HEALTH PORTAL-AN ANDROID SMARTER HEALTHCARE APPLICATION

S.Gavaskar[1], A. Sumithra[2], A.Saranya[3]

[1]*Assistant Professor, Galgotias University, Greater Nodia, Uttar Pradesh, India*
[2]*Assistant Professor, Velammal College of Engineering & Technology, Madurai, Tamilnadu, India*
[3]*P.G Student, Fatima Michael College of Engineering & Technology, Madurai, Tamilnadu, India*
gavaskar298@gmail.com, asm@vcet.ac.in, asaranyaalagar@gmail.com

Abstract

In the present scenario the health problems are increasing proportionally to the busy work schedule of the doctors. So mostly there is a conflict of free time of the doctors and the patients. Hence an easy and a steadfast system is required in the current world where health can be given equal priority as work and the doctors are made easily accessible to the patients and which also reduces the time spent for getting and providing a medical appointment. Our paper proposes a method in order to meet up and overcome the above mentioned problems. Mobile apps have found their way into every individual's life and has become a part of it. So we developed a mobile health care system to fix appointments with doctors and for the doctors to maintain their patient's database in a matter of few touches. The doctors can register and maintain their patient's database and the patients can access any doctor from any place and fix an appointment. GPS connectivity is linked with the application to find the list of doctors nearby the location at emergencies or travel and prescriptions are sent from the one they choose, in case of direct visit, appointment to the Doctors are made by filtering the list for the needed specification or complaint. Doctors also can view their patient lists and schedule their tasks. An additional feature is that reminders are added at the time of prescriptions recording. Thus the Application acts as a portal facilitating people in their busy schedule to care their health without wasting their time.

Keywords: *GPS, Health Care, Medical appointment*

----------***----------

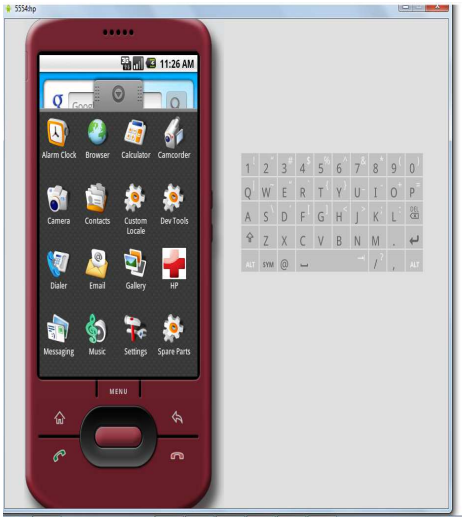
1. INTRODUCTION

Being busy is synonymous tothe present society.Life is becoming too busy to get medical appointments in person and to maintain a proper health care. Sudden travels can totally change the medicine course for people due to time zone changes and also people with serious medical ailments find it difficult to cope up with such travels and work and their health. Diabetes and high blood pressure patients have a necessity to take proper medicines at proper time. But the present busy schedule of people make it difficult for them to follow such timely medications.This is a problem that is prevailing all over the world where workaholics and travellers find it difficult to maintain both their health and work. Technology has provides us with many choices and our paper proposes one such innovation using the android platform for a healthier lifestyle. Health Portal is an android Application for such workaholics and travellers to keep their health at check.

2. HEALTH PORTAL

As said above, Health Portal is an mobile phone application developed in the Android platform that takes care of all health related appointments and also acts as a personal health assister. Mobile phones have found their way into each individual's life in a way that couldn't be explained. Mobile phones and Mobile apps have made themselves a part of literally every human's life on this planet. Health care made mobile is the best way to maintain a health conscious society.

Using Health Portal, one can get appointment with any doctor who has registered in it and can have their own medical database maintained along with the prescription of tablets and alerts on medication timings. Travellers can make use of GPS connectivity to find doctors in their place in case of emergency. GPS also guides them with the location of doctor and there also alerts on ambulance facilities in that area once they switch on the GPS facility.



3. IMPLEMENTATION

The software and hardware requirements to use this application are an Android Smart Phone. Implementation is purely software with an easy to use touch screen GUI interface. The Doctors are asked to register in this application from their mobile and then the database of patients are maintained and also the patients are allowed to view a list of doctors through the GPS facility or through manual selection by specialisation.

Patients can get an appointment from the doctors through the appointment form or get prescription by registering their complaints. They can also get tablet alerts regularly with respect to the maintained database.

3.1 Registration and Database Creation:

First, there are two domains once the application is started. One for Patients and one for Doctors

Doctors initially have to register to get their separate patient database on registration. Inside the Doctor domain there are two options:

1) *Register:*A new doctor is first asked to register to create a database.

```
try{
db=openOrCreateDatabase("PT_Database",SQLiteDatabase.CREATE_IF_NECESSARY,null);

db.execSQL("Create Table Ptreg (Name Text, Complaint Text,Phone_Number Text)");
}

catch(SQLException e){}
```

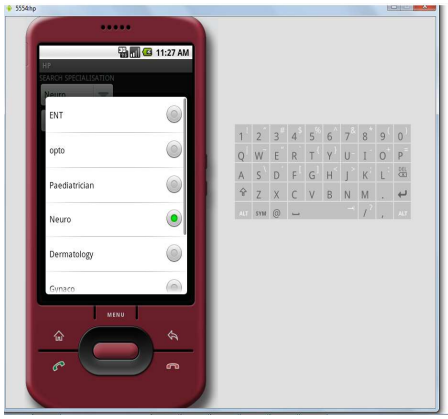
View Patient Database: A separate database is maintained for each doctor and once registered the doctor can maintain their own patients' database. It s password protected in order to prevent security issues.

3.2 Patients

If a patient registers into the patient domain then they are able to select the doctors based on the specialisation.Once they choose the specialisation a list of doctors from that particular specialisation is displayed on the screen.

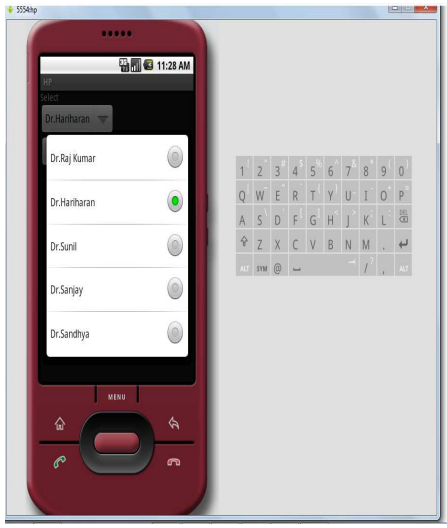
After selecting a particular doctor an appointment form is displayed.

```
b2.setOnClickListener(newView.OnClickListener() {

      publicvoidonClick(View v) {
                              // TODO Auto-generated method stub

      setContentView(R.layout.doctor);
                        Spinner spinner = (Spinner) findViewById(R.id.dtr);
                        // Create an ArrayAdapter using the string array and a default spinner layout

      ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(hp1.this,
                        R.array.dtr, android.R.layout.simple_spinner_item);
                        // Specify the layout to use when the list of choices appears

      adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
                        // Apply the adapter to the spinner

      spinner.setAdapter(adapter);
                        Button b8=(Button)findViewById(R.id.okk);
```



On filling the form the patient is added to the particular doctor's database and based on appointment timings and how full the database is an SMS message is sent regarding the appointment time and date.

In case of emergency an SOS message is sent to the particular doctor or the ambulance facility.



4. DATABASE

4.1 Doctors database:

First on creation the Doctor's Name, Specialisation, Address, Hospital, Experience are all gathered and then is provided with a separate database.

```
values.put("Name", e1.getText().toString());

      values.put("Specialisation", e2.getText().toString());

      values.put("Address", e3.getText().toString());
            if((db.insert("Docreg", null, values))!=-1)
                        {
            Toast.makeText(hp1.this, "Record Successfully Inserted", 2000).show();
                        }
            else
                        {
            Toast.makeText(hp1.this, "Insert Error", 2000).show();
                        }
```

After a separate database is created then as each person gets an appointment, it is registered in this database. This way each doctor can have their own patient records in their mobile phone.

4.2 Patients Domain:

Once a patient searches a doctor by specialisation or through GPS then the list of doctors are provided from which he can choose one to get prescription or an appointment.

The patient enters his name, complaint and address and can chose to get an appointment or just a prescription related to the complaint based on the previous record in the database of the doctor.

```
e4=(EditText)findViewById(R.id.pname);

e5=(EditText)findViewById(R.id.pcomplaint
);

e6=(EditText)findViewById(R.id.ph);

      ContentValues
values=newContentValues();



      values.put("Name",
e4.getText().toString());

      values.put("Complaint",
e5.getText().toString());

      values.put("Phone_Number",
e6.getText().toString());

                  if((db.insert("Ptreg",
null, values))!=-1)
                                    {

      Toast.makeText(hp1.this, "Record
Successfully Inserted", 2000).show();
                                    }
                  else
                                    {

      Toast.makeText(hp1.this, "Insert
Error", 2000).show();
                                    }
```

4.3 TABLET ALERTS:

Each person who has a database record in this application will also get tablet alerts regularly in their scheduled time.

This is to help diabetes and blood pressure and other chronic disorder patients.

This in turn will help patients have an health alarm for their medications.

5. GPS CONNECTIVITY:

Using GPS connectivity, patients who travel can get a list of doctors from that particular location in case of emergency and there are also ambulance service list that is displayed while using GPS.

This is very useful for travellers who has to take regular health check ups and also in case of emergency there is an facility for SOS message using GPS to the nearby hospital.

6. FUTURE ENHANCEMENT

There are ideas to provide a web domain for each doctor and patient to make it available online and a separate domain for each doctor to maintain he patient records in future. This will in turn provide a better access to people.

CONCLUSIONS

Finally to conclude, this Android Application Health Portal provides a better solution for a mobile health care for workaholics and travellers. This will greatly reduce the excuse for not taking proper care of health and will in turn be a boon to these busy worlds. The health care Application for travellers will definitely help them keep track of their medicines and in turn make their journey peaceful. On the whole it will provide a better healthy society.

REFERENCES

[1] http://www.codeproject.com/Articles/549488/Measures-to-be-taken-for-Health-compliant-site
[2] http://www.nytimes.com/2012/06/12/business/apps-for-the-traveler-with-medical-issues.html
[3] https://play.google.com/store/apps/details?id=com.medscape.android&hl=en
[4] http://www.nytimes.com/2012/10/09/science/redefining-medicine-with-apps-and-ipads-the-digital-doctor.html?src=me&ref=general&_r=1&
[5] http://www.codeproject.com/script/Articles/Latest.aspx