

CSCI 479 Project

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Pharmacy Data Base

Introduction:

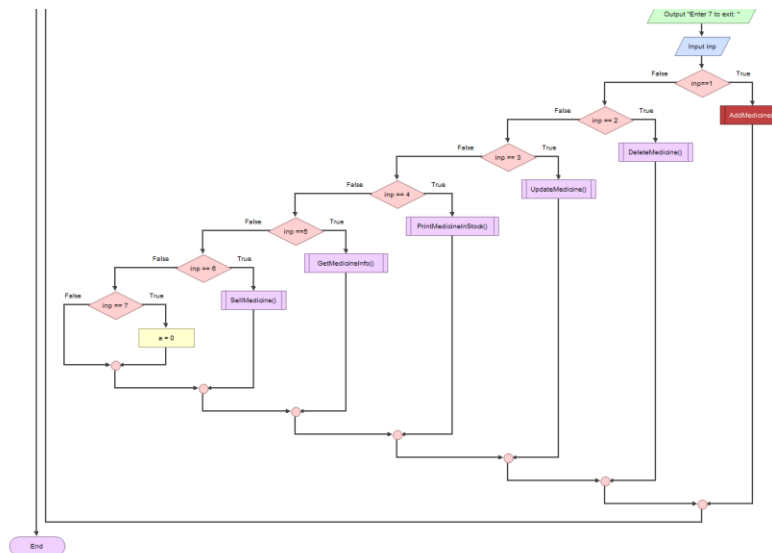
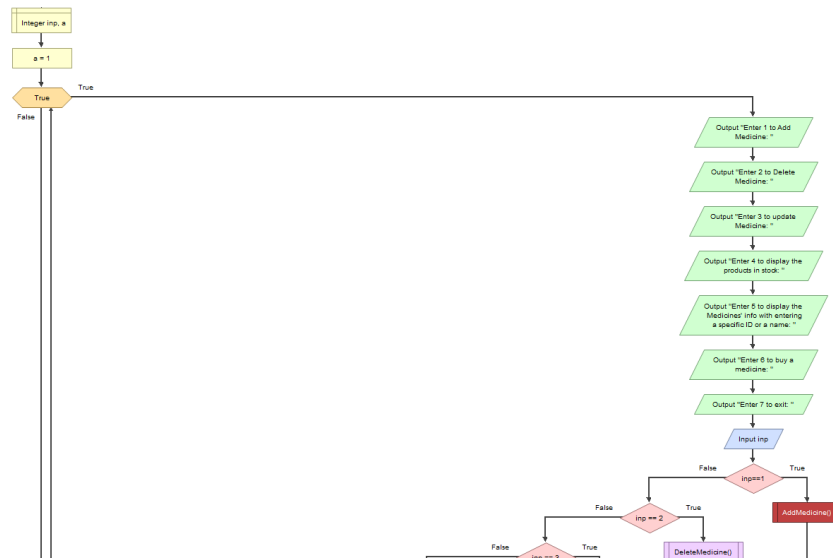
This application was directly made for pharmacies to store the data of their medicine on a PC. The data can be modified, displayed in several ways. The user can also calculate the price of a specific medicine in the database.

Code Design:

The code was deducted using the “C Programming” Language. Functions, Arrays, Structures, File manipulation, and multiple functions from String.h library were used in the code body.

Flowchart:





Code Description:

The code structure is based on multiple functions, each function is called upon the user's request. There're 6 functions used in this Application. Firstly, I will discuss the **main** function body. There're multiple statements to direct the user throughout the application and to guide him to press the write numbers to do his task. There's an infinite loop to check if the user wants to quit or to continue surfing the Application.

The **AddMedicine** Function: The function which stores the data entered by the user into a text file using FILE manipulations. A file is created first, then a pointer pointed to the location of the file appends all the data stored by the user for further modifications. `fprintf()` function was used to print the data into the text file pointed into by the pointer.

The **DeleteMedicine** Function: Same File manipulation is used to read and write the strings in the file. One file will be opened in read mode and the other in write mode. The idea behind this function is to scan an ID or a name from the user then compare it to the lines in the original text file. Then, using strstr function, we find where is the specific line that includes the user's input. Then, using the write mode, it creates a new file and stores the non-specific line in this file. Then, delete the old file and renaming the new file with the old ones.

The **UpdateMedicine** Function: The same looping concepts used in DeleteMedicine function were used here. feof() and fgets were the main structure behind why did this code work. feof() is a file handling function that is used to find the end of a file. fgets is used to store the lines the pointer is pointing at in an array for further usage. fscanf() function was used to read the data from the text file.

The **PrintMedicineInStock** Function: This function is pretty simple compared to the others. Using file manipulation, data can be printed easily on the screen to the user.

The **GetMedicineInfo** Function: A simpler function compared to the others and it's mainly based on File manipulation as explained before.

The **SellMedicine** Function: This function's idea was kind of tricky as the data was stored as strings and its type had to be changed using atoi() function. The type was changed from string to integer to do the Mathematical operations then changing it back to string using itoa() function to store it in the text file. The same technique used in the delete function was used here to update the file.

Bugs: There're few bugs that won't affect the user experience for now.

The first bug is in the update section, the update function won't work properly if there're less than 3 Medicine Info in the file. There's no way the pharmacist will only use 3 Medicine data in his database, but further updates will be applied to the code.

The second bug is in the `getmedicineinfo` function, the last line is printed twice, but it doesn't affect the efficiency of the program.

Further updates will be applied in the future.