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Day5

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CodeIssuesPull requestsActionsProjectsWikiSecurityInsightsSettings

Day5Public

PinWatchForkStar

main1 Branch0 Tags

Go to file

Add fileCode

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enkhee-git ehri commit2s4d790 · 1 minute ago1 Commit

Customer.class	ehri commit	1 minute ago
Order.class	ehri commit	1 minute ago
OrderItem.class	ehri commit	1 minute ago
Product.class	ehri commit	1 minute ago
Product.java	ehri commit	1 minute ago
SalesSystem.java	ehri commit	1 minute ago
SalesSystemTest.class	ehri commit	1 minute ago
SalesSystemTest.java	ehri commit	1 minute ago

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Programming-Practice-Day5

Public



main



1 Branch



0 Tags



Go to file



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Customer.class

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Order.class

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OrderItem.class

ehni commit



Product.class

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Product.java

ehni commit



SalesSystem.java

ehni commit



SalesSystemTest.class

ehni commit



SalesSystemTest.java

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Producy.java

```
public class Product {
    private String name;
    private double price;
    private int stockQuantity;

    public Product(String name, double price, int stockQuantity) {
        if (!name.matches("[a-zA-Za-яА-Я\\s]+")) { throw new
            IllegalArgumentException("Нэр зөвхөн үсэг байж
болно.");
        }
        if (price <= 0) { throw new IllegalArgumentException("Үнэ
            эерэг тоо байх
ёстой.");
        }
        if (stockQuantity < 0) { throw new
            IllegalArgumentException("Үлдэгдэл сөрөг байж
            болохгүй.");
        }
        this.name = name; this.price = price;
        this.stockQuantity = stockQuantity;
    }

    public String getName() { return name; } public double
    getPrice() { return price; } public int
    getStockQuantity() { return stockQuantity; }

    public void reduceStock(int qty) { if (qty < 0 || qty >
        stockQuantity) { throw new
            IllegalArgumentException("Буруу тоо ширхэг
            байна.");
        }
        stockQuantity -= qty;
    }

    public void increaseStock(int qty) {
        if (qty < 0) {
            throw new IllegalArgumentException("Нэмэгдэх тоо эерэг байх
            ёстой.");
        }
        stockQuantity += qty;
    }

    public String toString() { return name + " - " + price + "₮
        (" + stockQuantity + "
            ширхэг)";
    }
}
```

SalesSystem.java

```
import java.util.*; // Зөв List интерфэйсийг оруулна
```

```
class Product { private
    String name; private
    double price; private int
    stockQuantity;

    public Product(String name, double price, int
        stockQuantity) { this.name = name; this.price =
        price;
        this.stockQuantity = stockQuantity; }

    public String getName() { return name; }

    public double getPrice() { return price; }

    public int getStockQuantity() { return stockQuantity; }
```

```
    public void reduceStock(int qty) {
        stockQuantity -= qty;
    }
```

```
    public void increaseStock(int qty) {
        stockQuantity += qty;
    }

    public String toString() { return name + " - " + price + "₮"
        (" + stockQuantity + "
ширхэг");
    }
}
```

```
class Customer { private String name,
    email, phone;
```

```
    public Customer(String name, String email, String phone) {
        this.name = name; this.email = email; this.phone = phone;
    }
```

```
    public String getName() { return name; }
}
```

```
class OrderItem { private
    Product product; private
    int quantity;
```

```
    public OrderItem(Product product, int quantity) {
        this.product = product; this.quantity = quantity;
    }
```

```
    public String toString() { return product.getName() +
        " - " + quantity + "ш";
    }
}
```

```
class Order { private Customer
    customer; private
    List<OrderItem> items;
```

```
    public Order(Customer customer) { this.customer =
        customer; this.items = new ArrayList<>();
    }

    public boolean addItem(Product product, int quantity) { if
        (quantity <= product.getStockQuantity()) {
            items.add(new OrderItem(product, quantity));
            product.reduceStock(quantity); return true;
        } else {
            return false;
        }
    }

    public String getOrderDetails() {
        StringBuilder sb = new StringBuilder(); sb.append("Захиалагч:
    ").append(customer.getName()).append("\n"); for (OrderItem item : items)
        { sb.append(" - ").append(item).append("\n");
        } return sb.toString();
    }
}
```

SalesSystemTest.java

```
import org.junit.jupiter.api.Test; import static
org.junit.jupiter.api.Assertions.*; import
java.util.List;

public class SalesSystemTest {

    @Test
    public void testProductCreation() {
        Product p = new Product("Физик", 18000, 10);
        assertEquals("Физик", p.getName());
        assertEquals(18000, p.getPrice()); assertEquals(10,
            p.getStockQuantity());
    }

    @Test
    public void testReduceAndIncreaseStock() {
        Product p = new Product("Математик", 20000, 5);
        p.reduceStock(2); assertEquals(3,
            p.getStockQuantity());
    }
}
```

```

        p.increaseStock(4); assertEquals(7,
        p.getStockQuantity());
    }

    @Test
    public void testAddItemToOrderSuccessfully() {
        Product p = new Product("Гүн ухаан", 15000, 10);
        Customer c = new Customer("Баатар", "b@example.com",
"99112233");
        Order order = new Order(c);
        boolean added = order.addItem(p, 3);
        assertTrue(added); assertEquals(7,
        p.getStockQuantity());
    }

    @Test
    public void testAddItemToOrderFailsWhenInsufficientStock() {
        Product p = new Product("Математик", 20000, 2);
        Customer c = new Customer("Сааа", "s@example.com", "99114455");
        Order order = new Order(c);
        boolean added = order.addItem(p, 5); assertFalse(added);
        assertEquals(2, p.getStockQuantity()); }

    @Test

```

```

    public void testOrderDetailsFormatting() {
        Product p = new Product("Физик", 18000, 5);
        Customer c = new Customer("Болд", "b@example.com", "99001122");
        Order order = new Order(c); order.addItem(p, 2);

        String details = order.getOrderDetails();
        assertTrue(details.contains("Захиалагч: Болд"));
        assertTrue(details.contains("Физик - 2ш")); }
    }

```