

## Task: Dynamic Database Operations

Name: Om Ingle Batch: 3rd Year IT Repository: [OmIngle82/JDBC-Assessments](https://OmIngle82/JDBC-Assessments)

### 1. Class & Method Explanation

- **ParameterizedQueries Class:** Handles user interactions and database operations using dynamic input.
- **Scanner:** Captures user input (ID, Name, City, etc.) at runtime instead of using hardcoded values.
- **PreparedStatement:**
  - Used for executing SQL queries where values are supplied dynamically.
  - **Secure:** It prevents SQL Injection attacks by using placeholders (?).
  - **Efficient:** The database pre-compiles the SQL structure.
- **Workflow:**
  1. **Insert:** Accepts 5 inputs from the user and adds a new record to the table.
  2. **Update:** Accepts an ID and a new Contact number to modify an existing record.
  3. **Search:** Accepts a City name and retrieves all employees residing in that city using executeQuery() and ResultSet.

### 2. Sample Input Used

- **Insert:** ID: 45, Name: Rohit Sharma, City: Mumbai
- **Update:** ID 45 updated with new contact.
- **Search:** Searched for City Mumbai.

### 3. Console Output Screenshot

eclipse-workspace - DynamicQuerries/src/ParameterizedQueries.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer    ParameterizedQueries.java    Task List    Outline

```
1 import java.sql.*;  
2 import java.util.Scanner;  
3  
4 class ParameterizedQueries {  
5     public static void main(String[] args) {  
6         // Mandatory Output  
7         System.out.println("Name: Om Ingle");  
8         System.out.println("Batch: 3rd Year IT");  
9         System.out.println("-----");  
10        String url = "jdbc:mysql://localhost:3306/test_db";  
11        String user = "root";  
12        String pass = "om@ngle.";  
13  
14        -----  
15        -----  
16        DB Connected.  
17  
18        --- 1. Insert New Employee ---  
19        ID: 45  
20        Name: Rohit Sharma  
21        Email: rohitsharma@gmail.com
```

Problems Declaration Console Terminal

Name: Om Ingle  
Batch: 3rd Year IT  
-----  
DB Connected.  
--- 1. Insert New Employee ---  
ID: 45  
Name: Rohit Sharma  
Email: rohitsharma@gmail.com