**Pharmacy Ordering System**

CSCI217 Project

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**1. Introduction**

The Pharmacy Ordering System is a menu-driven Java program that allows users to manage drug orders in a pharmacy. The drugs are categorized into cosmetics, prescription drugs, and other. Users can add drugs, remove drugs, place orders, get total sales for one day, and exit the system.

**2. System Requirements**

* Java Development Kit (JDK) installed
* IDE for Java development (e.g., Eclipse, IntelliJ)

**4. User Guide**

4.1 Initializing the System

* When the system runs for the first time, the user is prompted to enter the capacity of the pharmacy (maximum number of drugs).

4.2 Adding a Drug

1. Select option 1 from the menu.
2. Enter drug details: name, id, price, category, available quantity.
3. The drug is added only if there is space in the pharmacy.

4.3 Removing a Drug

1. Select option 2 from the menu.
2. Enter the id of the drug to be removed.

4.4 Placing an Order

1. Select option 3 from the menu.
2. Enter the id of the drug for the order.
3. Choose the quantitiy.
4. The program calculates the total price for the order.

4.5 Getting Total Sales

1. Select option 4 from the menu.
2. The program displays the total sales for the day by multiply every product .

4.6 Exiting the System

1. Select option 5 from the menu.
2. The program terminates.

**5. Code Structure**

* The code is structured into several classes:
  + **PharmacyGUI**: Handles the GUI and user interactions.
  + **Drug**: Represents a drug with properties like id, price, category, and available quantity.
  + **Order**: Represents an order with information such as drug, quantity, and total price.

**6. ### Error Handling**

The Pharmacy System incorporates robust error handling mechanisms to ensure a smooth and secure user experience. The system is designed to provide informative error messages in cases of invalid input or exceptional scenarios. The key areas where error handling has been implemented are outlined below:

#### 1. Invalid Input Handling

- The system checks for valid numeric inputs when users are required to enter drug-related information, such as drug ID, price, and quantity.

- In case of invalid numeric input, the system displays a user-friendly error message, guiding the user to enter valid numeric values.

#### 2. Drug Removal Validation

- When the user requests to remove a drug, the system validates whether the entered drug ID exists in the drug list.

- If the drug ID is not found, the system raises an exception and displays an error message, informing the user about the non-existence of the specified drug.

#### 3. Order Placement Verification

- Before processing an order, the system checks whether the specified drug ID exists in the drug list.

- If the drug ID is not found, the system raises an exception and displays an error message, notifying the user that the specified drug for the order was not found.

#### 4. Quantity Validation

- The system ensures that the user-entered quantity for placing an order does not exceed the available quantity of the selected drug.

- If the quantity exceeds availability, an error message is shown, alerting the user about the insufficient quantity.

#### 5. General Exception Handling

- To handle unforeseen issues or exceptions, the system includes a catch-all exception block. Any unexpected errors are caught, and an appropriate error message is displayed to guide the user.

These error-handling mechanisms contribute to the overall reliability and security of the Pharmacy System, allowing users to interact with confidence and reducing the likelihood of unintended errors.

**7. Testing**

* Sample test cases and scenarios are included in the test folder to validate the functionality of the system.

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