SOS Application
Save Our Selves application to survive emergency cases

Manal Salem, Reem Alghrebi, Sakhaa Alhakami, Alya Momenah, Sarah Alhalife

UMM-ALQURA UNIVERSITY

Abstract:

The project demonstrates an application to provide the least possible response time in emergency reporting of patients by linking the patients with the clinic on campus.

The SOS application on the android phone sends an SOS alert triggered by the patient himself if conscious or by a passerby. It will contain the indoor location measured by barometer sensor and medical information that both will be retrieve from the database to the clinic to get the patient's location and medical information to provide appropriate treatment.

Introduction:

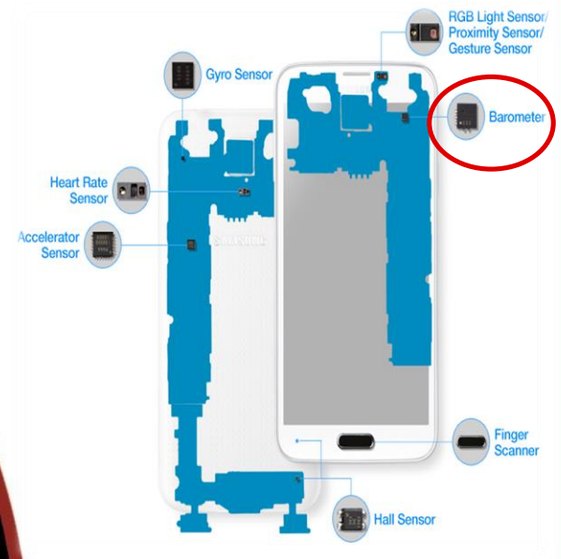
The first few minutes in emergency case are the most critical to saving the patient's life.

In addition to as the medical technologies advanced to reduce the response time in emergency cases.

Two challenges remains ;accurate location and medical information.

GOOGLE Map provides indoor locations service still yet not available in Saudi Arabia and which is a real challenge in this cases.

The barometer sensor that available in all smartphones since 2014 is used in this application to cover accurate patient's location challenges.



Challenges:

- **Google indoor map not yet exists in Saudi Arabia.**

Solution used :

Barometer sensor in smartphone has been used determining the range of each floors by meters.

Next plan :

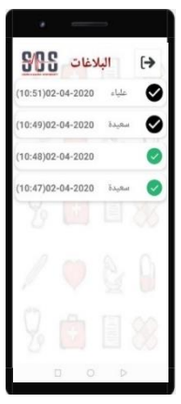
Apply Patented starting in June 2020.

How SOS app works :

1 Register / Log in as user / admin

2 Medical information

3 Home page for user



4 Home page for admin

5 Alert details

Conclusion:

The application designed to cover UQU and give students the ability to register with personal and medical information then they can trigger the alert for it's self in emergencies or for others by writing a description of of the case with the few existing information about them.

Clinic staff will be able to receive the alert from patients at a real-time after login, the triggered alert will retrieve the exact location and medical information from the database.

To get the application final result we had to learn android studio and firebase.

The test phase had to be in the UQU campus to measure the exact height for each floor, but due to COVID-19 conditions, the test has been done in 5 different buildings which is the group members homes.

Future Enhancements :

- Make the application available in multiple languages.
- Make the application compatible with iOS.
- Make an iWatch application.
- Commercialize the application to other universities.

Materials & tools :

- Android smartphone with barometer sensor.
- Android studio.
- Firebase database.

Reference:

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