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Computer Engineering

ENG 224

Computer Programming

Software development life cycle(SDLC) is also referred to as application development life cycle. It is a term used in system engineering and software engineering to describe the process for planning, developing, testing, and deploying information system. SDLC is a life cycle through which software goes, till it is fully developed and deployed.

Software development life cycle processes includes

1. Requirement analysis
2. Planning
3. Design
4. System development
5. Testing
6. Deployment

Requirement analysis

Business requirements are gathered in this phase from the requirements regarding the software that you are going to develop through various sources. The main concept for LMR system is a web based health care management system. For effective COVID19 healthcare, a network system monitoring one's vital signs and evaluating one's health conditions is highly desirable. In our laboratory, we have developed a vital sensing system for home healthcare. The purpose of this study is to design and implement a prototype web-based healthcare management system (WBHMS) to make effective use of the data that are measured by the vital sensing system.

Planning

The Planning phase is the most crucial step in creating a successful system, during this phase you decide exactly what you want to do and the problems you're trying to solve, by:

Defining the problems, the objectives and the resources such as personnel and costs.

- Studying the ability of proposing alternative solutions after meeting with clients, suppliers, consultants and employees.
- Studying how to make your product better than your competitors'.

After analyzing this data you will have three choices: develop a new system, improve the current system or leave the system as it is.

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. The following sub-sections discuss the various aspects of hardware requirements. These include, Intel dual Core, i3 as the processor of the Os, Internet connection for the health center, clinical thermometer.

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. **Design**

A well- defined algorithm for a web-based COVID19 Healthcare Management System
STEP1: Start

2: Body status to the virus=0

3: Add the COVID19 symptoms in the system

4: Put the software involved

5: Create a questionnaire

6: Collect qualitative data

7: Analyze Data

8: Body Status positive to the virus

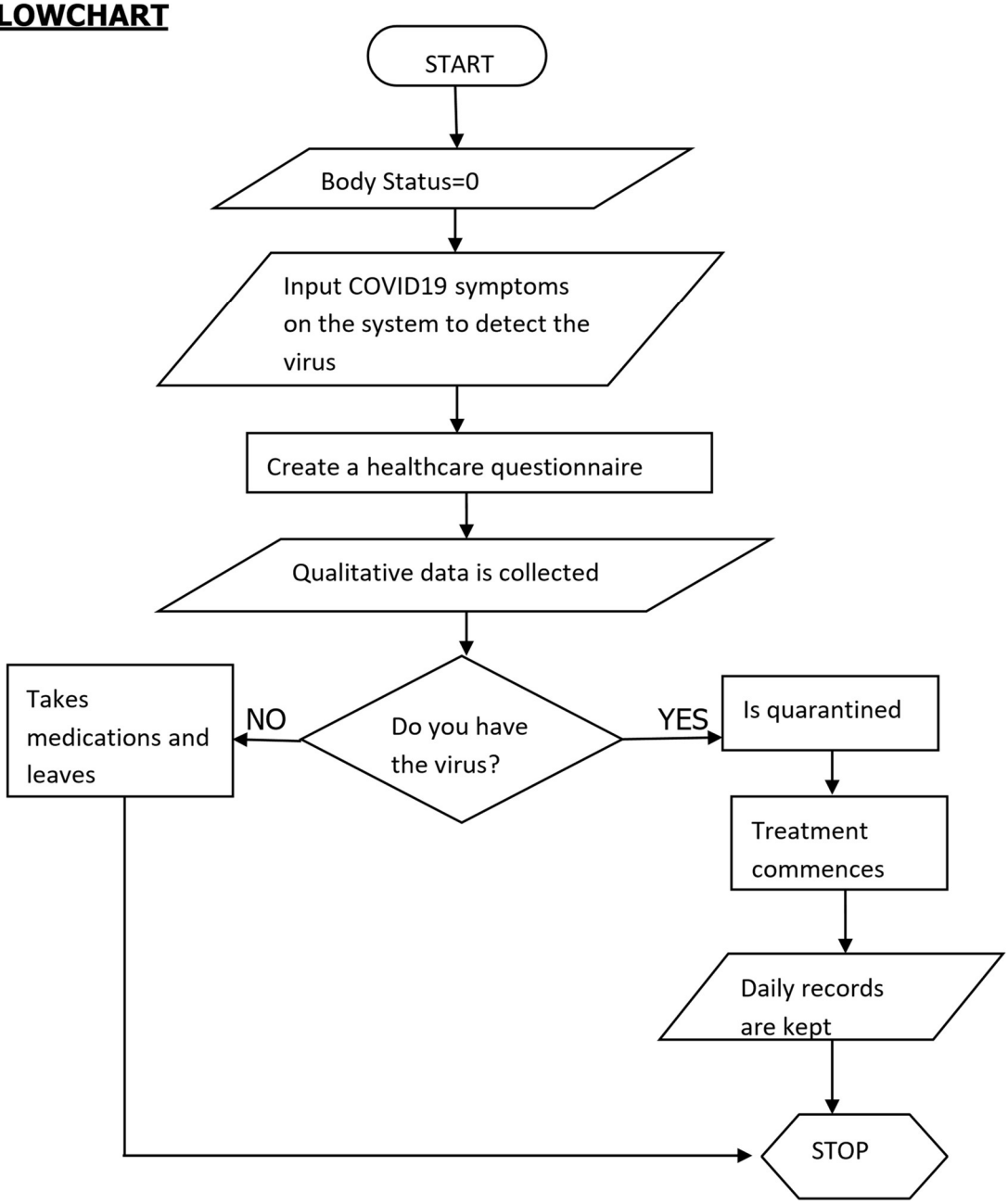
9: Else

10: Body Status negative to the virus

11: Display feedback

12: Stop

FLOWCHART



System development

The data viewer function provided graphs of physiological data, which are body temperature, blood pressure, pulse wave (PW), and electrocardiograph (ECG), measured by the vital sensing system.

Testing

The COVID19 Healthcare web apps need to be fool-proof, which is why testing the apps and their functionalities become so important. Right from testing the security and compliances to the workability and the integration of the app, testing can also be done with different operating systems, internet connections and hardware.

Deployment

This application is being released to detect, display the rate of virus, store, transmit and access data through the web together and its updated when necessary based on the health center feedback

TOP- DOWN DESIGN APPROACH OF THE APPLICATION