

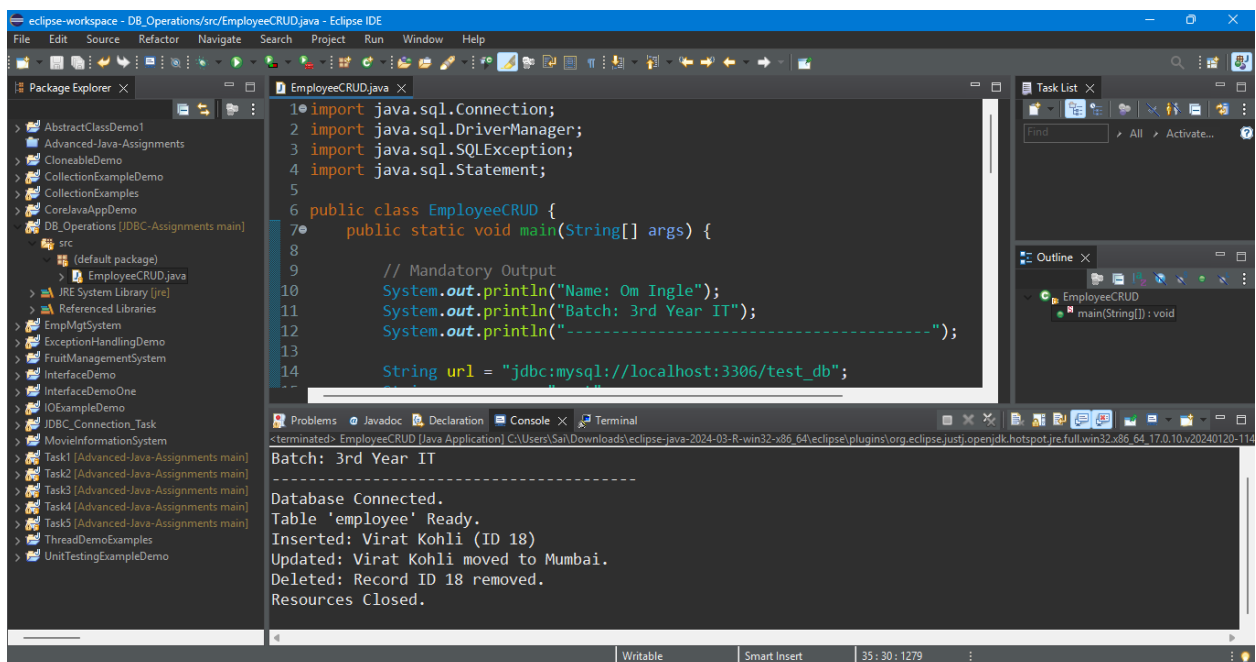
Task: Employee Table Operations

Name: Om Ingle Batch: 3rd Year IT Repository: [OmIngle82/JDBC-Assignments](https://github.com/OmIngle82/JDBC-Assignments)

1. Class & Method Explanation

- **EmployeeCRUD Class:** This class handles the database connection and executes the full lifecycle of SQL operations (Create, Read, Update, Delete) on the employee table.
- **createSQL:** Defines the table structure with columns id, name, email, city, and contact. It uses IF NOT EXISTS to ensure the program runs smoothly even if the table was created in a previous run.
- **insertSQL:** Inserts a sample record (Virat Kohli, ID 18) into the table to verify that data entry works correctly.
- **updateSQL:** Modifies the existing record by changing the city from 'Delhi' to 'Mumbai' for the employee with ID 18.
- **deleteSQL:** Removes the record with ID 18 to clean up the database after the operations are verified.
- **stmt.executeUpdate():** This single method is used for all these operations (CREATE, INSERT, UPDATE, DELETE) as they modify the database state rather than returning a result set.

2. Console Output Screenshot



The screenshot displays the Eclipse IDE interface. The Package Explorer on the left shows the project structure, including the 'DB_Operations' package. The main editor window shows the 'EmployeeCRUD.java' file with the following code:

```
1 import java.sql.Connection;
2 import java.sql.DriverManager;
3 import java.sql.SQLException;
4 import java.sql.Statement;
5
6 public class EmployeeCRUD {
7     public static void main(String[] args) {
8
9         // Mandatory Output
10        System.out.println("Name: Om Ingle");
11        System.out.println("Batch: 3rd Year IT");
12        System.out.println("-----");
13
14        String url = "jdbc:mysql://localhost:3306/test_db";
```

The Console window at the bottom shows the output of the program:

```
<terminated> EmployeeCRUD [Java Application] C:\Users\Sai\Downloads\eclipse-java-2024-03-R-win32-x86_64\eclipse\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.win32-x86_64.17.0.10.v20240120-114
Batch: 3rd Year IT
-----
Database Connected.
Table 'employee' Ready.
Inserted: Virat Kohli (ID 18)
Updated: Virat Kohli moved to Mumbai.
Deleted: Record ID 18 removed.
Resources Closed.
```