Software Development 1 Lab Project Report

Institute Name: Northern University Bangladesh

Course: Software Development-1

Project Title: Medicine Reminder

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1. Introduction

This project is a simple **Medicine Reminder Alarm** System written in C++. It allows users to add their info, search for medicine, add medicine, display medicine from the library, add medicine volume/amount, add taking times, and delete medicine from the system using file handling. It is a console-based application developed as part of our Software Development Lab.

This project is for patients who are reluctant to take their medications on time and are indifferent about the dosage/amount of medication they take. So the

purpose of this project is to create a medicine reminder alarm through which patients can take their medicine on time. Thus, an attempt has been made here to solve the problem by creating a medicine reminder alarm for patients, helping them take their medication.

2. Key Features

-Add user info
- View all Medicine

- Add new Medicine details
- Search Medicine by name
- Delete Medicine by name

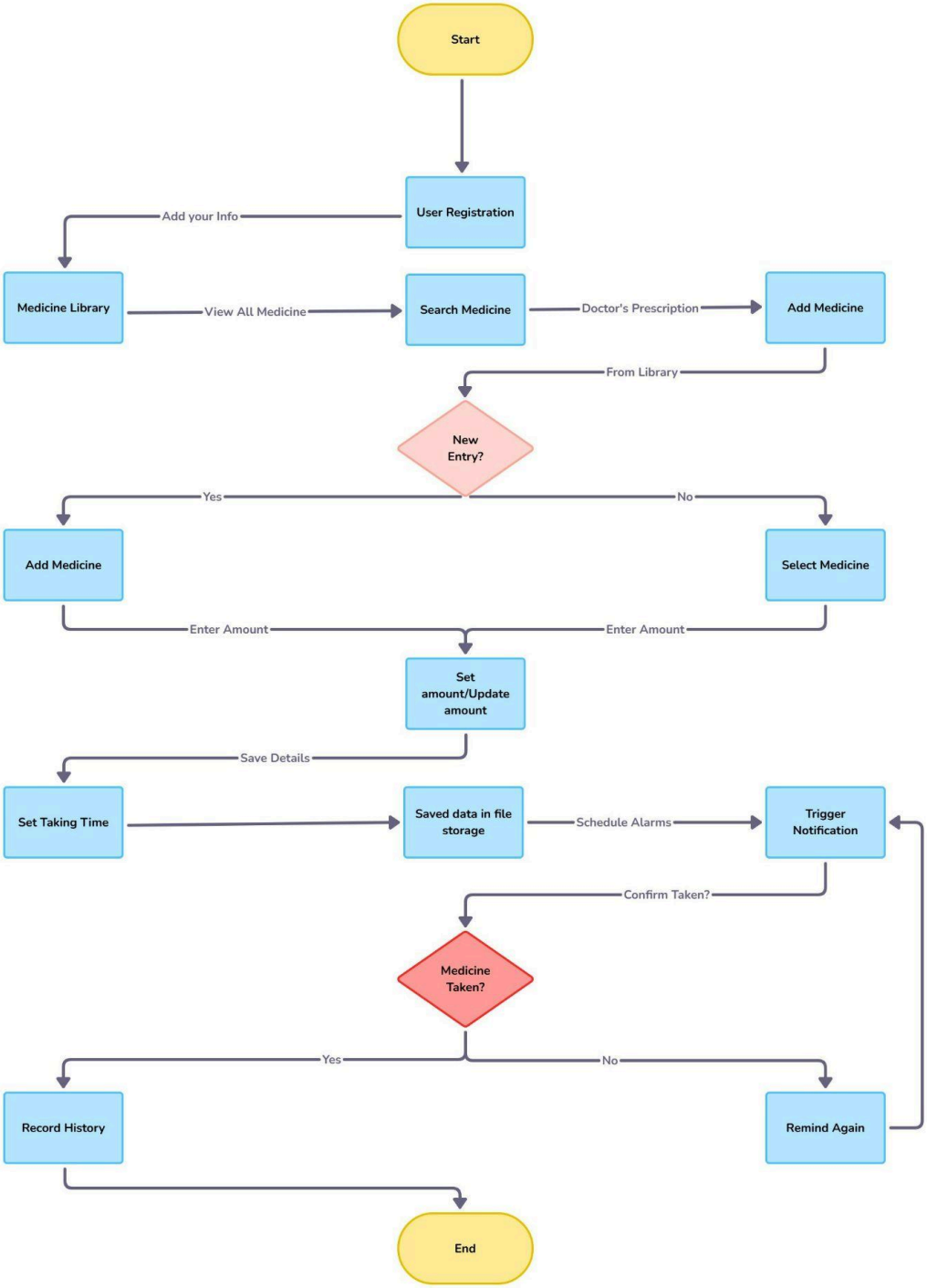
- Add/Modify Medicine volume or amount

- Set Medicine taking time for the Alarm
- File-based data storage

3. Tools & Technologies Used

- Language: C++
- Compiler: GCC / Code::Blocks / Dev-C++
- OS: Windows / Linux
- Optional Tools: GitHub, VS Code

4. System Design



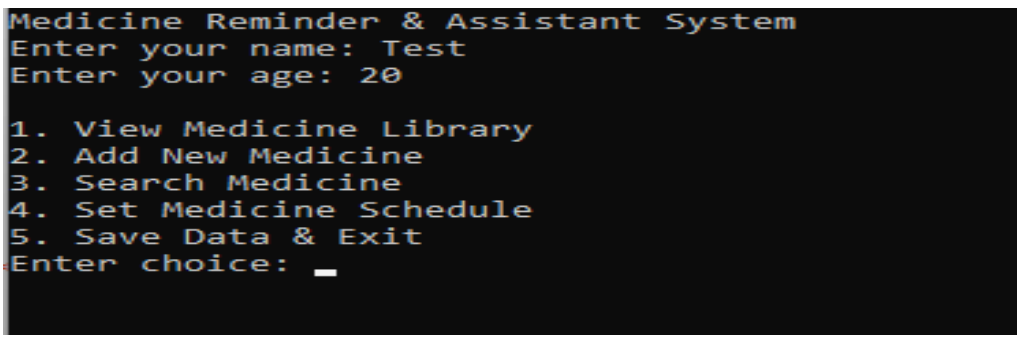
Here, we explained the program structure and logic,

- **User Registration**
  - Program starts with user registration, where personal info is added.
- **Medicine Management**
  - User can search for medicine in the Medicine Library.
  - If the medicine is **not found (New Entry = Yes)**, the user can **add a new medicine** with its details.
  - If the medicine exists, the user can **select it from the library**.
- **Dosage & Schedule**
  - After selecting or adding a medicine:
  - User sets the **medicine amount/dosage**.
  - Sets the **taking time (daily schedule)**.
- **Data Storage**
  - All information is **saved in file storage**.
- **Alarm & Notification**
  - The system **schedules alarms** and **triggers notifications** at the set time.
- **Confirmation**
  - The system asks: **Medicine Taken?**
  - If **Yes,** it records the history.
  - If **No,** it reminds the user again.
- **End**
  - Once medicine is taken and history recorded, the program ends the session.

Summary of Logic:

- **Decision points**: Checking for new medicine and medicine confirmation.
- **Loops:** Reminder repeats until the user confirms intake.
- **Data Handling:** Medicine data is stored and can be updated.
- **Alarm system:** Automated notifications ensure timely reminders.

5. Sample Output (Screenshots)



```
Medicine Reminder & Assistant System
Enter your name: Test
Enter your age: 20

1. View Medicine Library
2. Add New Medicine
3. Search Medicine
4. Set Medicine Schedule
5. Save Data & Exit
Enter choice: 1
=== Medicine Library ===
Name: Nafa_A, Amount: 0, Time:
Name: Nafa_B, Amount: 0, Time:
Name: Nafa_C, Amount: 0, Time:
Name: Nafa_D, Amount: 0, Time:
```

```
Medicine Reminder & Assistant System
Enter your name: tt
Enter your age: 20

1. View Medicine Library
2. Add New Medicine
3. Search Medicine
4. Set Medicine Schedule
5. Save Data & Exit
Enter choice: 1
=== Medicine Library ===
Name: Nafa_A, Amount: 0, Time:
Name: Nafa_B, Amount: 0, Time:
Name: Nafa_C, Amount: 0, Time:
Name: Nafa_D, Amount: 0, Time:

1. View Medicine Library
2. Add New Medicine
3. Search Medicine
4. Set Medicine Schedule
5. Save Data & Exit
Enter choice: 2
Enter medicine name: Nafa_E
Enter amount: 2
Enter taking time (e.g. 8AM): 8AM

1. View Medicine Library
2. Add New Medicine
3. Search Medicine
4. Set Medicine Schedule
5. Save Data & Exit
Enter choice: 1
=== Medicine Library ===
Name: Nafa_A, Amount: 0, Time:
Name: Nafa_B, Amount: 0, Time:
Name: Nafa_C, Amount: 0, Time:
Name: Nafa_D, Amount: 0, Time:
Name: Nafa_E, Amount: 2, Time: 8AM

1. View Medicine Library
2. Add New Medicine
3. Search Medicine
4. Set Medicine Schedule
5. Save Data & Exit
Enter choice:
```

6. Challenges Faced

Examples:
- Understanding file handling in C++
- Making a Flow-Chart
- Debugging logical errors

- Making a functionable system

7. Conclusion

This project helped us understand how to build simple software using structured programming in C++. We learned how to manage data using structures and files and improved our problem-solving and teamwork skills.

8. References

- https://www.programiz.com/c-programming
- ChatGPT
- Stack Overflow

9. GitHub Repository

https://github.com/dev-asad-galib/medicine_reminder.git