Source code:

package com.app.DatabaseConnecttion;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class DatabaseConnector {

private static final String JDBC\_URL = "jdbc:mysql://localhost:3306/ecommerce";

private static final String USERNAME = "root";

private static final String PASSWORD = "root";

static {

try {

Class.forName("com.mysql.cj.jdbc.Driver");

} catch (ClassNotFoundException e) {

e.printStackTrace();

}

}

public static Connection getConnection() throws SQLException {

return DriverManager.getConnection(JDBC\_URL, USERNAME, PASSWORD);

}

}

package com.app.ecommerce.Test;

import org.testng.annotations.Test;

import com.app.DatabaseConnecttion.ProductDAO;

public class ECommerceApp {

@Test

public void testCheckStockAvailability() {

String productName = "Laptop";

ProductDAO productDAO = new ProductDAO();

int stockQuantity = productDAO.getStockQuantity(productName);

// Display stock information

System.out.println("====================================");

System.out.println("| Stock Availability |");

System.out.println("====================================");

System.out.println("| Product Name | Stock Quantity |");

System.out.println("====================================");

System.out.printf("| %-13s | %-15d |%n", productName, stockQuantity);

System.out.println("====================================");

}

}

package com.app.DatabaseConnecttion;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

public class ProductDAO {

public int getStockQuantity(String productName) {

int stockQuantity = 0;

try (Connection connection = DatabaseConnector.getConnection()) {

String sql = "SELECT stock\_quantity FROM products WHERE product\_name = ?";

try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

preparedStatement.setString(1, productName);

ResultSet resultSet = preparedStatement.executeQuery();

if (resultSet.next()) {

stockQuantity = resultSet.getInt("stock\_quantity");

}

}

} catch (SQLException e) {

e.printStackTrace();

}

return stockQuantity;

}

}

// public List<String> getSimilarProducts(String productName) {

//

// //======================TO fetch all Products from Db

// List<String> allProducts = new ArrayList<>();

//

// try (Connection connection = DatabaseConnector.getConnection()) {

// String sql = "SELECT product\_name FROM products";

// try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

// ResultSet resultSet = preparedStatement.executeQuery();

//

// while (resultSet.next()) {

// allProducts.add(resultSet.getString("product\_name"));

// }

// }

// } catch (SQLException e) {

// e.printStackTrace();

// }

// return allProducts;

// }

//}

//============================TO Fetch Only similar products from DB

// List<String> similarProducts = new ArrayList<>();

//

// try (Connection connection = DatabaseConnector.getConnection()) {

// String sql = "SELECT product\_name FROM products WHERE product\_name LIKE ?";

// try (PreparedStatement preparedStatement = connection.prepareStatement(sql)) {

// preparedStatement.setString(1, "%" + productName + "%");

// ResultSet resultSet = preparedStatement.executeQuery();

//

// while (resultSet.next()) {

// similarProducts.add(resultSet.getString("product\_name"));

// }

// }

// } catch (SQLException e) {

// e.printStackTrace();

// }

//

// return similarProducts;

// }

//

// }