

Day-8_Spring_CaseStudy

E-Commerce Order Processing:

Product.java:

```
package com.example.ecommerce;
```

```
public class Product {  
    public void addProduct() {  
        System.out.println("Product added");  
    }  
    public void listProduct() {  
        System.out.println("Listing all products...");  
    }  
}
```

```
package com.example.ecommerce;
```

Payment.java:

```
public class Payment {  
    public void processPayment() {  
        System.out.println("Payment processed.");  
    }  
    public void refundPayment() {  
        System.out.println("Payment refunded.");  
    }  
}
```

AppCofig 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
```

```
    @Bean
```

```
    public Order order() {  
        return new Order();  
    }  
    @Bean
```

```
    @Bean
```

```
    public Payment payment() {  
        return new Payment();  
    }  
    @Bean
```

```
    @Bean
```

```
    public EcommerceService ecommerceService() {  
        return new EcommerceService(product(), order(), payment());  
    }  
}
```

```
}
```

```
EcommereceSrvice.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) {  
        super();  
        this.product = product;  
        this.order = order;  
        this.payment = payment;  
    }  
    public void execute() {  
        product.addProduct();  
        order.createOrder();  
        payment.processPayment();  
    }  
}
```

Order.java:

```
package com.example.ecommerce;  
public class Order {  
    public void createOrder() {  
        System.out.println("Order created.");  
    }  
    public void cancelOrder()  
    {
```

```
System.out.println("Order cancelled.");  
}
```

```
}
```

Main.Java:

```
package com.example.ecommerce;
```

```
import org.springframework.context.ApplicationContext;
```

```
import  
org.springframework.context.annotation.AnnotationConfigApplicationContext;
```

```
public class MainApp {
```

```
    public static void main(String[] args) {
```

```
        ApplicationContext context = new  
AnnotationConfigApplicationContext(AppConfig.class);
```

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

```
        service.execute();
```

```
    }
```

```
}
```

Output:

Product added

Order created.

Payment processed.

LibraryManagement:

Book.Java:

```
package com.example.library;
```

```
import org.springframework.stereotype.Component;
```

```
@Component
```

```
public class Book {  
    public void addBook() {  
        System.out.println("Book added.");  
    }  
    public void searchBook() {  
        System.out.println("Searching book...");  
    }  
  
}
```

Member.java:

```
package com.example.library;
```

```
import org.springframework.stereotype.Component;
```

```
@Component
```

```
public class Member {  
    public void registerMember() {  
        System.out.println("Member registered.");  
    }  
}
```

```
}  
public void viewMembers() {  
    System.out.println("Viewing all members...");  
}
```

```
}
```

AppConfig:

```
package com.example.library;
```

```
import org.springframework.context.annotation.ComponentScan;
```

```
import org.springframework.context.annotation.Configuration;
```

```
@Configuration
```

```
@ComponentScan
```

```
public class AppConfig {
```

```
}
```

LibraryService:

```
package com.example.library;
```

```
import org.springframework.beans.factory.annotation.Autowired;
```

```
import org.springframework.stereotype.Component;
```

```
@Component
```

```

public class LibraryService {
    @Autowired
    private Book book;
    @Autowired
    private Member member;
    @Autowired
    private Loan loan;
    public void performOperations() {
        member.registerMember();
        book.addBook();
        loan.issueBook();
    }
}

```

Loan.java:

```

package com.example.library;

```

```

import org.springframework.beans.factory.annotation.Autowired;

```

```

import org.springframework.stereotype.Component;

```

```

@Component

```

```

public class LibraryService {
    @Autowired
    private Book book;
    @Autowired
    private Member member;

```

@Autowired

```
private Loan loan;  
  
public void performOperations() {  
    member.registerMember();  
  
    book.addBook();  
  
    loan.issueBook();  
}
```

```
}
```

MainApp.java:

```
package com.example.library;
```

```
import org.springframework.context.ApplicationContext;
```

```
import
```

```
org.springframework.context.annotation.AnnotationConfigApplicationContext;
```

```
import org.springframework.context.annotation.ComponentScan;
```

```
import org.springframework.context.annotation.Configuration;
```

@Configuration

@ComponentScan("com.example.library")

```
public class MainApp {
```

```
    public static void main(String[] args) {
```

```
        ApplicationContext context = new  
        AnnotationConfigApplicationContext(MainApp.class);
```

```
        LibraryService service = context.getBean(LibraryService.class);
```

```
        service.performOperations();
```


}

}

OUTPUT:

Member registered.

Book added.

Book issued.