

## **Mobile Based First Aid System**

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### **Introduction**

First Aid is needed in an emergency situation. The major problem is most of the people do not have a proper knowledge about giving first aids and medication correctly. This unawareness may cause to risk the victim's life even more. Mobile Based First Aid System addresses these problems and provides better solutions. This mobile application facilitates in find out how the first aid should be given correctly, the basic supplies that should be kept in a first aid kit, the information regarding first aid (Treatment and Medication) according to the requirement of the user, facility of GPS in order to find out the nearest hospital, pharmacy location and provides MMS, emergency call facility (via the mobile phone) between the family doctor and the user.

### **Methodology**

The diseases are categorized in accordance with human body parts. According to the disease name in both Sinhala and English language, an introduction about the disease, symptoms, treatments and western or Ayurvedic medication information are stored in a MySQL database server. A website named [www.mobimedfirstaid.com](http://www.mobimedfirstaid.com) is developed and the relevant database is connected in order to retrieve information according to the user's requirement. By enabling the internet access this Android mobile application can retrieve data from this database via the PHP web service.

The website [www.mobimedfirstaid.com](http://www.mobimedfirstaid.com) which is developed using HTML, PHP, JavaScript and CSS, JQuery can be accessed by any user in order to get the information about correct ways of giving first aid and to watch videos of several bandage methods. The contact numbers of family doctor, ambulance, accident service and poison centre are stored in a SQLite database in Android mobile phone. So the user can directly call for any option without worrying to find those in the contact list. It is facilitated to capture the injured area as an image via mobile phone and directly send it to the family doctor with a single touch.

The basic supplies of a first aid kit have been stored in a SQLite database with relevant images in the mobile so that the user can refer it whenever he needs. The longitudes and latitudes of hospitals, pharmacies are saved in the SQLite database. As a result it is facilitated to display in a map according to the user's location and he may able to find the nearest hospitals and pharmacies. The methods of giving first aids in life threatening situations and rescue breath are saved with relevant images in a SQLite database in the mobile, so the user can access to those data without the internet connection.

### **Results and Discussion**

The mobile based first aid system supplies the data of giving first aid correctly. The data will retrieve from the MobiMED website via internet connection and will display in the mobile. The information regarding methods of giving CPR (Cardiopulmonary resuscitation), major supplies of a first aid kit, treatments to do in life threatening situations are saved in the mobile phone itself as a result the user can directly retrieve the information without wasting time to access the internet.

As contact numbers of family doctor and other emergency centers are saved in the application database itself, user can directly contact them without finding those contact

numbers anywhere else. Another important option is that, it allows the user to capture an image of injured area on the body and send it to the family doctor as a Multimedia Message (MMS). The doctor can observe the image and advise the first aider what to do as precautions. The user can easily find the nearest hospital and pharmacy proportionate to his location, if he is not aware of the place.

## Conclusion

This android mobile based first aid system helps a first aider to get aware of first aid methods, ayurvedic and western medication, bandage methods via a mobile application and a website. First aids for life threatening situations, CPR (Cardiopulmonary resuscitation) methods and major supplies of first aid kit information are in offline mode in the application. Besides the GPS facility has been provided to find the nearest hospital and pharmacy location. The direct dial facility for family doctor and other emergency centers help the user to reduce the wastage of time to search those in somewhere else. Overall it is a very low cost but efficient android application for first aid.

## References

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