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**WEB APPLICATION DESIGNED TO CONTROL CORONA VIRUS/COVID 19 OUTBREAK**

**Web Application development process**

**Planning Phase:**

 The Outbreak of the Covid-19 has been a serious issue over the past months globally. The (WHO) World Health Organisation has termed the virus a pandemic due to its ability to spread at a fast rate. A method for controlling this pandemic hasn’t been discovered. However, developing a web application which will be able to gather Data concerning the symptoms and location around the world, in other reduce physical contact which will be able to reduce the spread of the Covid-19.The Data will be stored on a Cloud Database which will be access strictly by the health officials. The point of adding a location feature to alert the users using the web application of someone that has the symptoms and where the person is located.

**Analysis:**

-It’s a web-based Application.

- Users will Input their Full Name, Age, Email, Password and other important details.

-The Users details will be stored in the cloud database

-The cloud database will be accessible only to health officials so they will be able to get the data an analyse it.

-It will be Simple web application with a simple UI (User Interface) design.

-it will have a contact / Location section which will help users search for the nearest healthcare units for the Covid-19.

-The Cloud Database Will Possess the survey Questions, Location data of both the health officials and the user.

-The Survey Questionnaire will ask for the current state and the symptoms the user possess.

-the web-based application will ask the user to turn on their location of their device.

-The result of the survey will be made available to doctors for analysis

-The Cloud Database will also store symptoms of the user.

**Design Phase:**

The Application will have a very unique and simple User Interface in other to reduce the wastage of time, Making it too get Straight to the point for the users to complete the survey Questionnaires so that the doctors will be able to get the data and analyse.

**Algorithm:**

1. Start
2. Input User Details, Cloud Database, Location Data, Survey Questionnaire, Symptoms, Contact health officials.
3. Store User Details, Location Data, Survey Questions, Symptoms in the cloud database.
4. Get User details, Survey.
5. If User details = Empty

Display Error

Else

Display user details on the web application page.

1. If Survey = empty

Display please fill in the Survey Questions

Else

Display Entered Answers successfully.

1. If Symptoms of user = Symptoms in cloud database

 Display you have Symptoms of corona virus

Else

End Survey

1. Display Contact the nearest Medical centre.
2. Stop

**Flow Chart:**

Input User Details, Cloud Database, Location Data, Survey Questionnaire, Symptoms, Contact health officials.

Get User details, Survey

Store User Details, Location Data, Survey Questions, Symptoms in the cloud database.

If User details = Empty

 Yes

Display user details on the web application page.

 No

Display Error Enter your details

If Survey = Empty

 No

 Yes

Display please fill in the Survey Questions web application page.

Display Entered Answers successfully.

If Symptoms of user = Symptoms in cloud database

Yes

 No

End Survey

 Display you have Symptoms of corona virus

Display Contact the nearest Medical centre.

**Implementation:**

The Web based Application will be written in Nodejs and python. Nodejs is the language that will be used for the user interface and front-end design and python will for the back-end implementation with the use of Django framework. Django framework is a python framework used for the development of web-based applications. The Cloud database which we are going to be using is called Firebase Database it is a google based cloud database which can be used for various implementations.

**Testing and Debugging:**

The Web based application will be tested by various random people that will judge the web application strictly then give a feedback regarding the UI (User Interface) and UX (User Experience) of the application and if any error is found in the process of testing it shall be solved with the use of debugging.

**Release and Maintenance:**

The web-based application will be released via publicly and will be accessed with the use of web browsers, any new discovery will be implemented and sent as an update for the users.

**Hardware and software features:**

The software will be able to gather data from various users through the use of the survey questionnaire and accept data of the user’s location for those that have successful completed the surveys.

A web server and a database which will work together with the application so that information will be kept safe and there will be no need for a physical server because the firebase database will be in use.

**top-down design :**

A **top**-**down design** is the decomposition of a system into smaller parts in order to comprehend its compositional sub-systems. In **top**-**down design**, a system's overview is designed, specifying, yet not detailing any first-level subsystems.

Web application

Cloud Database

Survey questionnaire

Display Survey

Display Contact of health care units

Store all possible symptoms

Stores answers from users

Stores all survey questions