Pharmacy Ordering

## Overview

This is a simple pharmacy system. The program starts by asking the user to enter the pharmacy’s capacity. The capacity controls how many drugs are added when drugs are removed their space is freed. The same happens when an order is placed. The user orders specific quantity so the same quantity’s space in the pharmacy is freed so the user can add more. The main functions are add drug, remove drug, display all, place an order, search by id and name, get total sales of the day which also prints to a file and finally exit. The program handles all edge cases and errors using try catch and if conditions. There is a CLI version of the code, but it is not complete. The GUI version has more features and better error handling.  
   
Class Main

The main class includes the pharmacy class initialization, the main menu and all the GUI functions. Moreover, it calls the method “clearTotalFile()” that erases the totalData file every time the program runs. One of the most important methods implemented in the main is Create\_Button(). It is used to create the 6 menu buttons and styling them. The main reason it is used is to keep the code clean and simple with no repetition. The main class includes 10 methods in total including the main method. The main class can be considered the front-end of this program meanwhile the pharmacy class resemples the backend.

Class node & Class linked list

This program uses the linked list data structure to store the drugs. It serves as a good use of what we learned in the data structure’s course last semester. The linked list includes 4 methods add, remove search by id and search by name. They are used to traverse the list. The first two are void return type. Add just takes the created drug obj and adds it to the list. Remove takes the id and remove the node. The two search methods return the drug if found and a fake drug obj (used in handling errors and edge cases) if not found.

Class Pharmacy

As mentioned, the pharmacy class can be considered the backend of the program. It contains the capacity variable and its input window. Worth mentioning is that it also contains the drug\_capacity variable which stores the current number of the drugs. The capacity is the maximum that drug\_capacity variable can reach. The drug\_capacity is controlled by the add, remove and place orders methods. Which are the backend versions of the GUI methods in the main. This class also initializes “List” which is an obj of the Linked\_list class and an “array” which is an ArrayList of float. It is used to store the price of an order so we can use the Get\_total() method to get total sales.

Class Drug

The drug class is very significant as it is the main obj of the program. It does not contain any methods except for the getters. The getters are mainly used in the display all GUI.