



PHARMACY MEDICATION SYSTEM USER DOCUMENTATION

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INTRODUCTION

The Pharmacy Medication System is a comprehensive management tool designed to help pharmacies efficiently track and manage patients, doctors, medications, and prescriptions. It enables users to perform various tasks, including adding patients, overseeing doctor information, monitoring medications and prescriptions, and generating reports that provide an overview of system data. Additionally, the system can identify expired medications and facilitate inventory restocking.

Elements

- **id:** A unique numeric identifier assigned to each person.
- **name:** The full name of the individual.
- **age:** The person's age in years.
- **phoneNumber:** The individual's contact number.

Patient & Doctor Structure

Significant

Represents a patient and a doctor, both of which inherit attributes and behaviors from the Person structure.

Constructor Description

Invokes the Person class constructor to set up the patient's attributes and initializes the doctor's details.

Medication and Prescription Structure

Significant

Represents a medication available in the pharmacy and a prescription issued to a patient.

Medication Elements

- **ID:** Unique numeric identifier for each medication
- **Name:** The name of the medication
- **Dosage:** The prescribed dosage of the medication
- **Stock Quantity:** The available stock of the medication
- **Expiration Date:** The date the medication expires

Prescription Elements

- **ID:** Unique numeric identifier for each prescription
- **Doctor:** The medical professional issuing the prescription
- **Patient:** The recipient of the prescription
- **Medication:** The prescribed drug
- **Expiration Date:** The validity period of the prescription

Constructor Description

- Initializes a medication with its essential attributes.
- Creates a prescription with the necessary details and automatically sets the expiration date to one year from the current date.

MedicationTrackingSystem

Significant

- Handles system management.

Elements

- **Patients:** Collection of all registered patients.
- **Doctors:** Collection of all assigned doctors.
- **Medications:** Inventory of available medications.
- **Prescriptions:** Record of all issued prescriptions.

Functions

- **addPatient()** – Registers a new patient in the system.
- **addDoctor()** – Registers a new doctor in the system.
- **addMedication()** – Adds a medication to the inventory.
- **addPrescription()** – Issues a new prescription in the system.
- **searchByName()** – Looks up patients, doctors, or medications by name.
- **generateReport()** – Compiles a summary of stored system data.
- **checkExpiredMedications()** – Identifies and lists expired medications.
- **restockMedications()** – Increases the stock of medications as needed.

Launching & Navigating the System

Setup Requirements

The system requires Java to be installed

Starting the Program

- Open a terminal or command prompt and navigate to the directory containing the file.
- Compile the Java file using the `javac` command.
- Once compiled, execute the program using the `java` command.

Operating the System

The system begins by displaying a menu where you can choose to add a new person, edit an existing one, or remove someone from the system. Additional options include printing all prescriptions for a specific individual, checking for expired medications, restocking inventory, and generating system reports.

Once an initial selection is made, a corresponding submenu will appear (e.g., selecting "Add Person" will lead to options for adding a doctor or patient). You will then be prompted to enter any necessary details to complete the task, such as a patient's name and contact information. After completing a task, you can navigate back to the main menu to perform additional actions.

Structure Diagrams

Person Structure

The foundational structure for both the Patient and Doctor entities.

Patient Structure

Extends the Person class.

Each patient can have multiple prescriptions (one-to-many relationship).

Doctor Structure

Extends the Person class.

Each doctor can prescribe multiple medications (one-to-many).

Medication Structure

Medications are associated with prescriptions, with each prescription containing a specific medication.

Prescription Structure

Each prescription is assigned to a single patient and issued by a single doctor (many-to-one relationship).

MedicationTrackingSystem

Maintains records of patients, doctors, medications, and prescriptions, providing users with options to manage and interact with the system's data.

Conclusion

Despite its simplicity, this system is highly effective and essential for pharmacies to manage vital information on patients, doctors, medications, and prescriptions. It enables users to efficiently oversee patient and doctor records, generate reports on prescriptions and their expiration dates, and monitor medication stock levels.