HEALTH MONITOR APPLICATION

Supervisor : ******

Name: ******

Student ID:

Introduction

- Health is an important aspect in today's world in order to be fit.

- Therefore, it is important to monitor their health condition on the regular basis for assuring their mental as well as physical health.

- The working environment of people plays a significant role in determining their health condition.

- Daily lifestyle and routine are also important for maintaining health conditions.

- Besides this food habits are also important for maintaining the health situation configuration of the mobile health application includes the option of suggesting healthy food habits and daily routine.

- The study is going to shed light on the configuration of the mobile health application.

- Essential tools such as MS SQL, Firebase, android studio, and Java are going to be used to develop a mobile application

Aim and objectives

- The aim of the assessment is to ***design of a mobile application so that a person's ECG collection, blood pressure, blood oxygen, heart rate, body temperature and sleep rate data be transmitted to a web server that is available to both the doctor and the patient and book appointments with the doctor in case of any emergency as per the requirement***.

- To reflect the actual status of the medical condition and health condition of the users in order to provide appropriate information to the users

- To find appropriate data related to blood pressure, heartbeat, sugar, and calories

- To design an easily accessible interface for the mobile-based application that can help the users in booking online appointments of the doctors

Research Questions

- What is the actual status of the medical condition and health condition of the users in order to provide appropriate information to the users?

- What are the appropriate data related to blood pressure, heartbeat, sugar, and calories?

- How to design an easily accessible interface for the mobile-based application that can help the users in booking online appointments of the doctors?

- How to provide information regarding health, food habits, and exercise for being fit by analyzing the overall health condition through automated sensor technology?

Chapter 2: Literature review

This section of the study has been illustrated to engage adequate information regarding such type of application development in terms of exploring preliminary researches and facts concerning digital health monitors.
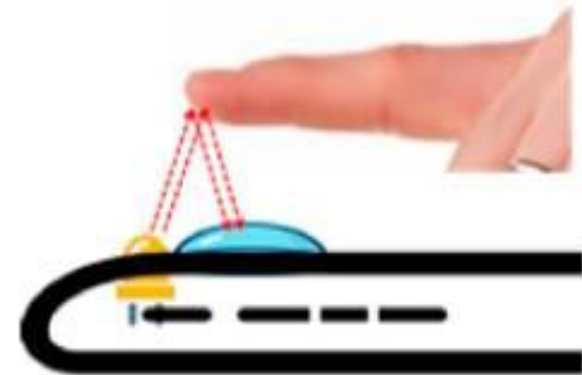
Conceptual Framework

Measurement of heart- rate

- Measuring heartrate from typical ECG signal

- Heart rate measurement from smartphone based sensors.
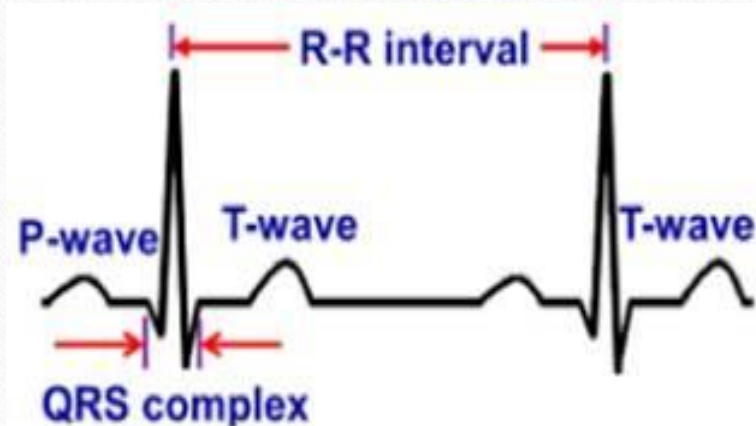
Measuring heartrate from typical ECG signal

Heart rate measurement from smartphone based sensors.

Hybrid Mobile applications

- The mobile-based application also contains the menu-driven option of tracking heartbeat and sugar levels. These health parameters are so important that they need to be measured on the regular basis to gather information on the health conditions.

- It also assists the users to check the blood pressure level and collect daily reports in order to get the appropriate advice from the application or from direct consultation with the specialist physicians if required.

Importance of health monitoring application

- The most impactful drawback which a health monitoring system may contain are the loopholes within the implementation code which and exploring possible loopholes may increase the chance of getting hacked or data thief

- Automation is none but the concept of executing specific processes automatically with the help of digital technology

- Accuracy is the most essential factor for the technical industry. In the technical revolution, accuracy plays a crucial role concerning success of development

Importance of automation concerning mobile based application

- Developing mobile applications concerning health monitoring engages several concepts in the view of operational level.

- Theoretical support concerning mobile application development has also been covered in this section of the study.

GLOBAL MOBILE INTERNET POPULATION
4.28bn

MOBILE INTERNET TRAFFIC AS SHARE OF TOTAL GLOBAL ONLINE TRAFFIC
55.64%

**NUMBER OF MOBILE APP DOWNLOADS WORLDWIDE IN 2020**
218bn

Chapter 3: Design of health monitoring application

- The application development consists of multiple stages from designing to beta version of the application where it include *strategy stage, designing stage, development stage, testing stage* along with *app release and ongoing support*.

- Along with this concept, the designing process implemented certain pages of an application which are identified based on the requirement such as the *page for measuring BP, page for measuring Oxygen saturation level, page for sugar level* and many other related pages which can be linked together for building the application

- The application consists of backhand database connectivity which holds the potential for storing the information of the user along with their disease or requirement

Chapter 4: Analysis of detailed methodology

- The respective development of the designing of the android application is determined with attainment of respective 8 phases of enhancement and developing application respectively.

- The detailing of the phrases determined through working simulation of the android application is evaluated in the respective chapter in brief for better simulation effectively. The following phases that are determined below are evaluated respectively:

Database of proposed application
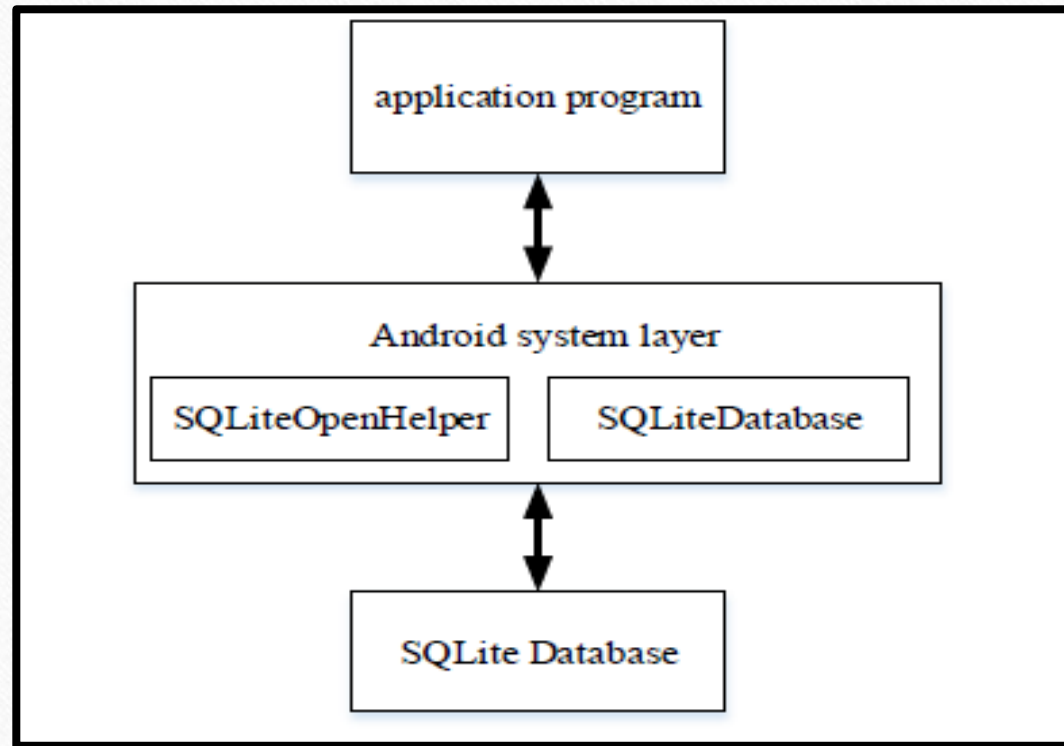
8 Phases of developing application
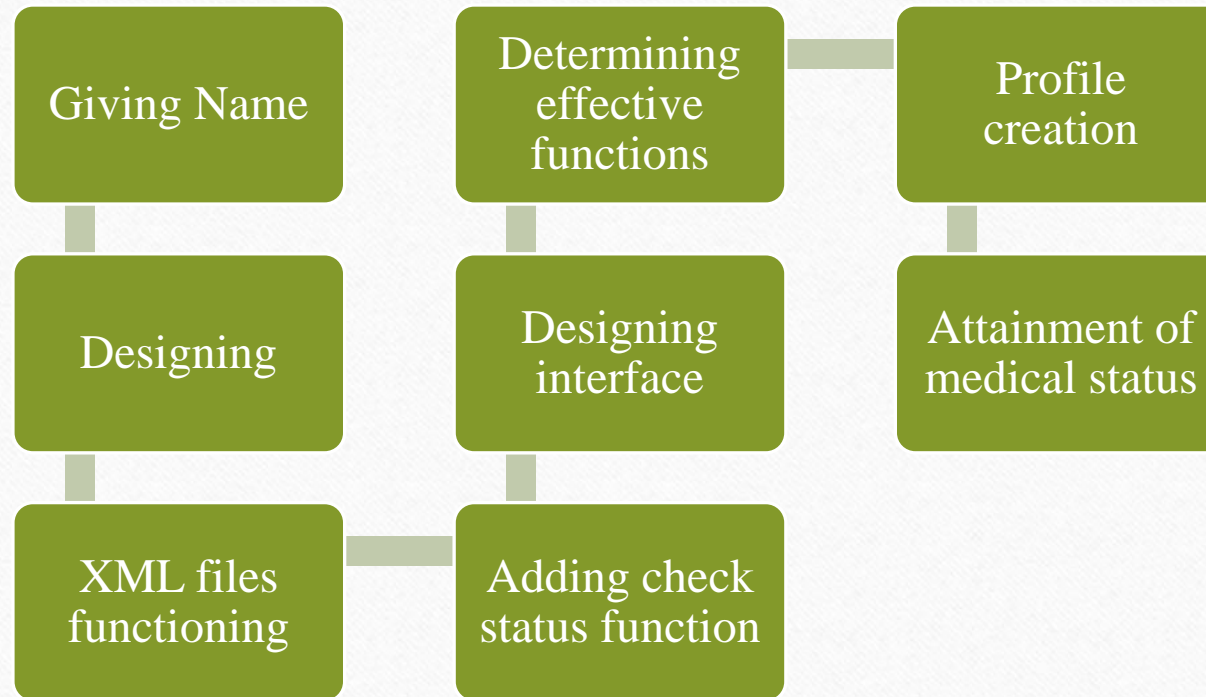
Chapter 5: Conclusion

The possible future scope of the health monitoring application is the adoption and implementation of the advanced features which can transform manual input to automation utilising sensor functionality. Along with this context, other functionality can be adopted and implemented based on the real scenarios where their user can track nearby users to identify if the user is COVID positive or not. Moreover, from tracking it can even adopt technological aspects which can use the sensor for reading the health condition of the users to notify the user about their health condition for the betterment. In addition, the list of the doctor will be even modified where the doctor can track user daily updates on the users who are under the doctor consultancy for a better understanding of the health.

Results

- In health monitoring applications multiple pages hold the various functionalities for supporting the application effectively and efficiently.

- Additionally, the entire software is conducted using android studio where multiple pages are linked together for building the application.

- Along with this context, the application consists of multiple stages for ensuring the building of the application which can detect and suggest the user related to their health conditions for the betterment

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- The stages which are considered as essential for the proper building of the application are the strategy stage, designing stage, development stage, testing stage as well as application release stage with ongoing support and fixation stage for ensuring proper functioning of the application.

- Initially, strategy stages are initiated where ideas are drawn on the paper for identifying and determining appropriate strategies which can be implemented within the application.

- Along with that it is considered that the strategies which are implemented within the application hold the potential for attracting the users towards this application as there are numerous applications in the marketplace

Conclusion

- Linking with objective 1:

  - The details are collected from the users on the interface pages for calculating their health status based on their inputs; the application displays exact information related to their health status.

- Linking with objective 2:

  - Along with this context, the second objective of the application achieved as it identifies appropriate data related to blood pressure, heartbeat, sugar as well as calories of the users.

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- Linking with objective 3:

  - Based on objective 3, the application has easily accessible interface for the mobile-based application which can assist the user to book their appointment with related health issue doctors.

- Linking with objective 4:

  - As per objective 4, adequate information has been provided to the users related to their health, exercise, and food habits while considering the overall health condition of the users while utilizing the backhand database.

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