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

ECommerceApp.java

```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

```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

```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)
```