**To Backup Created Packages and Test Them for Stock Management Application(source code)**

**ECommerceApp.java**

package com.app.ecommerce.Test;

import org.testng.annotations.Test;

import com.app.com.app.DatabaseConnecttion.ProductDAO;

public class ECommerceApp {

@Test

public void testCheckStockAvailability() {

String productName = "tablet";

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("====================================");

}

}

**DatabaseConnector.java**

package com.app.ecommerce.Test;

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/product\_database1";

private static final String USERNAME = "root";

private static final String PASSWORD = "Handbook7\*";

static {

try {

Class.forName("com.mysql.cj.jdbc.Driver"); // Update to the correct driver class

} catch (ClassNotFoundException e) {

e.printStackTrace();

}

}

public static Connection getConnection() {

try {

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

} catch (SQLException e) {

e.printStackTrace();

throw new RuntimeException("Failed to connect to the database.");

}

}

}

**ProductDAO.java**

package com.app.com.app.DatabaseConnecttion;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

import com.app.ecommerce.Test.DatabaseConnector;

public class ProductDAO {

public int getStockQuantity(String productName) {

int stockQuantity = 0;

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

String sql = "SELECT stock\_quantity FROM product 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;

}

}

**DataBase Creation**

mysql> create database product\_database1;

Query OK, 1 row affected (0.02 sec)

mysql> use product\_database1;

Database changed

mysql> create table product(product\_name varchar(50) not null,stock\_quantity int not null);

Query OK, 0 rows affected (0.05 sec)

mysql> insert into product('laptop',3);

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near ''laptop',3)' at line 1

mysql> insert into product values ('laptop',3);

Query OK, 1 row affected (0.01 sec)

mysql> insert into product values ('desktop',10);

Query OK, 1 row affected (0.01 sec)

mysql> insert into product values ('tablet',5);

Query OK, 1 row affected (0.01 sec)

mysql> select \* from product;

+--------------+----------------+

| product\_name | stock\_quantity |

+--------------+----------------+

| laptop | 3 |

| desktop | 10 |

| tablet | 5 |

+--------------+----------------+

3 rows in set (0.00 sec)