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Electrical/Electronics Engineering

1.

This application can be said to be a web smart health system that allows the detection, display, storage, transmission of data and also gives access of the database through the web. This system would help to minimise human interaction that is involved with monitoring and tracking the health status of infected patients, which in turn would help to reduce the possible spread of COVID-19 amongst more medical personnel.

The health tracking and monitoring system is as follows. A number of medical sensors would be connected to the patient in order to obtain vital signs which would be converted to biomedical signals that would be transmitted via Wi-Fi/cellular. The data received is then analysed. In the case of abnormality found a medical expert would be alarmed in order to help contain the situation, while in the case of no abnormality the system would keep on monitoring the patient's vital signs. If there's need a webpage would be used to access patient information from the hospital database.

2. Hardware Features include:

a. Computers: This could be a Smartphone, laptop or desktop that is used to access the web based health tracking and monitoring system in order to retrieve a patient information.

b. Server: this is a device that allows the maintenance and sharing of the medical database of patients.

c. Sensors: these are medical sensors that checks for patient's vital signs e.g (pulse rate, blood pressure, temperature, heart rate, respiration rate).

Software Features include:

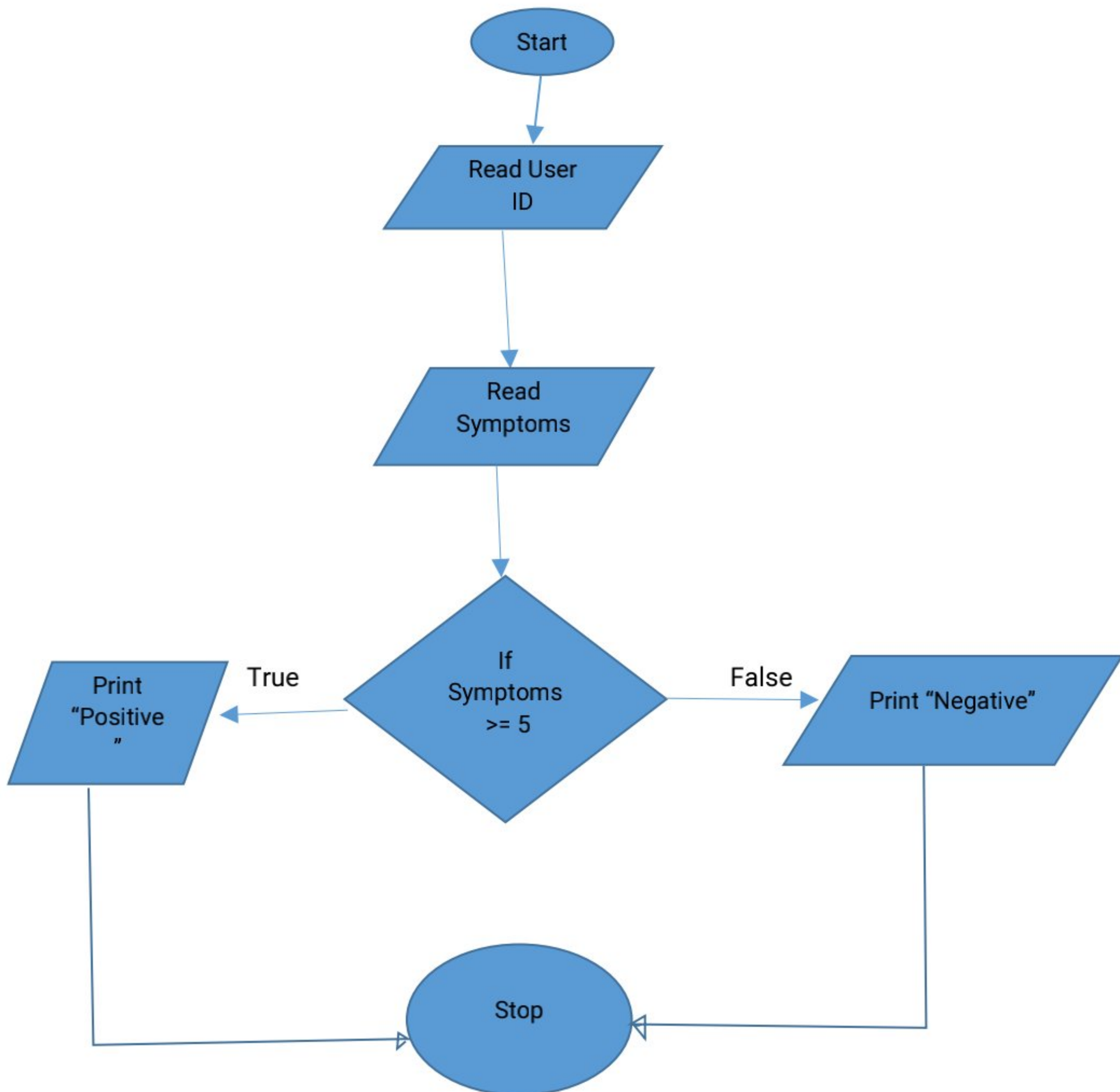
a. Database Management System (DBMS): this is a software application which is designed to allow the definition, manipulation, retrieval, and management of an hospital's medical database.

b. Web Design Package: this software is used to design web template which is used to access patient information through the internet. It also helps to organise and manage the digital information on the website.

c. Access control management software: this software controls who has access to medical records using the two-factor authentication. This is to ensure that the medical

data isn't altered or tampered or given access to the unauthorized personnel.

b. Flowchart



Hardware features of the application essentially involve any device capable of accessing the internet with at least 2MB RAM and microprocessors.

TOP-DOWN DESIGN APPROACH

