

Abstract

This sections contains the summary of how our android application is working throughout the ever increasing health sector. It will give you brief over view of how it the app works in short time.

The Healthcare App is created for one sole purpose; it is to create a link between the doctors & the patients. This works for two types of registrations. One as Doctor & the other as a patient.

Doctor Registration

If one creates a profile as a doctor, then he can

- easily manage his patients through digital database system. It will be directed to him by the application management team.
- study his patients by accessing their previous health records.

Patient Registration

If anyone registers as a patient, then he can access many advantages such as

- fixing appointments
- seeing doctors
- BMI calculator
- health related books
- receiving reports through the app
- Accessing different Govt. Health websites
- 24x7 Emergency Ambulance Service through direct call.

The main work of the app in this project is to be the middle ground between the doctors & the patients as now-a-days the it is seen that there is a huge wastage to time for appointment waiting & report. Even it is seen that the doctor is absent or attending an emergency.

So this App can act as a bridge to help doctors & patients collaborate with each other.

N.B: The detailed interface of the applications & how it functions is described very thoroughly in the further sections.

Objectives:

- **Commutation between Doctor & Patients:**

In the recent times the communication between doctors & patients has maximized a lot. It has been dependent on a different medium such as clinics or chambers. So patients have to deal with them. But more often they have to suffer a lot, because they have to wait in line, fix an appointment. Often the doctors come late or have an emergency. But the patients have to wait or are not aware of this fact.

So the app allows them communicate frequently about the updates of their appointments, whether is it going be late for the doctor to see them. Even the patients can cancel their appointments if emergencies occur. This way the time will come closer.

- **Digital Report Delivery System**

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The application allows the users to digitally have the reports through the app & their emails. So, the patients will not have to wait in long lines for their reports anymore. This way a lot of time can be saved thorough this process.

- **Doctor's Having More Patient Access:**

Doctors can access their patients' health record from the database whenever they want to. They can study the patient by just a click of a button. This allows the doctors to quickly see though the patients so that he can move forward with the new ones.

- **Emergency Ambulance Service for Mass People**

The app allows emergency ambulance service to any emergency situation. Suppose an emergency situation has occurred, so by pressing the emergency button a direct call will go to the App team. They will know their whereabouts & send the nearest ambulance service to their place &even prepare the hospital for the emergency patient.

- **All in One App**

The App allows its users to access advantages of a clinic or health center by just the push of a button. Here you can have every access to fixing appointments to seeing your previous health record & consulting with better doctors if you want to. This will eventually become the one place for ultimate health care network.

User Requirements:

Software Requirements:

- Android Studio
- Google Firebase
- Google Forms
- Adobe Illustrator (Design Purpose)

Additional Requirements:

- Computer or Laptop with Graphics Card.
- Internet Access.

Languages:

- Java

Working Procedure Through Application:

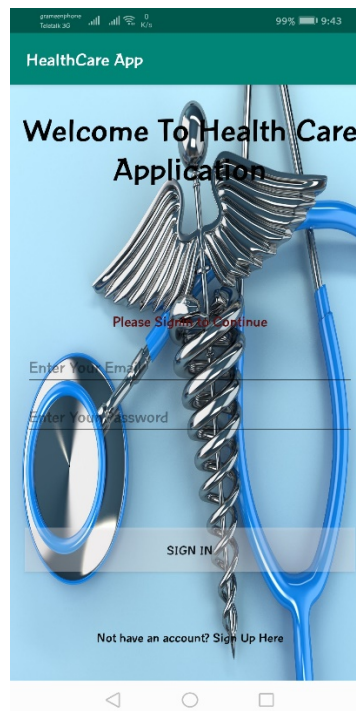
When someone want to first time open our android application through his Android device, first it need to be installed on device. Then it can be use. First page look like this:



Then as a new user need to be registration. So have to select REGISTER AS PATIENT. The page look like this.



Here, by entering valid email and authentic password then tapping REGISTER USER button one can registered to our system. But if he already had an account, he can sign in by tapping Already registered? Sign in now. Sign in page look like this:



After sign in or registered to account, then he has to give us some information us, so that we can provided him his usual service.



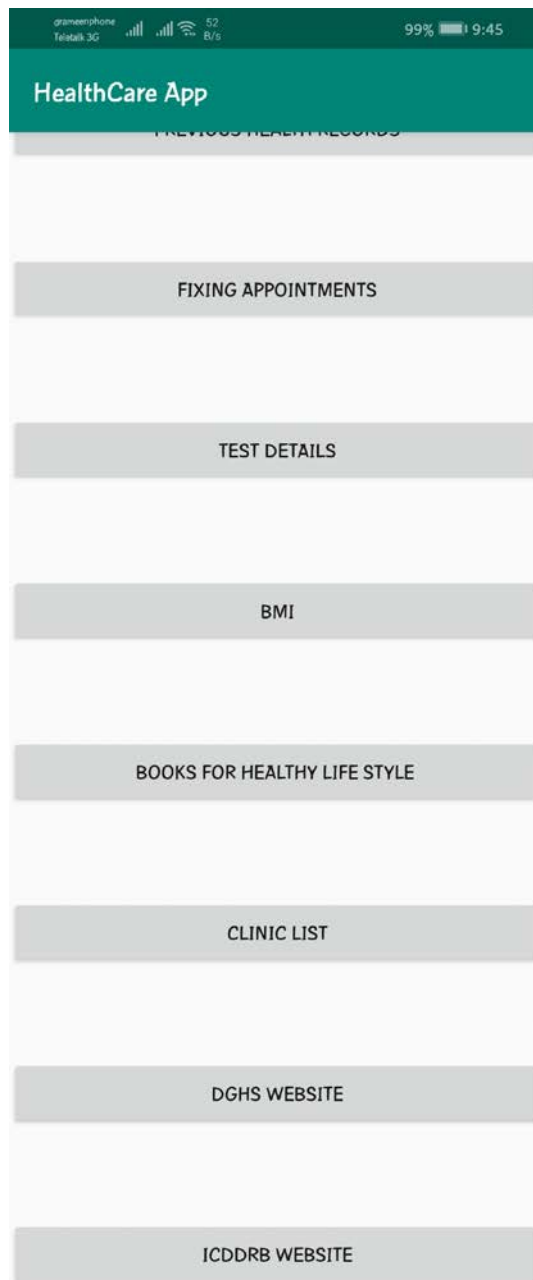
The screenshot shows the 'HealthCare App' registration screen. At the top, there's a green header with the app name. Below it, a welcome message says 'Welcome nrpnadim@gmail.com'. The form contains three input fields: 'Enter Your Name', 'Enter Your Age', and a dropdown menu for gender with 'Male' selected. At the bottom, there are two buttons: 'SAVE INFORMATION' and 'LOGOUT'.

After entering information, he has to press SAVE INFORMATION button. That will Bring him to main page, where he has different options.

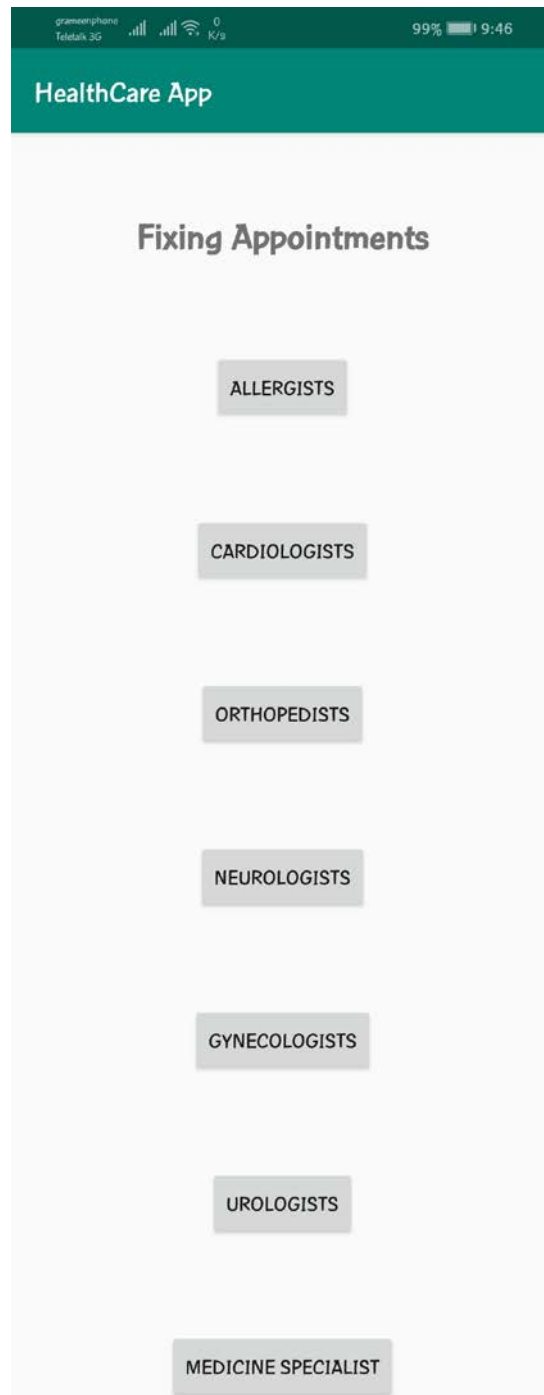


The screenshot shows the 'HealthCare App' main menu. It has a green header with the app name. Below it, a welcome message says 'Welcome Nadim'. Underneath, it says 'Welcome to HealthCare'. There are five buttons: 'PREVIOUS HEALTH RECORDS', 'FIXING APPOINTMENTS', 'TEST DETAILS', 'BMI', and 'BOOKS FOR HEALTHY LIFE STYLE'. A small 'Information Saved...' message is visible above the last button. At the bottom, there are three navigation icons.

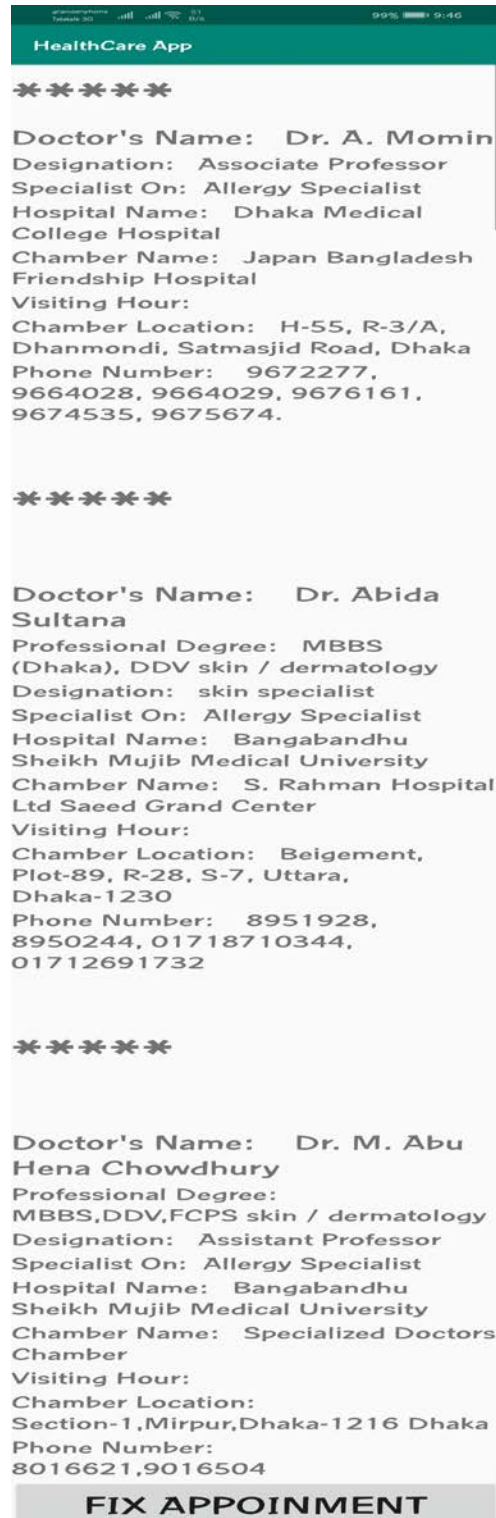
We called it Benefits page. The benefits he can get:



For Fixing appointment to a doctor, he has to press FIXING APPOINTMENTS button. That will bring him to this page:



Suppose he have allergic problem, and has to set appointment to an allergist. So he has to press ALLERGIST button. We provide here best doctor in our city. Here is an example:



The screenshot shows a mobile application interface for a healthcare app. At the top, there's a status bar with signal strength, battery level (99%), and time (9:46). Below the status bar is a green header with the text "HealthCare App". The main content area is white and displays three doctor profiles, each separated by a decorative line of asterisks. Each profile includes the doctor's name, designation, specialist type, hospital name, chamber name, visiting hours, chamber location, and phone numbers.

Doctor's Name: Dr. A. Momin
Designation: Associate Professor
Specialist On: Allergy Specialist
Hospital Name: Dhaka Medical College Hospital
Chamber Name: Japan Bangladesh Friendship Hospital
Visiting Hour:
Chamber Location: H-55, R-3/A, Dhanmondi, Satmasjid Road, Dhaka
Phone Number: 9672277, 9664028, 9664029, 9676161, 9674535, 9675674.

Doctor's Name: Dr. Abida Sultana
Professional Degree: MBBS (Dhaka), DDV skin / dermatology
Designation: skin specialist
Specialist On: Allergy Specialist
Hospital Name: Bangabandhu Sheikh Mujib Medical University
Chamber Name: S. Rahman Hospital Ltd Saeed Grand Center
Visiting Hour:
Chamber Location: Beigement, Plot-89, R-28, S-7, Uttara, Dhaka-1230
Phone Number: 8951928, 8950244, 01718710344, 01712691732

Doctor's Name: Dr. M. Abu Hena Chowdhury
Professional Degree: MBBS,DDV,FCPS skin / dermatology
Designation: Assistant Professor
Specialist On: Allergy Specialist
Hospital Name: Bangabandhu Sheikh Mujib Medical University
Chamber Name: Specialized Doctors Chamber
Visiting Hour:
Chamber Location: Section-1,Mirpur,Dhaka-1216 Dhaka
Phone Number: 8016621,9016504

FIX APPOINMENT

When he sure about doctor, after see designations and specialties', he can now fix appointment by pressing FIX APPOINTMENT button. Then a google form will open, and we collect your data from that from.

The image shows a mobile screen displaying a Google Form titled "Fix Appointments" for "Allergists". The form is structured with several sections, each containing a label and a text input field:

- Doctor:** A section with three radio button options: "Dr. Abida Sultana", "Dr. M. Abu Hena Chowdhury", and "Dr. A. Momin".
- Name:** A text input field with the placeholder text "Your answer".
- Age:** A text input field with the placeholder text "Your answer".
- Profession:** A text input field with the placeholder text "Your answer".
- Sex:** A section with three radio button options: "Male", "Female", and "Other:". Below the "Other:" option is a text input field with the placeholder text "Your answer".

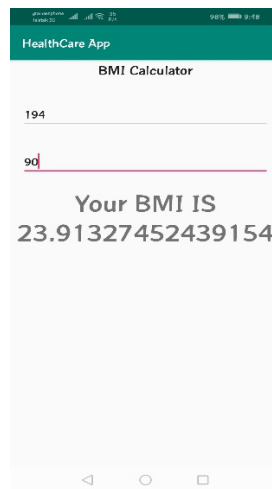
At the bottom of the form is a purple "Submit" button. The top of the screen shows a status bar with "grammerphone", "Telcel 3G", signal strength icons, "0 K/s", "99%", and "9:46". The browser address bar shows "docs.google.com/forms/d/" and a tab count of "25".

After pressing Submit button, His appointment will be fixed, and we provide him a appointment number.

For investigation about his previous health report, he has to press PREVIOUS HEALTH REPORT button. Here he can see all his previous diseases details and information.

The screenshot displays the 'HealthCare App' interface on a mobile device. At the top, a teal header bar contains the app's name. Below this, a section titled 'Previous Health Records' lists two entries. Each entry is represented by a light gray card with a rounded top. The first card is labeled with the number '1' and contains three input fields: 'Disease Name', 'Doctor Name:', and 'Date:'. The second card is labeled with the number '2' and contains two input fields: 'Disease Name' and 'Doctor Name:'. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons. The status bar at the very top indicates the carrier as 'gramphone', signal strength, Wi-Fi connection, data speed of '16 B/s', 99% battery, and the time '9:45'.

One can also calculate his BMI (Body Mass Index) from our application. Just have to press on BMI button.



We also provide some pdf books for healthy lifestyle. For reading these, he just has to press BOOKS FOR HEALTHY LIFESTYLE.

By connecting one to Health Ministry of Bangladesh, we also add here a link of DGHS Bangladesh website. Here he can be updated and concerned about upcoming flu, disease, virus, antivirus etc. Just he has to press DGHS WEBSITE button



Not only this, we also add here a link of ICDDR,B. Which is International health research institute. Here, he able to know about world health conditions.



If anyone want to know about the best clinic, hospital or diagnostic center of his city, he just has to press CLINIC LIST button.



Project Future Innovation Plan:

In Bangladesh the health sector is very under developed. The government has taken many steps to make the health care unit a more productive one. But ultimately without making it more digital this plan will not go further.

Health Sector is one of the busiest sectors of today. So it is high time steps have been taken to minimize the work procedure of the patients & the hospital staffs. Our aim is very simple. It is to bring the whole health care unit in one simple Application.

Our plans for this Application has some phases. So let us discuss them right away.

Phase One: Primary Phase

In this phase we would want test our app in a busy hospital & manage their patient & doctor involvement through our App. The regular works can be undergone by the App itself. By using the App, the hospital can also be benefited as their whole Patient Report & Appointment got digitalized. We will be in this phase for almost 6 months.

Then we will see the result of this phase. After evaluation if we think we have succeeded in our objectives then we can move on to our next phase.

Phase Two: Secondary Phase

After completing the first phase for our App testimonial. We will begin our phase two. This phase will be a bit hard as it involves a whole city. We tend to make a whole city's health care system digitalized. In this process we shall link all the hospitals in the city through the App. So as result you will have the whole health care unit in your pocket. You can access it whenever you want.

But this will take much man power. There has to be a app team in every hospital to make the collaboration with the patients & doctors. So this phase is really a lot difficult as it comes with a lot of obstacles. If we surpass this hindrance, then we can achieve our ultimate goal. This phase has a period of 1 year to 1.5 years.

Phase Three: Ultimate Phase

After achieving our secondary phase, we will have to aim higher. Because now the target is to make the whole countries health care unit in to our one app. This will most certainly require a huge amount of funding as well as help with government. But this goal is ultimately very far. So while working on the secondary phase we will try to talk to the government officials in this regard. If the government works by our side, then it won't be long when the whole medical system is in our hands.

Conclusion:

Bangladesh is going through a huge transaction. So, it is important to understand the medical healthcare unit is the only thing that is holding Bangladesh to go to a Developed Country. Digitalizing the healthcare system is only the first step toward better medical attention of the mass people.

The linkage between the doctors & patients is the first step towards a Digital Bangladesh. It will be a revolution to medical community as it will help everyone to do their jobs more efficiently.

This will ignite the fume & more innovations will come along. The HealthCare App is most certainly not going to be a bargain. It will eventually become an essential element to everyone in this country.

Everyone will be united by this application & we will finally achieve the status of being one the developed countries in the world