Object Oriented Programming (CS3C023)
Mini Project

Covid -19 Self Care And Vaccine Tracker

Medi-Caps University

Mini Project

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Covid -19 Self Care And Vaccine Tracker

Submitted by:

EN20CS301351 RISHI NIGAM

EN20CS301339 RASHMI KOLHE

EN20CS301317 PRIYANKA SHARMA

Guided By:

Mr. Arpit Deo Sir

Assistant professor

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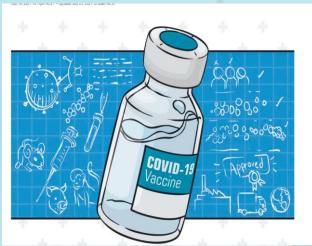
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PROBLEM STATEMENT

In Society there is need of an application which keeps you updated regarding the status of active Covid-19 cases in your locality, as well as, in India. An Application which provides the various safety guidelines that you should follow to avoid infection and also to check whether you are symptomatic of Covid-19 or not.

INTRODUCTION

Covid -19 Self Care And Vaccine Tracker

This Mini Project in C++ Covid 19 Self Care And Vaccine Tracker is a console application using the C++ programing language. It is Compiled in Windows VS Code and DEV C++ with the GNU compiler.

In this Application, you can perform functions such as view current status of covid 19 in India, know government guidelines and help line Number , Covid Assessment and many more. File Handling has been Used many times in project so ,this project definitely guide you to understand project in better way.

SYSTEM REQUIREMENTS

Processor	Intel Core Processor Or Better Performance
Operating system	windows only
Memory	1Gb ram or more
Files used	4 Files ->> status, covid_status, Covid_test , Vaccinated _person **Need to be saved in same Folder**
Technology Used	C++
Compiler(In Windows only)	Dev C++, Visual Studio. (Not Online Compiler as They are lynx based)

NEED FOR THIS APPLICATION

This Application will let you avail the following benefits:

• This application keeps you updated regarding the status of active Covid-19 cases in your locality, as well as, in India.

• Assess whether you are residing in a hotspot area, where virus occurrence is high.

• Learn about the various safety guidelines that you should follow to avoid infection.

• Self-assessment to determine whether you are symptomatic of Covid-19.

HEADER FILES USED IN THE PROJECT

1. #include<iostream>
   iostream provides basic input and output services
   for C++ programs.

2. #include<iomanip>
   The iomanip is a library in C++ which helps us in manipulating the output of any C++
   program.

3. #include <fstream>
   To read and write from a file we are using the standard C++ library called **fstream**.

4. #include <limits>
   This header defines constants with the limits of fundamental integral types for the
   specific system and compiler implementation used.

CLASS CREATED IN PROJECT

1. Extra (Parent Class)
2. Front Page (Inherited from Extra class)
3. Covid_status (Inherited from Extra class)
4. Self_assisment(Inherited from Extra class)
5. Guide_lines
6. Helpline
7. Vaccine (Inherited from Extra class)
8. Admin (Inherited from Extra class)

```
> class Extra…
> class Front_page : public Extra…
> class Covid_status : public Extra…
> class Self_assisment : public Extra…
> class Guide_lines…
> class Helpline…
> class Vaccine : public Extra…
> class Admin : public Extra…
```

LIST OF FUNCTIONS CREATED(INSIDE CLASSES) AND USED WITHIN PROJECT

❖ **void invalid()**

   This function will check any Input taken is in correct form or not.

❖ **void starting()**

   This Function will print heading of the every page in output.

❖ **void check()**

   When this function is used it will check the input data type is integer or not.

❖ **void exit()**

   This function will exit the program.

LIST OF FUNCTIONS CREATED(INSIDE CLASSES) AND USED WITHIN PROJECT

❖ **void starting()**
   This function is used to print Front Page of the Project.

❖ **void main_menu()**
   This function will print the main menu for the user.

❖ **void os_check()**
   This function will check that operating system is windows or not.

❖ **void current_status()**
   This function will let user to know current covid status.

❖ **void list_state()**
   This Function will print the State wise Covid-19 Current Status.

LIST OF FUNCTIONS CREATED(INSIDE CLASSES) AND USED WITHIN PROJECT

❖ **void self_asses() and string result_check(string na)**
Combination of these two function will take covid assessment and generate result.

❖**void covid_self()**
This function will print the menu for self assessment.

❖**void guideline()and void gov_helpline()**
this function is used to print recent government guide lines and helpline number of covid-19 respectively.

```cpp
class Self_assisment : public Extra
{
    public:
        void self_asses()...
        void covid_self()...
        string result_check(string na)...
        void rule()...
};
```

```cpp
class Guide_lines
{
    public:
        void guideline()...
};
class Helpline
{
    public:
        void gov_helpline()...
};
```

LIST OF FUNCTIONS CREATED(INSIDE CLASSES) AND USED WITHIN PROJECT

❖**void covid_vaccine()**

　This function will print the menu for vaccine realated issues.

❖ **void covid_vaccinated()**

　This function will take details of user if he or she is vaccinated.

❖**void vaccine_cent()**

　This function will give you choice that user want to know vaccine
　centers from which city.(Indore/Bhopal).

❖ **void Bhopal() & void indore ()**

　This function is used to print vaccination centers available in Bhopal
　and Indore respectively .


```
class Vaccine : public Extra
{
    public:
        void covid_vaccine()...
        void covid_vaccinated()...
        void vaccine_cent()...
        void bhopal()...
        void indore()...

};
```

❖ **void covid_vacci_list(), void_assis_list()** --- These function will print list of vaccinated person and list of person who have performed covid assessment.

❖**void admin_log()** ---- This function will take user to Administrator login page and if password entered correctly **Admin()** will run.

❖**void status_update()** --- This Fuction will update number of Active , Recovered and Decreased cases.

```
class Admin : public Extra
{
    public:
    void admin_log()...
    void admin()...
    void status_update()...
    void covid_vacci_list()...
    void covid_assis_list()...
};
```

EXTRA FUNCTIONS USED FROM HEADER FILES
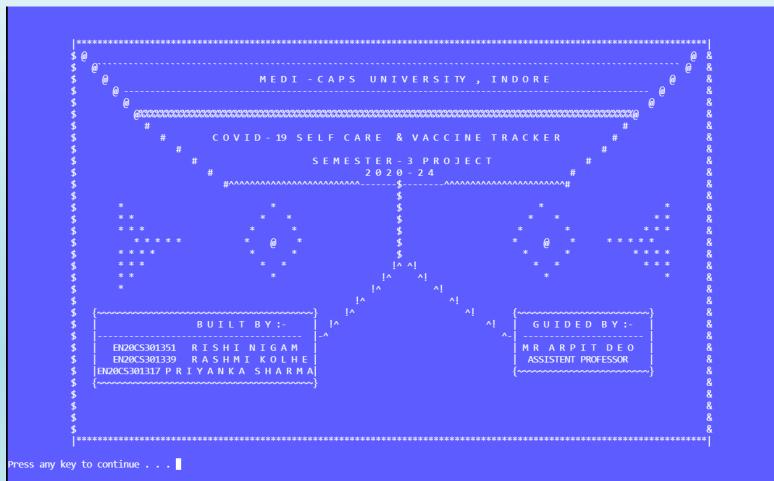
- **setw()** - The setw C++ function helps to set the field width used for output operations.

- **Cin.sync()** - Typing "cin.sync()" after the "cin" statement discards all that is left in the buffer.

- **cin.ignore(numeric_limits::max(),'\n')** - "cin.ignore(numeric_limits::max(),'\n');" after the "cin" statement discards everything in the input stream including the newline.

- **cin.clear** - The cin.clear() clears the error flag on cin (so that future I/O operations will work correctly)

- **System("cls")** - CLS (for clear screen) is a command used operating systems to clear the screen or console window of commands and any output generated by them.

- **System(pause)** - ses of system() in Windows OS are, system("pause") which is used to execute pause command and make the screen/terminal wait for a key press.

OUTPUT

Front Page

MAIN MENU


```
|#####################################################################################|
|         WELCOME  TO  COVID-19  SELF  CARE  AND  VACCINE  TRACKER                    |
|*************************************************************************************|
            |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|
            |   AVAILABLE  CHOICES  ARE  GIVEN  BELOW : -          |
            |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|


{-------------------------------}   {-------------------------------}   {-------------------------------}
{        Enter 1 to            }   {        Enter 2 to            }   {        Enter 3 to            }
{  KNOW  THE  CURRENT STATUS OF }   {  TO PERFORM  C O V I D -19    }   {  KNOW  GOVERMENT   COVID 19   }
{        C O V I D  19          }   {  S E L F  A S S I S M E N T   }   {     G U I D E L I N E S       }
{-------------------------------}   {-------------------------------}   {-------------------------------}


{-------------------------------}   {-------------------------------}   {-------------------------------}
{        Enter 4 to            }   {        Enter 5 to            }   {      Enter 6 FOR             }
{ COVID-19 GOVERMENT           }   {  VACCINE RELATED             }   {  A D M I N I S T R A T O R    }
{  HELP LINE NUMBER            }   {        I S S U E             }   {        L O G I N             }
{-------------------------------}   {-------------------------------}   {-------------------------------}


                    |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|
                    |   E N T E R  7  T O  E X I T  |
                    |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|


        |~~~~~~~~~~~~~~~~~~~~~~~~~~~~~|
        | E N T E R  Y O U R  C H O I C E |      --->> ▌
```

```
|&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&|
|        W E L C O M E   T O   C O V I D - 1 9   S E L F   C A R E   A N D   V A C C I N E   T R A C K E R        |
|**************************************************************************************************|


            **********************************************************************
            |              C O V I D - 1 9   S E L F   A S S I S M E N T              |
            %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%


            *******************************************************
            |            E n t e r   y o u r   D e t a i l s        |
            %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      |    E N T E R   Y O U R  N A M E   |      --->>  Rishi



   ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
   |   E N T E R   Y O U R  P H O N E   N U M B E R   |       --->>  6267116755



      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      |     E N T E R   Y O U R  A G E     |        --->>  18



      ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
      |    E N T E R   Y O U R  A D D R E S S    |        --->>  Indore
```

```
|&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&|
|          W E L C O M E   T O   C O V I D - 19   S E L F   C A R E   A N D   V A C C I N E   T R A C K E R          |
|****************************************************************************************************************|


                    **************************************************************
                    |          C O V I D - 19   A S S I S M E N T   R U L E          |
                    %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%


****************************************************************************************************************************

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<

##The Home Screen has four classifications signifying increasing risk of infection:

                    Green, Yellow, Orange and Red.

**Green:


The Green classification on your screen signifies that you are safe or at Low Risk You are safe when:


++ Either you havenΓÇÖt met anyone who has been tested COVID-19 positive or


++ You havent declared any symptoms and conditions related to COVID-19 during Self-Assessment or both or


++ You havent taken the self-assessment yet You will be classified at Low Risk .


++ You have come in contact with a tested COVID-19 positive but at a relatively log distance or for short duration .
```

```
|$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$|
|         W E L C O M E   T O   C O V I D - 1 9   S E L F   C A R E   A N D   V A C C I N E   T R A C K E R         |
|*****************************************************************************************************************|


              ################################################################
              |  C O V I D - 1 9   G O V E R M E N T   G U I D E L I N E S   |
              ################################################################


*****************************************************************************************************************

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^


    Stay aware of the latest COVID-19 information by regularly checking updates from WHO in addition

                       to national and local public health authorities.



^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

)))Keep yourself and others safe: Do it all!


$  Get vaccinated as soon as itГÇös your turn and follow local guidance on vaccination.

$  Keep physical distance of at least 1 metre from others, even if they donГÇöt appear to be sick.

$  Avoid crowds and close contact.

$  Wear a properly fitted mask when physical distancing is not possible and in poorly ventilated settings.

$  Clean your hands frequently with alcohol-based hand rub or soap and water.

$  Cover your mouth and nose with a bent elbow or tissue when you cough or sneeze.
```

```
|@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@|
|      W E L C O M E   T O   C O V I D - 1 9   S E L F   C A R E   A N D   V A C C I N E   T R A C K E R      |
|*********************************************************************************************************|

                    ***********************************************************
                    |         L I S T   O F   C O V I D   V A C C I N E   C E N T E R S         |
                    %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%


 *********************************************************************************************************

                              ---------------------------------------------------
                              ( 1 ) ENTER 1 TO KNOW COVID CENTERS IN INDORE .
                              ---------------------------------------------------



                              ---------------------------------------------------
                              ( 2 ) ENTER 2 TO KNOW COVID CENTERS IN BHOPAL .
                              ---------------------------------------------------


                              ---------------------------------------------
                              ( 3 ) ENTER 3 TO RETURN TO PREVIOUS MENU .
                              ---------------------------------------------


                         -------------------------------------------------------------
                         VISIT BELOW SITE TO KNOW ALL COVID CENTERS IN  INDIA.
                         -------------------------------------------------------------


        ----------------------------------------------------------------------------------------------------
        https://www.uhcpindia.com/web/statenotifications/documents/Networks/Vaccine%20Information%20&%20Govt%20Approved%20Vaccine%20Centres.pdf
        ----------------------------------------------------------------------------------------------------


             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
             | E N T E R   Y O U R   C H O I C E  |      --->> █
```

```
|***************************************************************************************************|
|           WELCOME TO COVID-19 SELF CARE AND VACCINE TRACKER                                       |
|***************************************************************************************************|
                         ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                         |    ADMINISTRATOR LOGIN     |
                         ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~


             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
              PASSWORD -> 123456
  | ENTER  PASSWORD   |      --->>  █
```

```
|***************************************************************************************************|
|          WELCOME TO COVID-19 SELF CARE AND VACCINE TRACKER                                        |
|***************************************************************************************************|
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
                    |    WELCOME ADMINISTRATOR      |
                    ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~



                   --------------------------------------------
                    ( 1 ) ENTER 1 TO UPDATE CURRENT COVID STATUS.
                   --------------------------------------------


                  ---------------------------------------------------
                    ( 2 ) ENTER 2 TO THE LIST OF COVID VACCINATED PERSON .
                  ---------------------------------------------------


                  -----------------------------------------------------
                    ( 3 ) ENTER 3 TO THE LIST OF COVID ASSISMENT  PERFORMED .
                  -----------------------------------------------------


                        --------------------------------------
                          ( 4 ) ENTER 4 TO RETURN TO MAIN MENU .
                        --------------------------------------


                        --------------------------------------
                          ( 5 ) ENTER 5 TO EXIT THE APPLICATION .
                        --------------------------------------


                   ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  | ENTER  YOUR CHOICE  |    --->>  █
```

EN20CS301351 RISHI NIGAM , EN20CS301339 RASHMI KOLHE ,
EN20CS301317 PRIYANKA SHARMA

FUTURE SCOPE

o This application can be easily implemented under various situations. we can add new features as and when we require. Reusability is possible when we require in this application.

o This software is extendable in ways the developer may not expect as the code is easily understandable.

o Features like GPS system , More Security etc.. Can be added in future which will make Application more efficient.

ADVANTAGES

- With the help of self-assessment we will get information whether we are affected from covid-19 or not.

- Learn about various safety guidelines that we should followed to avoid infection .

- The user can also find the helpline no. for each state in India.

- We also resolved the the vaccine related issues.

DRAW BACKS

- We will not able to edit the data which we inserted in it.
- We cannot delete any data from the list containing vaccinated and covid test.
- It does not have the facility of location and Bluetooth.
- In this we get only the information about covid centres in Indore and Bhopal.