COVID ASSISTANT

- A MINI C PROJECT

APOORVA KOTHARI
LAVESH VERMA
KARTHIK S
SAUMYA

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Abstract

COVID - 19 & Vaccine

In late December 2019, Chinese health authorities reported an outbreak of pneumonia of unknown origin in Wuhan, Hubei Province. A few days later, the genome of a new coronavirus was published and made available to the scientific community. Since its discovery, the virus has spread around the world, claiming thousands of lives and having a huge impact on our health systems and economies. The COVID-19 is a public health threat a ecting humankind. Currently after the emergence and spread of the novel coronavirus or the severe acute respiratory syndrome coronavirus 2. The virus is believed to have originated from bats and transmitted to humans. Around 5 crore peoples are confirmed to have the COVID-19 and more than 5+ Lakh individuals have died of it by Feb, 2021, in India

It is transmitted by inhaling or having contact with droplets. The incubation period ranges from 2-14 days. It manifests mainly with fever, non-productive cough, and dyspnea. The polymerase chain reaction from various samples like throat swabs, nasal swabs, bronchoalveolar lavage.

uid is used to con rm the diagnosis. High-resolution chest computerized tomography is abnormal in most patients, and typical ndings are ground glass patchy opacities on both lungs and sub-segmental consolidation

At a Glance

Covid Assistant

COVID-19 MANAGEMENT PROGRAM

MOTIVATION

PROGRAM

SOLUTION

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
MOTIVATION	DRAFTING	PROGRAM	BUG FIX	PRESENTING

Problem Statement & Description

The sudden spread of the Covid-19 virus was a startling and distressing phase of everyone's life. It had been ages since the world had last witnessed such a disastrous pandemic. With an outburst in the number of active cases and a steep increase in death rate, it had become really important to suppress the calamity.

The lockdown acted as a temporary solution to the problem but did not prove to be completely effective as it had its own drawbacks - majorly being the large impact on local economies and government budgets. Then, soon later, Covid-19 vaccines were released which brought back hope into people's lives.

Having limited supplies of the vaccines, the government had to not only make sure of conveniently making it reach to the huge mass of people but also take care of its black marketing. To assure the proper and the legal usage of vaccinations, we came up with the 'Covid Assistant' program which would help the vaccination campaign to run smoothly and effectively.s.

Motivation

Moved by many problems that we have come to light recently related to covid vaccination, we decided to make a small program that can help and manage vaccines from the factory to the front line with speed scale and flexibility.Our programs will help citizens to remove obstacles to quickly get vaccines witha new platform connect workflows across systems for effective vaccine distribution and monitoring. The complaints that government face of limited vaccine supply motivated us to make a program wherein people get the supplies at right time.

Proposed Solution

THE COVID MANAGEMENT PROGRAM

We've brainstormed a series of ideas for the Covid-19 management program and have focussed on the user experience as you interact with the program at a time full of uncertainty, emotions and anxiety. In this program we target to build a covid manager that has basic functionalities such as patient check and vaccination calender using C language. This uses wide areas of C such as file management (database) to store info of vaccination centers, Qustionairre to understand the patient conditon and giving health suggestions, emergency contact details, and a terminal interface for the users to interact with

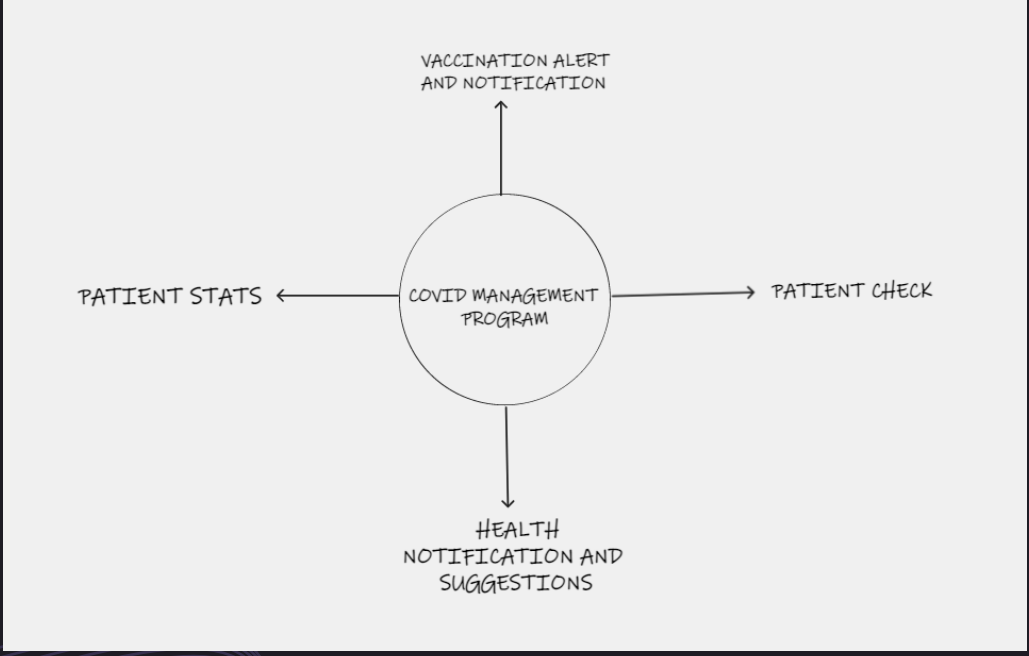
PROGRAM SUMMARY

DOCTOR MANAGER
PATIENT CHECK AND STATS
HEALTH ANALYSE AND SUGGESIONS

1. Storing Data :
    a. File Management
    b. Array of struct
    c. Dynamic array using calloc()

2. Functions :
    a. getData() - to get patient info
    b. setData() - process & store data
    c. DoctorInfo() - get Doctor details
    d. DoctorStats() - check Doctor status
    e. checkmyHealth() - patient checkup
    f. covidStats() - display covid stats

3. Control Structures :
    a. Conditionals - if, if-else if-else, switch
    b. Iterations - for loop, while loop



RESULT

Program Strengths :

► It is actually a user-friendly software, and easy to use just to follow the instruction which are appeared on the interface

► This program has a login system, so that only authorized user is only allowed to access through system

►All the record have unique id so that there will not be redundancy

► Doctor management system well sufficient to manage adding and alloting doctors to the patients with symptoms

RESULT

Patients

The code stores and retrieves patient details on registration and login respectively
a. Registration :
Display the form for filling the basic information for the of patients entered using basic form checks and validation, Uses basic file management using c to push file into a csv file. uses a separate csv file to store passwords
b. Login :
Enters the patient ID and password to login
c. Detail view
Retrieve data of the logged in patient and displays it in a well arranged tabular form
d. Add Issue :
A tab to manage and organize the issue of the patient and related symptoms
e. Summary :
To view and report latest details of a patient issue and resolve

Doctor

The code stores and retrieves patient details on registration and login respectively, Uses basic file management using c to push file

a. Enter New Doctor Table
    1. Doctor Name:
    2. Doctor ID:
    3. Doctor Age:
    4. Gender:
    5. Time Hour And Minutes , AM/PM:

b. For one Doctor time table

c. Remove Doctor Time Table

RESULT

3. Covid Stats

The code is responsible for storing and retrieving information for COVID statistics.
It pushes files into a CSV file using basic file management techniques implemented in C.

It displays the number of COVID patients from each state in descending order, with the state with the greate
of patients at the top of the list, as well as the total number of deaths.

4. Health Checker

The code asks the user if they are suffering from any covid symptoms or if they have any pre-existing condi
Considering the health issues and the recent travel records of the user, Health Checker will help in calculatin
being affected by the Corona Virus.

a. Questions regarding Covid symptons

b. Questions regarding Pre-existing conditions

c. Recent Travel Details

d. Risk Percentage

e. Message for the user (based on the Risk Percentage)

Conclusion

In conclusion, the project aims to provide a working interface to manage the covid patients and we have covered code for storing data, accessing data, processing data, and publishing data using different data structures and file management methods. The code is also filled with different control structures and covers a good extent of the C language

Learning outcomes - It was important to us that we learned how to design a program architecture, convert real-life situations into efficient code, how we can write readable and understandable code that is both time- and memory-efficient, wise usage of file management and other storage structures.

Github repo

CODE REPO

PRESENTATION

PDF

Contact Us

LIT2021029@IIITL.AC.IN

LIT2021012@IIITL.AC.IN

LIT2021034@IIITL.AC.IN

LIT2021058@IIITL.AC.IN