Application Overview

The **Pharmacy Medication Tracking System** is a Java-based application that manages pharmacy operations, including patients, doctors, medications, prescriptions, and pharmacy inventory. It allows pharmacy staff to efficiently track patient prescriptions, manage doctor and medication data, and generate reports, such as those for expired medications and prescription histories.

The application uses object-oriented principles, with inheritance playing a crucial role in organizing entities like doctors, patients, and prescriptions.

Classes and Their Functionality

The **Persons** class is the base class for all the persons in the system (**Doctors** and **Patients.**) It contains common variables that are shared by both doctors and patients.

The **Doctor** class extends **Persons** and represents a doctor in the system. It provides methods for adding, editing and managing doctor-specific data, such as specialty, license number, etc.

The **Patient** class extends **Persons** and represents a patient in the system. It provides methods for managing patient specific data, adding and removing patients, etc.

The **Medications** class represents medications in the system. This class is used to manage inventory and expiration dates. It also has methods for removing and adding medications to the pharmacies inventory.

The **Prescription** class is a subclass of **Doctor, Patient, and Medications.** It associates a doctor with a patient and any prescribed medications. This class also has methods to allow editing, creating and removing prescriptions, and managing associations of specific medications with specific doctors.

The **MedicationTracking** class manages the main operations of the system, such as adding and removing whole patients, doctors, medications, and prescription objects from the system. It acts as the central repository for all entities in the system and performs the CRUD operations for these entities. It contains methods for interacting with all records in the system and can generate reports.

The **Menu** functions as the **Main** class and serves as the entry point of the program. It displays a menu to the user, presenting different options for interacting with the system. Based on the user’s selection, the appropriate method from **MedicationTracking** is called.