Pharmacy Management System

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Project Overview:

The Pharmacy Management System is designed to help manage patient prescriptions, doctors, and medication inventory efficiently. It allows users to:

* Add, search, and manage **patients** and **doctors**.
* Record **prescriptions** and link them to patients and doctors.
* Track **medications**, their quantities, and expiry dates.
* Generate **reports** for system-wide data, prescriptions, and expired medications.
* Restock **medications** automatically.

This system is built using **Java** and follows **Object-Oriented Programming (OOP) principles.**

How to Use the System:

Running the System

Follow these steps to set up and run the program:

1. **Clone the repository**

git clone https://github.com/NSparkes95/java-sprint-nicole-dylan-christian.git

cd java-sprint-nicole-dylan-christian

1. **Compile the program**

javac -d bin src/main/java/medicationtracking/\*.java

1. **Run the system**

java -cp bin medicationtracking.Menu

Navigating the System Menu:

Once the program runs, users will see a **Main Menu** that provides access to different sections of the system.

Example Workflows:

Adding a Patient

1. Select **"Patients Menu"** from the main menu.
2. Choose **"Add Patient"**.
3. Enter the patient's **ID, Name, Age, and Contact Number**.
4. The system will confirm the patient has been added.

Assigning a Prescription

1. Select **"Prescription Menu"**.
2. Choose **"Add Prescription"**.
3. Enter **Doctor ID, Patient ID, Medication ID, and Expiry Date**.
4. The prescription will be recorded and linked.

Generating Reports

1. Select **"Reports Menu"**.
2. Choose from the available reports:
   * **System-wide report**: Displays all data.
   * **Prescription report**: Lists all prescriptions.
   * **Expired medications report**: Lists expired drugs.

Restocking Medications

1. Select **"Medication Menu"**.
2. Choose **"Restock Medications"**.
3. The system will **automatically increase stock** by a random amount (5-15 units).

*(Include screenshots of these steps for better clarity.)*

**Explanation of Features**

**1**. Patients Menu

* **Add Patient** – Registers a new patient.
* **Delete Patient** – Removes a patient from the system.
* **View All Patients** – Displays all registered patients.

2. Doctors Menu

* **Add Doctor** – Registers a new doctor.
* **Search Doctor by Name** – Finds a doctor using their name.

3. Prescriptions Menu

* **Add Prescription** – Assigns a prescription to a patient.
* **List Prescriptions by Doctor** – Shows all prescriptions issued by a doctor.
* **List Prescriptions by Patient** – Shows all prescriptions assigned to a patient.

4. Medications Menu

* **Add Medication** – Adds a new medication to inventory.
* **Check Expired Medications** – Identifies expired medications.
* **Restock Medications** – Increases the stock of existing medications.

Class Diagram

This section should include a **UML Diagram** showing relationships between:

* **Doctor** (Manages Patients, Issues Prescriptions)
* **Patient** (Has a list of Medications & Prescriptions)
* **Prescription** (Links Doctor, Patient, and Medication)
* **Medication** (Has ID, Name, Dosage, Expiry Date)

*(Create a UML diagram using draw.io or another tool and insert it here.)*

Screenshots:

Include console **screenshots** demonstrating:  
✅ Main Menu  
✅ Adding a Patient  
✅ Assigning a Prescription  
✅ Generating Reports  
✅ Restocking Medications