EMERGENCY SOS FOR PREGNENT WOMEN

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Abstract: Android is an open source and Linux-based **Operating System** for mobile devices such as smart phones and tablet computers. Android was developed by the *Open Handset Alliance*, led by Google, and other companies. Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android. The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008.Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast. Every day more than 1 million new Android devices are activated worldwide.
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Keywords: Alert Message System, APK (Android Package Kit)

I.   INTRODUCTION

Android is an **operating system** which is build basically for Mobile phones. It is based on the Linux Kernel and other open sources software and is developed by **Google**. It is used for touch screen mobile devices such as smart phones and tablets. But nowadays these are used in Android Auto cars, TV, watches, camera, etc. It has been one of the best-selling OS for smart phones. Android OS was developed by **Android Inc**. which Google bought in 2005. Various applications (apps) like games, music player, camera, etc. are build for these smart phones for running on Android. **Google Play store** features more than 3.3 million apps. The app is developed on an application known as **Android Studio.** These executable apps are installed through a bundle or package called **APK(Android Package Kit)**.

Android Components : The App components are the building blocks of Android. Each components have their own role and life-cycles i.e from launching of an app till the end. Some of these components depend upon other also. Each component have a definite purpose.
The four major app components are:
1.   **Activities :** It deals with the UI and the User interactions to the screen. In other words, it is a User Interface that contains activities. These can be one or more depending upon the App. It starts when the application is launched. Atleast one activity is always present which is known as MainActivity.
2.   **Services :** Services are the background actions performed by the app, these might be long running operations like a user playing music while surfing the Internet. A service might need another sub-services so as to perform a specific tasks. The main purpose of the Services is to provide non-stop working of the app without breaking any interaction with the user.
3.   **Broadcast Receivers :** A Broadcast is used to respond to the messages from other applications or from the System. For example, when the Battery of the phone is low, then the Android OS fires a Broadcasting message to launch Battery Saver function or app, after receiving the message the appropriate action is taken by the app.
4.   **Content Provider :** Content Provider is used to transfer the data from one application to the others on request of the other application. These are handled by the class Content Resolver class.

1.2 OBJECTIVE:
To design an application based on SOS alert message system that sent an alert message to the doctor when the patient click on the SOS button on the application.In this application patient can choose the suitable medical scheme for their medical emergency which helps them financially.It has an feature of medical intake reminder which help the patient to remind them of the medicine they have to taken.

1.3 SCOPE:
The project is used to help the rural peoples who lived far away from the hospitals to get the correct service at the correct time and to reduce the fatal rate of pregnant women and the newborn child.

II.   ANALYSIS

2.1 SYSTEM ANALYSIS

System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose. Analysis specifies what the system should do.

2.1.1 PROBLEM DEFINITION

The project is used for the rural and village side pregnant women those who cannot achieve the hospital at the correct time. The user must enter the id and password in the registration coloumn for the login. After enter the login id the user can enter into the home page. In home page an SoS button Will be there. Once after we entered the button an alert message is send to the Duty Doctor, Chief nurse and the duty ambulance driver. Once after they received their message the ambulance driver start the travel to the women address who send to him. The duty doctor can start their preparation for the patient.

2.1.2 EXISTING SYSTEM:

Existing application does not have the intake medicine reminder for the patient. This existing application does not have the features like the showing governmentRelated health scheme.

2.1.3 PROPOSED SYSTEM:

The proposed model is designed and implemented withthe objective that it has to be user friendly and triggering of theapplication should take least time by the use of the application the user can sent and emergency message to the contact that the user has entered and to the nurse and the ambulance service. Additional feature of the application is that the application give reminder for the intake of the medicine for the use by alert ringtone for the user, this application has an feature of Appling for the government medical scheme through this app.

SYSTEM ANALYSIS

System analysis "the process of studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way". Another view sees system analysis as a problem-solving technique that breaks down a system into its component pieces for the purpose of the studying how well those component parts work and interact to accomplish their purpose.

2.2.1 Functional Requirements

Functional requirements define a function of a system and its components. A function is described as a set of inputs, the behaviour and its outputs. It may be calculations, technical details, data manipulation, processing with other specific functionality that defines what a system is supposed to accomplish.

Functionality

Functionality is defined as the required functions available, including interoperability and security. The functionality of the system is grouping image files with respect to the type of image.

Reliability

It is the maturity, fault tolerance and recoverability. The system is very reliable in the image processing domain. Any other files other than the image files like docs, pdf, exe are ignored if present in the source location.

Usability

It is easy to understand, learn and operate the application. The person just need to give the source and destination file location no further manual work is needed.

Safety

Safety-critical is issues associated with its integrity level. It does not affect the nature of the image before and after processing.

2.2.2 Non Functional Requirements

Non-functional requirements determine the resources required, time interval, transaction rates, throughput and everything that deals with the performance of the system.

Portability

The software must easily be transferred to another environment, including Install ability. The user can access and use the application from any place.

Performance

While processing a complex image it does not affect the processing of other file that are being processed parallel by other processors.

2.2.3 SOFTWARE ANALYSIS

Software analysis as "The process of studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way". Another view sees system analysis as a problem-solving technique that breaks down a system into its component pieces for the purpose of the studying how well those component parts work and interact to accomplish their purpose.

2.2.4 SOFTWARE REQUIREMENTS

- Operating system :Windows 10

- Technology Used   :Android 10
- IDE   : Android studio
- Emulators   : AVD
- Plug-in   :ADT plug-in
- Database   :MySQL

III.   SYSTEMDESIGN

Systems design is the process of defining the architecture, components, modules, interfaces and data for a system to satisfy specified requirements. System design is the process of defining the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well-running system.
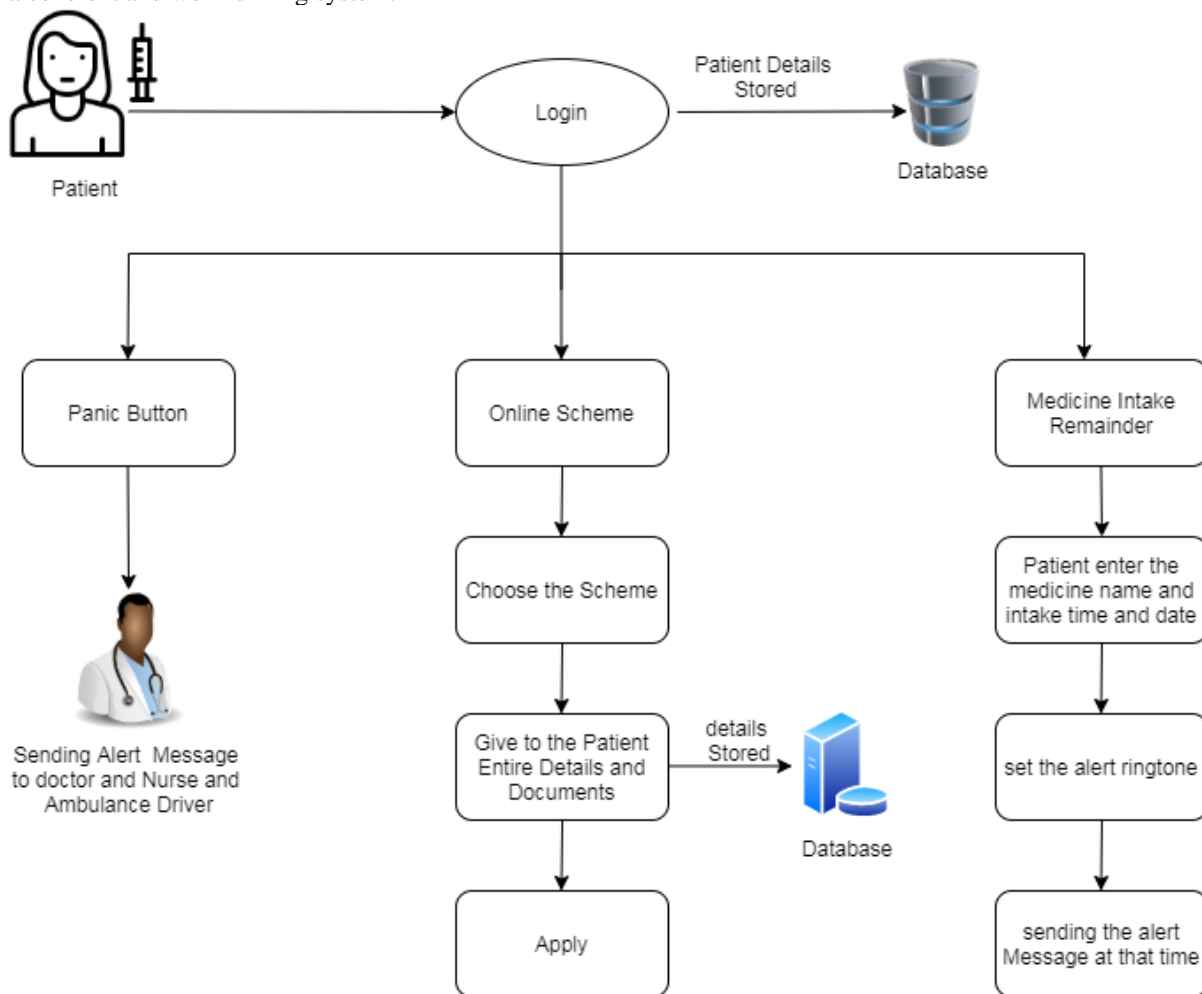

Fig 1 Overall Architecture Design for Emergency SoS

IV.   MODULES

MODULE DESCRIPTION
- Login
- Emergency SOS
- Online Scheme
- Medicine Intake

3.2 LOGIN

User authentication is a means of identifying the user and verifying that the user is allowed to access some restricted service. The main aim of this modules is to authenticate the user to application to view the motion detected image this module include username and password for authentication to application the validation is based on web service in server.

3.2.1 EMERGENCY SoS MODULE

In this module the user click the SOS button in case of feeling the pain an alert message will sent to the doctor nurse and the driver after getting the alert message the doctor start the precautionary measure for the patient to be treated for the emergency.

3.2.2 ONLINE SCHEME MODULE

In this module the user attached the files and the details of the patient and choose the relevant scheme that matches their need and submit the details to get the benefit of the scheme

VI. CONCLUSION

In this study, the emergency SoS system for pregnant women has been discussed. Although lot of research carried by different researcher doing research in emergency SoS buttons or systems, this is something that very handy and needful the registered user. This application is fast, handy and saves the time for the patient. The result will be the patient is received the treatment in on time. This will save the energy for the doctor and nurses and reduce the pressure on them and they don't have to be in hurry state.

VII. FUTURE ENHANCEMENT

The SoS System is already being implemented in majority of developed or developing countries. The system contains many benefits such saves the lives and prevents the major accidents before it happens. In our application there will be monitoring system that will check the daily report of the patient such as blood sugar level, blood pressure and heart beats. If any slight change might detect the patient will be take care by the doctor at hospital. With this the doctor can monitor the patient on anytime.

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