**Exercise 1: Implementing the Singleton Pattern**

public class DBConnection {

private static DBConnection instance;

private DBConnection() {

System.out.println("Database Connection Established.");

}

public static DBConnection getInstance() {

if (instance == null) {

instance = new DBConnection();

}

return instance;

}

public void executeQuery(String query) {

System.out.println("Executing: " + query);

}

public static void main(String[] args) {

DBConnection conn1 = DBConnection.getInstance();

conn1.executeQuery("SELECT \* FROM employees");

DBConnection conn2 = DBConnection.getInstance();

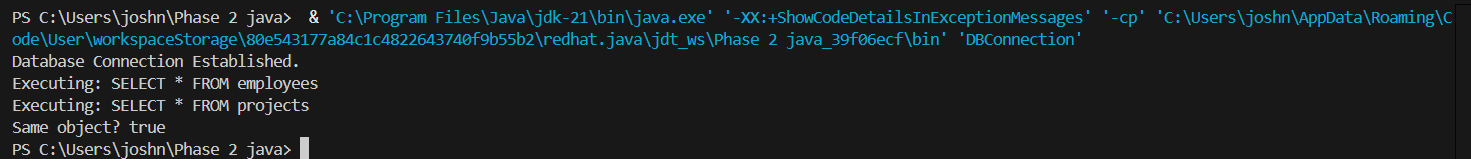
conn2.executeQuery("SELECT \* FROM projects");

System.out.println("Same object? " + (conn1 == conn2)); // true

}

}

**Output:**

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