Test Plan

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**Computer Science 308:**

Java for Programmers

COMP 308

**# Test Plan: for assignment two part 1 and part 2**

## Introduction

The test plan aims to ensure the functionality, reliability, and robustness of the code package for order processing and dispatching. It outlines various test scenarios to validate the behavior of the classes and methods implemented in the code.

## Test Objectives

- Validate the correctness of order creation, addition of items, and acceptance.

- Verify the proper processing of orders and dispatching of products.

- Ensure that the system handles various scenarios, including edge cases and error conditions.

## Test Environment

- Java Development Kit (JDK) installed.

- Integrated Development Environment (IDE) for Java programming.

- JUnit framework for automated testing (optional).

## Test Scenarios

### 1. Test Order Creation

- \*\*Scenario:\*\* Create a computer order with multiple computer parts.

- \*\*Steps:\*\*

1. Instantiate a ComputerOrder object.

2. Add ComputerPart objects to the order.

3. Verify that the order is created successfully with the expected items.

### 2. Test Order Acceptance

- \*\*Scenario:\*\* Accept a party tray order with various types of products.

- \*\*Steps:\*\*

1. Instantiate a PartyTrayOrder object.

2. Add Cheese, Fruit, and Service objects to the order.

3. Accept the order using the OrderProcessor.

4. Ensure that the order is accepted and stored correctly.

### 3. Test Order Processing

- \*\*Scenario:\*\* Process a computer order and verify dispatched computer parts.

- \*\*Steps:\*\*

1. Create a computer order with ComputerPart items.

2. Accept the order using the OrderProcessor.

3. Process the order.

4. Verify that the computer parts are dispatched correctly.

### 4. Test Dispatching

- \*\*Scenario:\*\* Dispatch various types of products from different orders.

- \*\*Steps:\*\*

1. Create orders with different types of products.

2. Accept and process the orders.

3. Dispatch computer parts, peripherals, cheeses, fruits, and services separately.

4. Verify that products are dispatched according to their types.

### 5. Test Error Handling

- \*\*Scenario:\*\* Add invalid items to an order.

- \*\*Steps:\*\*

1. Create an order with invalid product objects.

2. Ensure that appropriate error handling is implemented to reject invalid items.

## Test Execution

- Execute each test scenario step by step.

- Record the results of each test, including any failures or errors encountered.

- Debug and fix any issues identified during testing.

- Repeat testing as necessary to ensure the correctness and robustness of the code package.

## Conclusion

The test plan outlines various scenarios to validate the functionality and reliability of the code package for order processing and dispatching. By executing these tests and addressing any issues identified, we can ensure the effectiveness and correctness of the system in handling order-related tasks.