

Digital health tracker

Track your medical records

INTRODUCTION

What is health tracking?

The term health tracking refers to the collection and analysis of various data points related to one's health.

Why a health tracker?

Tracking Medication should not be a difficult task, however, it can become extremely difficult if one is suffering from a chronic condition or if one is trying to figure out what health modalities can help improve performance. Using a Medicine Tracker app can greatly improve your adherence.

According to the statistics, feedback from merely 5-10% of the patients is collected monthly from any of the government aided medical centres. The course of medication prescribed to patients is not monitored.

The main motto is to take up this problem is to cater to each and every need of the patient as well as monitor his/her health from the time he/she first visits the hospital till he/she totally recovers.

Additional attention and adequate support to ensure faster recovery is not possible as there is no proper communication channel/link between the doctor and the patient after the check-up.

The staff is not monitored in terms of their behaviour and supportiveness towards the needs of the patients.

OBJECTIVES

This project is built to help people maintain their medical records, save prescription details and remind them about when to take their prescriptions. It also stores information on more than one person. This project is essential right now, considering the whole pandemic situation.

This helps keep track of various clinical prescriptions thus helping people to back track or save a log of data for future problems if the condition re-emerges without worrying about losing the prescriptions or getting it exposed.

It helps people keep track of records without relying more on others.

Since the application reminds users about when to take their prescriptions, they do not have to worry about missing out or can be ready for upcoming appointments or even reminded when they run out of medicines.

Methodology to be followed:

To create user accounts and save their respective data, we will be using file handling to save and retrieve information on prescription and user data. This will make it easy and convenient for users to personalise their prescription needs and will help in transfer of this data without need for repetitive inputs.

The program would also include an encryption module to create a safe entry login for users. This makes sure users can securely login without worrying about their data being stolen or lost. These details can be shared with concerned ones and they will be able to monitor the users consumption too. It also enables multiple users to login and access their own prescription.

We will be using stacks to retrieve user data from the file document that will store user information.

Queues will be used to remind users for their upcoming appointments.

We will also be implementing linked lists to retrieve and remind users to consume their prescriptions in time.

The prescription data will be stored using a database which we will connect to for storing, retrieving, accessing, and deleting medical records.

OUTCOMES

This project will be delivering a stable fully functional health monitoring system

1. Help people maintain their medical records.
2. Create an account, login and save details of their clinical prescriptions.
3. Save data of medicines and reminders for upcoming health check ups.
4. Create a secure and safe record for any medical prescriptions to be accessed in the future as well.

Requirement Specifications

- A Desktop
- Edition : Windows 10/Linux/mac
- 64 bit operating system
- Ryzen 3 /Intel i3 Minimum
- TURBO C/C++

(or)

- CODE BLOCKS

DATA STRUCTURES

Stacks :

In this project, we will be using stacks to store and retrieve login details when the user tries to open their profile or create a new one.

When the user launches the program, he is asked for a username and a password. When username is entered. The program then reads from a text file the information of all the users and stores it as a stack data structure. It then traverses through the list to find a match for the user name and if yes, it then logs the user in.

In this single scenario, we will be able to use file handling, sorting algorithms to search and retrieve data.

Once the user has logged in successfully, he/she can then change or update their profile.

This means, updating information within the stack and then dumping the stack onto the file again to store the updated version.

Queues:

Once the user is ready to view his prescription, the program reads data from a database sequentially and stores them in a queue.

From there on, the program just displays the contents of the queue along with the time intervals between each medicine and other information stored alongside.

Linked Lists:

If the database is empty, the user is asked to enter prescriptions. We add elements to the database now by simply taking in the value and storing it as a linked list and then reading contents from the database to dump it into a database.

We will also use a linked list to modify contents and make changes to the already existing prescription data.

We are essentially using data structures to read, write and modify data from and to a file sequentially.

DESIGN

DESIGN GOALS

This project is built to help people maintain their medical records, save prescription details and remind them about when to take their prescriptions. It also stores information on more than one person.

EFFICIENCY

It helps us save time by helping us quickly go through all our given prescriptions in a single place. It also saves time by making sure we don't have to search for the hardcopy of the given prescriptions.

Design plan

