getInt("id");
30                 String lastName = resultSet.getString("last_name");
31                 String firstName = resultSet.getString("first_name");
32                 String email = resultSet.getString("email");
33                 String department = resultSet.getString("department");
34                 double salary = resultSet.getDouble("salary");
35                 System.out.println(id + ", Name: " + lastName + " " + firstName + ", Email: " + email + ", Department: " + department + ", Salary: " + salary);
36             }
37         } catch (SQLException e) {
38             e.printStackTrace();
39         }
40     }
41
42     private static void setResultSet(int resultSet) {
43         InsertingData.resultSet = resultSet;
44     }
45 }
```

Console Output:

```
<terminated> InsertingData [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Oct 11, 2024, 8:54:43 AM - 8:54:45 AM) [pid: 17984]
List of Employees
id: 1, Name: John Doe, Email: john.doe@foo.com, Department: HR, Salary: 55000.0
id: 2, Name: Mary Public, Email: mary.public@foo.com, Department: Engineering, Salary: 75000.0
id: 3, Name: Susan Queue, Email: susan.queue@foo.com, Department: Legal, Salary: 130000.0
id: 4, Name: David Williams, Email: david.williams@foo.com, Department: HR, Salary: 120000.0
id: 5, Name: Lisa Johnson, Email: lisa.johnson@foo.com, Department: Engineering, Salary: 50000.0
id: 6, Name: Paul Smith, Email: paul.smith@foo.com, Department: Legal, Salary: 100000.0
id: 7, Name: Carl Adams, Email: carl.adams@foo.com, Department: HR, Salary: 50000.0
id: 8, Name: Bill Brown, Email: bill.brown@foo.com, Department: Engineering, Salary: 50000.0
id: 9, Name: Susan Thomas, Email: susan.thomas@foo.com, Department: Legal, Salary: 80000.0
id: 10, Name: John Davis, Email: john.davis@foo.com, Department: HR, Salary: 45000.0
id: 11, Name: Mary Fowler, Email: mary.fowler@foo.com, Department: Engineering, Salary: 65000.0
id: 12, Name: David Waters, Email: david.waters@foo.com, Department: Legal, Salary: 90000.0
id: 13, Name: Eric Wright, Email: eric.wright@foo.com, Department: HR, Salary: 33000.0
```