# Case Study Title: E-Commerce Order Processing

**//pom.xml**

```xml
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
    http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.example</groupId>
  <artifactId>ecommerce-java-config</artifactId>
  <version>1.0-SNAPSHOT</version>
  <dependencies>
    <!-- Spring Core -->
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-context</artifactId>
      <version>5.3.30</version>
    </dependency>
  </dependencies>
</project>
```

**//Product.java**

```java
package com.example.ecommerce;
public class Product {
  public void addProduct() {
    System.out.println("Product added to inventory.");
  }
  public void listProducts() {
    System.out.println("Listing all available products.");
  }
}
```

```java
//order.java
package com.example.ecommerce;
public class Order {
    public void createOrder() {
        System.out.println("Order has been created.");
    }
    public void cancelOrder() {
        System.out.println("Order has been canceled.");
    }
}
```

```java
//Payment.java
package com.example.ecommerce;
public class Payment {
    public void processPayment() {
        System.out.println("Payment processed successfully.");
    }
    public void refundPayment() {
        System.out.println("Payment refunded successfully.");
    }
}
```

```java
//EcommerceService.java
package com.example.ecommerce;
public class EcommerceService {
    private Product product;
    private Order order;
    private Payment payment;
    public EcommerceService(Product product, Order order, Payment payment) {
        this.product = product;
        this.order = order;
        this.payment = payment;
    }
```

```java
    public void runService() {

        product.addProduct();

        product.listProducts();

        order.createOrder();

        payment.processPayment();

    }

}
```

**//AppConfig.java**

```java
package com.example.ecommerce;

import org.springframework.context.annotation.Bean;

import org.springframework.context.annotation.Configuration;

@Configuration

public class AppConfig {

    @Bean

    public Product product() {

        return new Product();

    }

    @Bean

    public Order order() {

        return new Order();

    }

    @Bean

    public Payment payment() {

        return new Payment();

    }

    @Bean

    public EcommerceService ecommerceService() {

        return new EcommerceService(product(), order(), payment());

    }

}
```

```java
//MainApp.java

package com.example.ecommerce;

import org.springframework.context.annotation.AnnotationConfigApplicationContext;

public class MainApp {

    public static void main(String[] args) {

        AnnotationConfigApplicationContext context = new
AnnotationConfigApplicationContext(AppConfig.class);

        EcommerceService service = context.getBean(EcommerceService.class);

        service.runService();

        context.close();

    }

}
```