1. Design the application following the software development cycle

* **Concept/plan:** The covid-19 virus is fast spreading and the digital world has to contribute to fight the virus and ensure the safety of humans. The app will be able to keep its users alert and updated about their health. With this app they’ll be able to check their degree of wellness. The app will keep records of previous data and will be able to alert the user if he /she are at risk or if he/she is safe. The app will also be able to allow users to share their data wirelessly with their doctors and families respecting the social distancing measures that are taken to minimize the spread of the virus. the application will be called “covid tracker”. A platform-independent web based system is adopted for its easy use. Then security and privacy will be considered because the personal data will be handled via the Internet.
* **Specification/analysis:** the covid tracker will specifically take the temperature of the user display and store it, it will also show the degree of infection of the virus and also transmit the data wirelessly .the application might not work for gadgets that do not have thermo sensors that will take the temperature of the user.
* **Design:** In system design Hardware requirements list is often accompanied by a hardware compatibility list (HCL), especially in case of operating systems. An HCL lists tested, compatibility and sometimes incompatible hardware devices for a particular operating system or application
* **Implementation:** At this stage,whatever was in the plan will be worked on to bring out results that can be reviewed and tested
* **Testing ad Debugging:** After the app has been programmed it will be tested and checked for bugs(errors) and they’ll be corrected before the application is released to the public for use
* **Release and Update:** The app is released to the public for use and feedback is gotten on the user experience, from the feedback, we know what is to be worked on and what should be added for a smooth experience throughout the use of the application

1. Critically discuss the hardware and software features

* **Hardware features**: there are a certain number of hardware features required for the app to work such as thermo sensors to take the temperature of the user, . These include, Intel dual Core, i3 as the processor of the Os, Internet connection for the health center, clinical thermometer
* **Software features**: Software Requirements deal with defining software resource requirements and prerequisites that need to be installed on a computer to provide optimal functioning of an application.

1. Support your answer with a flowcgart and an algorithm

1: Start

2: degree of infection =0

3: Add the COVID19 symptoms

4: Put the software involved

5: Create a questionnaire

6: Collect qualitative data

7: Analyze Data

8: user is positive to the virus

9: Else

10: user is negative to the virus

11: Display feedback

12: Stop

**TOP-DOWN DESIGN APROACH OF THE APPLICATION**

Web based healthcare application

Data base server

Web server

Application server

Data analyst

Java script,html,

Php,css

Create questionnaire

Data viewer function

Feedback function

Start

Stop

Records are stored

Treatment and observation takes place

User is quarantined

Take precations

Is the virus detected?

Analyze data

Create a questionnaire

Input possible symptoms todetect

Degree of infection=0

no yes