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E-Health Application for Kids

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ABSTRACT: Computer based system for daily life application is on of effective way to perform these types of activities. In this regard many new technologies have been introduced to overcome daily life problem solving. Android is most trending in these days for the better experience in different mobile devices. In this research focus on the E-health application based on android, this app is also the formal app which is provided by the graphical user interface (GUI) for the health record. This application has options to use for the viewing the app options and provide the interactive styles of App. There are four features when user inters in the app menu. These steps are adding child record, register yourself, view the record and add the health details of kids. The android app activities are based on the different time and efficiency based which is needed to work over the different application for different activities. In future may increase the features of app according to need of users.

Keywords: Application, Android, Application, features, Health, Problem and Solving.

Abbreviations: GUI, Graphical User Interface; App, Application.

I. INTRODUCTION

One of the open source operating system having Linux kernel is an android operating system introduced for smart devices such as mobile phone, tablets and many appliances [1, 2]. This platform provides improved and dynamic way to develop creative and innovative application that run on android platform [3]. Android delivers the viability, functionality, and accessibility that is freely available to users. Now-a-days android is more popular due to its free and open source platform as well as releases quick versions on the behalf of user's ratings and experiences. This system provides easiness to the developers to developed android applications via android operating system with graphical user interface (GUI) experience [4-7]. GUI represents attractive contents to developers as well as users. In this application the developer has exciting experience with development of new apps having controls over them such as device control, and media control [8]. This system give you access to install native apps as well as third party apps on your system. The developers are further quiet with its experience. The libraries can be easily available and installed that provides functionality and reliability to the user. In the field of science, the technology brings uprising in every field. In information technology, each day brings new values with modernizations for the easiness of users.

In this era, the systems are twisted into online systems which are fast and having reliable access with rapid response runs remotely without wasting any time [9]. It was normally noticed that health workers in Pakistan official visit diverse zones meant for child immunization. In this affection they accumulate the data and possess record of information by means of old traditional procedures. In this procedure they may miss keeping the official record, miss administration, record blister, turn by unfinished visits cause serious problems for kids if they did not take vaccine. So, that it is essential to take vaccines of every child and they may not suffer any problem meanwhile miss management of workers. So that, we have developed an android application focuses on "Health Domain" for the vaccination of kids which provides computer-based solutions to handle these issues [10, 11].

This application delivers you the information of child expert who check the record of the child about vaccination and recommends some medicines and guidance related to fitness in undeniably. You can also continue the vaccination record to add child record during each visit by yourself. It also alerts you to pop-up the notification on your mobile phone screen for the next vaccination of child [12].

In this android app, the commencement of this application is by installing the APK file on your device and then connecting the application to your android system. This application provides you beautiful, interactive, attractive and reliable interface. By opening the interactive interface of application there are many exciting features for users. We have defined three segments in which the doctor's, health workers and parents of child can access the application.

The main features in this application are first you create profile and then register your account to login into

application. If you are using this application for first time you need to register your account by creating you profile as a doctor, health worker, and parent. The registration account has following fields such as Name, Fathers Name, CNIC, Postal address, Contact number and email ID. After completion of the following requirements you are the registered member and profile show the information that you have entered while registration.
There is another feature is login dashboard such as login doctor, login health worker, and login parent. You can login into application by using account that you have registered already and then enter email ID and password to login into account. After successfully login into system you have right to run an interface with different dashboards such as Admin dashboard and parent dashboard. If you are involved in the administration you need to go through the admin dashboard and there are two features involved in admin dashboard, add the doctor and health worker. First you add the doctors bio data, When you click on the option add doctors it requires following fields such as doctor name, father's name, CNIC, designation, specialty, contact, address, email address, password and from which city doctors belongs and click add doctors. As the doctor record successfully registered into database, he/she can view the profile, edit the profile and view the child details. Secondly, you add the health workers bio data, when you click option to add health worker another profile opens in which you add the biodata of health worker such as name , fathers name, CNIC, designation, specialty, contact, address, email, password and city. As the record of health worker successfully registered into database, he/she can view the profile, edit the profile, and view child that how many children have took the vaccination, and which type of vaccine he/she has took and which type of vaccine will remain. Another dashboard is a parent dashboard in which sub-features are add child, view child, view profile of parents, edit profile of parents, share app and logout.

II. MATERIALS AND METHODS

The methodology of the research depends on three major modes of application such as: Doctor, Health worker and Parents shown in Fig, 1.

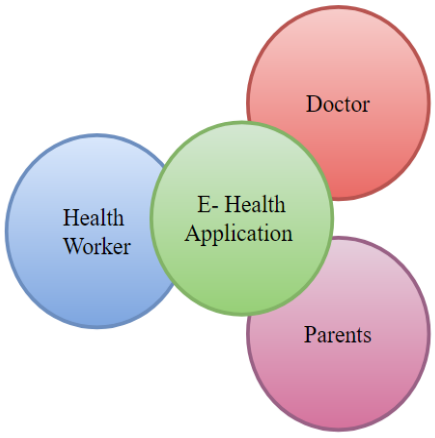

Fig. 1. Application Modes.

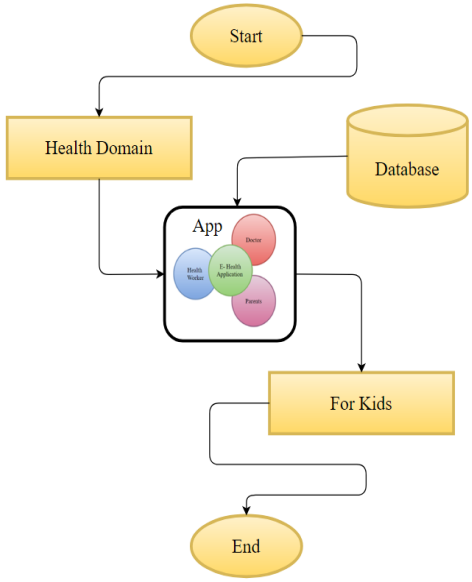

Fig. 2. Research Methodology.

Fig. 2, show the research methodology of research. This research depends on developing application related to health domain for kids to monitor the health and daily routine checkup.

A. Data set

The important asset of this app is data which is obtained from the health department. In this study we have submitted lots of the records as per guidance of the Health worker in health office of the District Shaheed Benazir Abad. However, the data is real for the child record and the android app is included the all the relevant filed as per data collection from the District health office. The real data is collected from the health work record manually collected and converted into the real data in the digital form. This is aim of this study to convert and record the manual data into digital format. The second thing is to provide the time being up to date information for the user and health worker.

B. Tools

The list of tools are used and given below
— Android studio
— ADB
— AVD Manager
— E-clips
— Fabric

C. Doctor

The doctor for this project is the person who evaluates the all activates of the health workers. The doctor is appointed from the government of Pakistan and he must be medical expert who controls and co-ordinates all activities. The child vaccination is scheduled and final recommendation will be given from the doctor. The doctor is responsible to diagnose and manage all activities of the vaccination.

D. Health worker

Health worker is person who is responsible to visit or follow the vaccination schedule as recommended by the doctor. In this context health worker can control over many activities such as making sure all vaccination

schedules are done on time, the reminder of current and next visit and other activities of the child vaccination.

E. The App working

The working of app needs to first login and for login it is important to register them on the app. After login user can add the record of the child such as name, age and vaccination date etc. After making the date of the vaccination the next step is to update the user either he/she is health worker or parents. This app also sends the emails or messages for reminders automatically if the date if close. This update notification is sent to the user or health work both one day before the date of the vaccination visit. The scheduled are maintain according to the visits of the child and also saves the dates for the next visit for better arrangement of the vaccination records.

III. RESULTS AND DISCUSSION

The results and discussions are the main part of this study which is actually the final output of the work. This app provides and smart comprehensive record management system for the health workers. The Smart Android app is also useful for the parents for making to know themselves updates of the kids vaccination for better remembrance of the dates of vaccination. The number of record can be added as much as need of the health worker. This app also sends the emails or messages for reminders automatically if the date if close. This update notification is sended to the user or health work both one day before the date of the vaccination visit. The scheduled are maintain according to the visits of the kid and also saves the dates for the next visit for better arrangement of the vaccination or health records. In this context results are counted from the user and health worker point of view. This is important for the evaluation of the app via the different activities.

IV. CONCLUSION

Overall conclusion of this research on E- Health Application for Kids was satisfied by using app. This app depends on three modules, Doctor, Health worker and Parents with main and sub feature of app. This app is also useful for Doctors as well as Parents with any location and time. No any restriction for app to view the record of kid's health. Which kids are new patients and treated patients? Also have a complete detail of kid's health with kid's detail record.

V. FUTURE SCOPE

In future work may increase the features of E-Health Application for kids according to need of users.

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Conflict of Interest. There is no conflict of interest.

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