iHealthCare

Project Plan and Second Increment

Spring 2017

Team # 22: SavvyHackers

Team members:

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1.Introduction

iHealthCare

iHealthCare is a one stop solution for expensive medical diagnosis.

Using android based mobile application user can perform following operations:

- User can login using Facebook or google or he can register on our domain.
- User can start diagnosis providing minimal details, he/she will get a feel as if they are in conversation with doctor as every response of the user is followed by an adaptive and an intelligent question. I can be a multiple choice or yes/no type.
- On identifying the user condition at the end of diagnosis, we provide a detailed report of the health condition and necessary measures to be taken.
- App suggests nearby doctors, who are specialists in treating patients condition.
- Patient reviews for each practitioner will be displayed to the User.
- User can book an appointment and see that practitioner.
- On the other hand, based on user condition severity, we monitor user health, posing notification questions and re-diagnosing.
- User will be provided with a graph of his condition severity.

2.Project Goal and Objectives(revised)

2.1 Overall goal

The core idea is to build an intelligent and adaptive symptom checker and to provide the patient with the potential diagnoses and recommend doctor accordingly. Scheduling an appointment with the doctor, if required.

2.2 Specific objectives (problem statement)

To create a unique platform where the application asks patient, possible set of questions on symptoms based on his previous responses and diagnose intelligently.

Provides patient with the possible health conditions along with severity and description of the same.

It also helps the patient to schedule an appointment with the nearest doctor on the list for medical condition.

2.3 Specific features

Diagnose: This feature makes the patient to interact with a set of possible questions on the symptoms based on the responses given by the user previously.

Appointment Scheduling: This feature helps the patient to schedule an appointment with the nearest doctor on the list for the medical condition, based on the reviews from customers

Monitoring Health Condition: This helps the user to monitor his/her health condition based on the previous diagnosis.

Nearby Doctors: This feature gives the patient with the nearby doctors list and it will even show the path to the location of doctors within a specified distance.

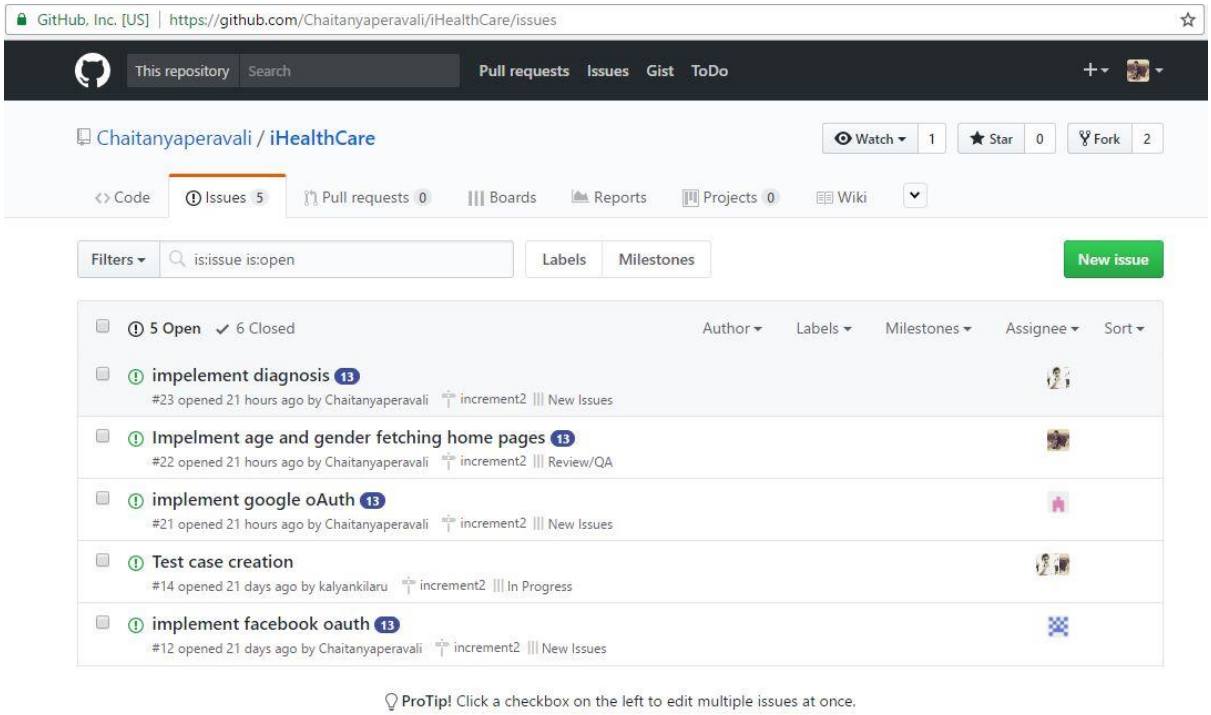
2.4 Significance

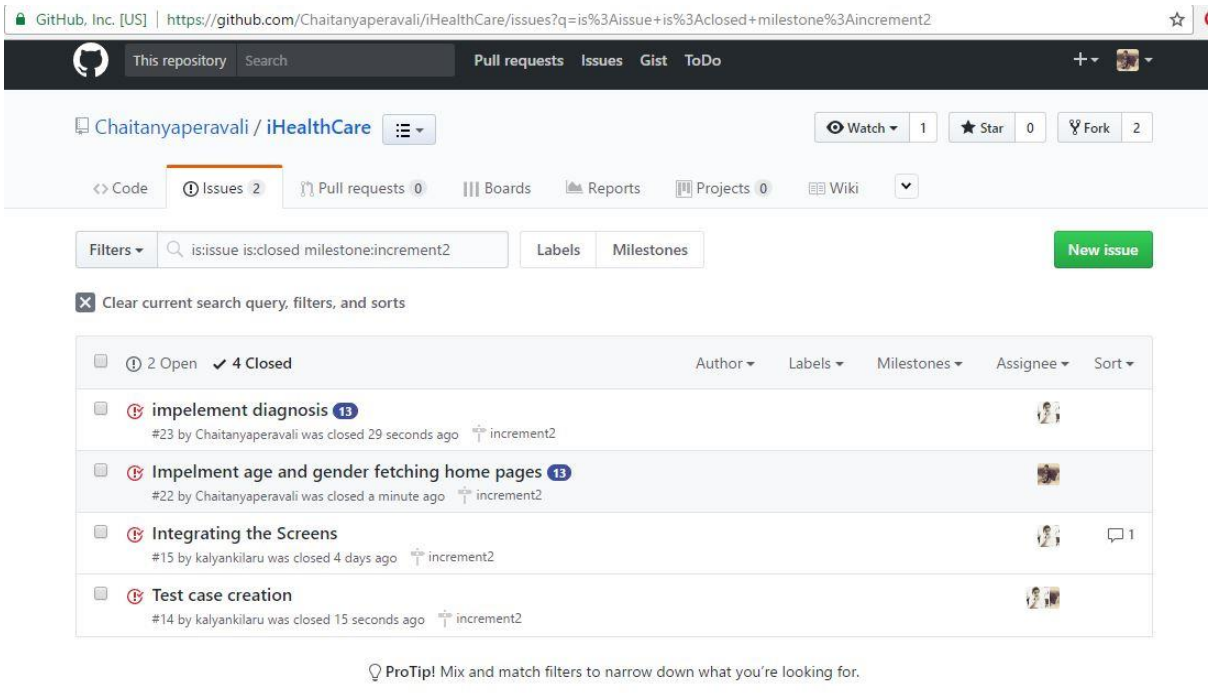
This app provides the feel as if the patient is speaking to a doctor on a medical condition. Apart from diagnosis, it also supports the patient by selecting a doctor and scheduling an appointment. This app is a single place where patient can get all these features.

3.Project Plan

1.Zen-Hub Screenshot

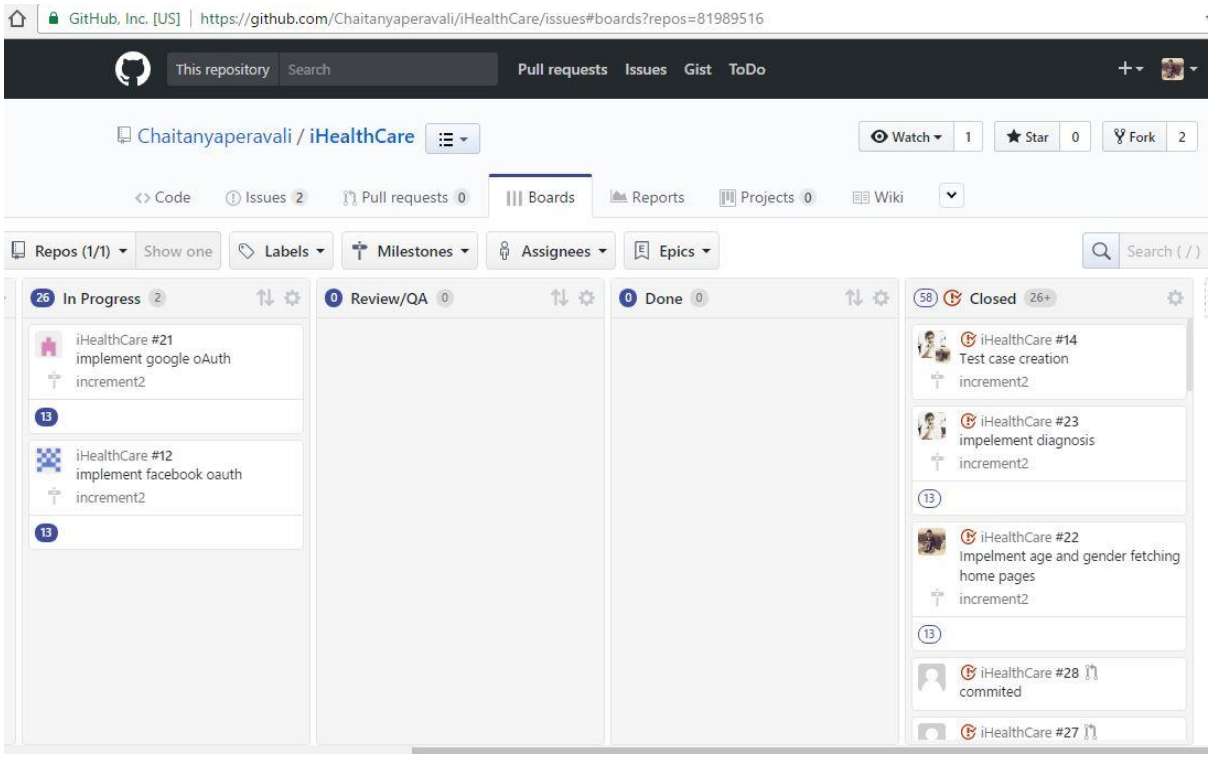
For the second increment, we had the following issues in Zen-Hub as shown in the screen shot, they are implementing Signup screens which fetch user details, implementing diagnosis, implementing Google oAuth and implementing Facebook oAuth. Apart from these, we had issues like updating the Class diagrams, creating test cases and integrating all the modules.


GitHub, Inc. [US] | https://github.com/Chaitanyaperavali/iHealthCare/issues
This repository Search
Pull requests Issues Gist ToDo
Chaitanyaperavali / iHealthCare
Watch 1 Star 0 Fork 2
Code Issues 5 Pull requests 0 Boards Reports Projects 0 Wiki
Filters is:issue is:open
Labels Milestones
New issue
5 Open 6 Closed
Author Labels Milestones Assignee Sort
impelement diagnosis 13
#23 opened 21 hours ago by Chaitanyaperavali increment2 New Issues
Impelment age and gender fetching home pages 13
#22 opened 21 hours ago by Chaitanyaperavali increment2 Review/QA
implement google oAuth 13
#21 opened 21 hours ago by Chaitanyaperavali increment2 New Issues
Test case creation
#14 opened 21 days ago by kalyankilaru increment2 In Progress
implement facebook oauth 13
#12 opened 21 days ago by Chaitanyaperavali increment2 New Issues
ProTip! Click a checkbox on the left to edit multiple issues at once.


GitHub, Inc. [US] | https://github.com/Chaitanyaperavali/iHealthCare/issues?q=is%3Aissue+is%3Aclosed+milestone%3Aincrement2
This repository Search
Pull requests Issues Gist ToDo
Chaitanyaperavali / iHealthCare
Watch 1 Star 0 Fork 2
Code Issues 2 Pull requests 0 Boards Reports Projects 0 Wiki
Filters is:issue is:closed milestone:increment2
Labels Milestones
New issue
Clear current search query, filters, and sorts
2 Open 4 Closed
Author Labels Milestones Assignee Sort
impelement diagnosis 13
#23 by Chaitanyaperavali was closed 29 seconds ago increment2
Impelment age and gender fetching home pages 13
#22 by Chaitanyaperavali was closed a minute ago increment2
Integrating the Screens
#15 by kalyankilaru was closed 4 days ago increment2
1
Test case creation
#14 by kalyankilaru was closed 15 seconds ago increment2
ProTip! Mix and match filters to narrow down what you're looking for.

2. Project Timelines, Members, Task Responsibility

Below is the screen shot of the boards, which tracks the issues and the state of the issues like in open state, review, in progress and closed states etc. This also shows the milestone of each issue.



3. Burndown Chart

The burndown chart for the total issues of increment 2, which are in open and closed status.

increment2

Edit Milestone | Milestones

Labels | Hide Pull Requests | Burn Pipelines

Start: **Feb 21, 2017** Edit Due: **Mar 10th, 2017** Edit

52 Total Story Points

26 Completed Story Points / 26 Remaining Story Points

6 Total Issues and Pull Requests

4 Completed Issues and PRs / 2 Remaining Issues and PRs

52 Total Story Points

26 Completed Story Points / 26 Remaining Story Points

6 Total Issues and Pull Requests

4 Completed Issues and PRs / 2 Remaining Issues and PRs

Remaining Issues and Pull Requests	Story points
implement facebook oauth iHealthCare **#12** ||| In Progress	13
implement google oAuth iHealthCare **#21** ||| In Progress	13

Completed Issues and Pull Requests	Story points
Test case creation iHealthCare **#14**	Not estimated
Integrating the Screens iHealthCare **#15**	Not estimated
Impelment age and gender fetching home pages iHealthCare **#22**	13
impelement diagnosis iHealthCare **#23**	13

4. Second Increment Report

4.1 Existing Services/REST API

The below mentioned API's are used in the second increment to make it a user-friendly application.

1. **Facebook Authentication API:**
   As Facebook is a social platform where many people are connected, the Facebook Authentication API will let users to create an account easily with their Facebook account.
2. **Google Authentication API:**
   In similar to that of Facebook, many users are connected to Google so by making Google Authentication to the users of our will make them easy to sign up to our application.

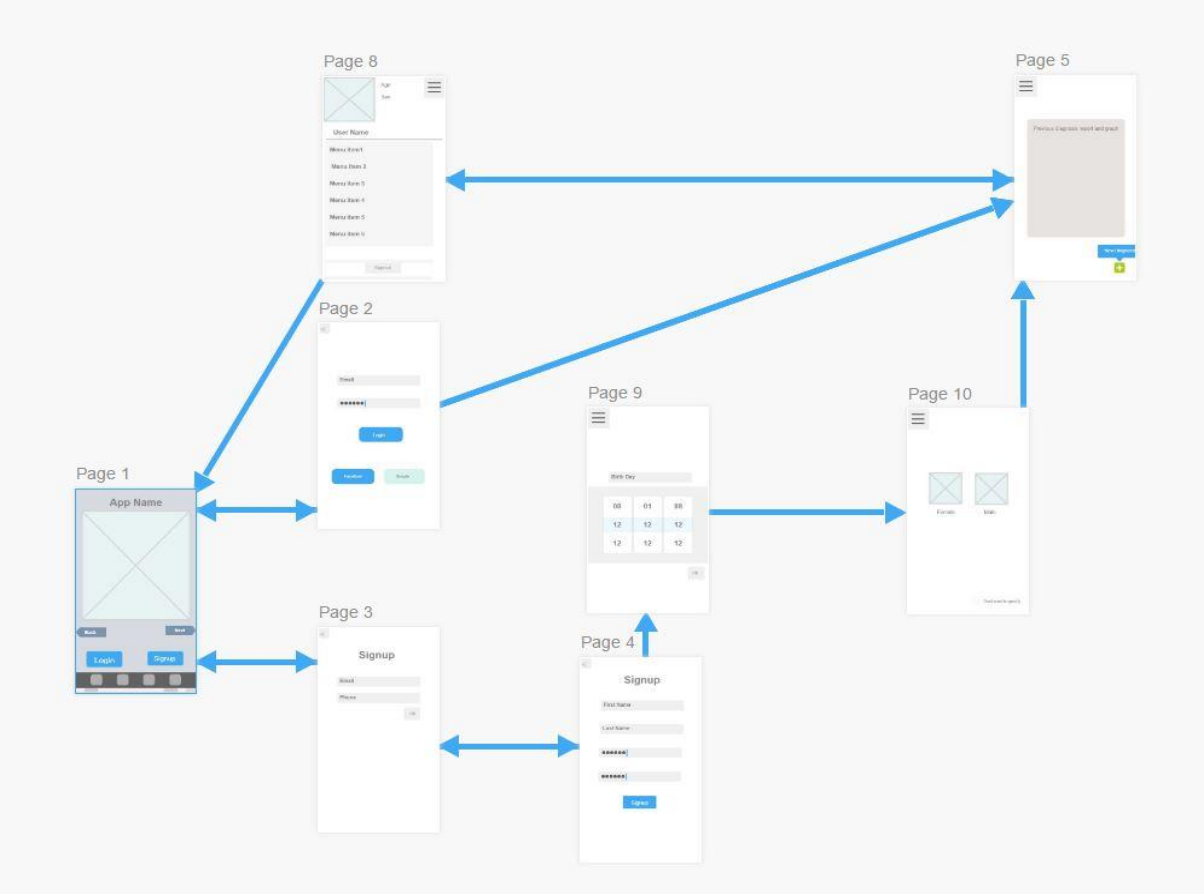
API's to be Implemented:

- Infermedica
- Better Doctor API
- Google Maps API

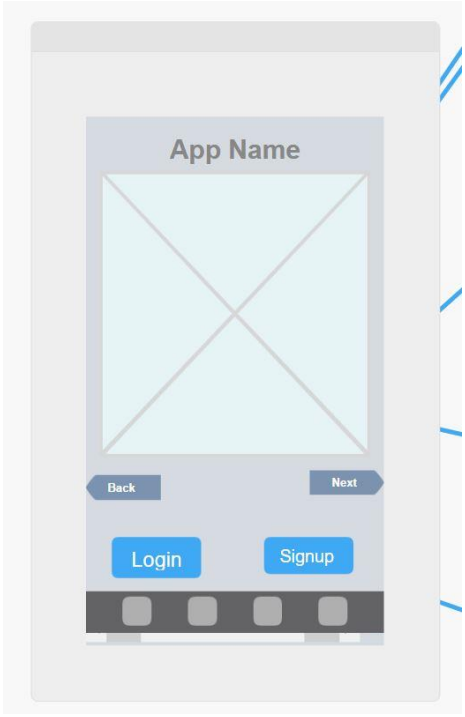
4.2 Detail Design of Features

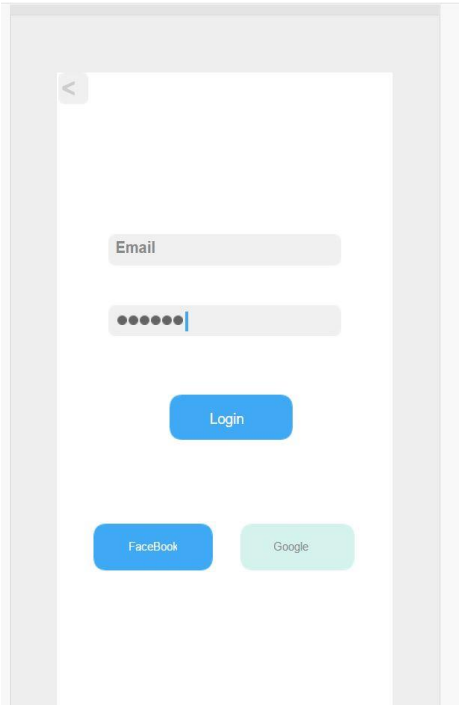
4.2.1 Wireframes:

Flow Chart:

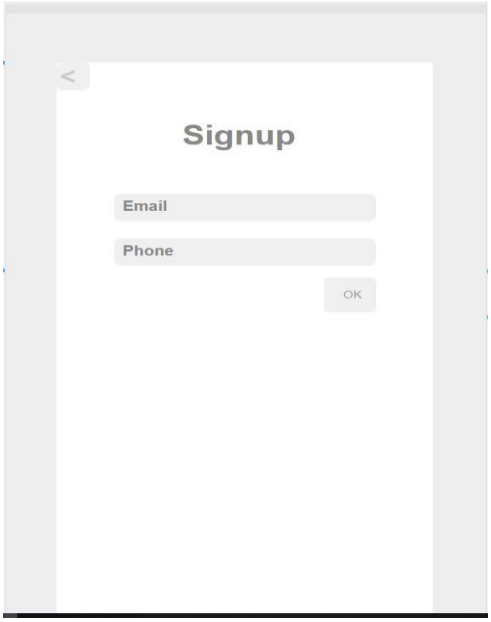

Page 8
Page 5
Page 2
Page 9
Page 10
Page 1
App Name
Login
Signup
Page 3
Signup
Page 4
Signup

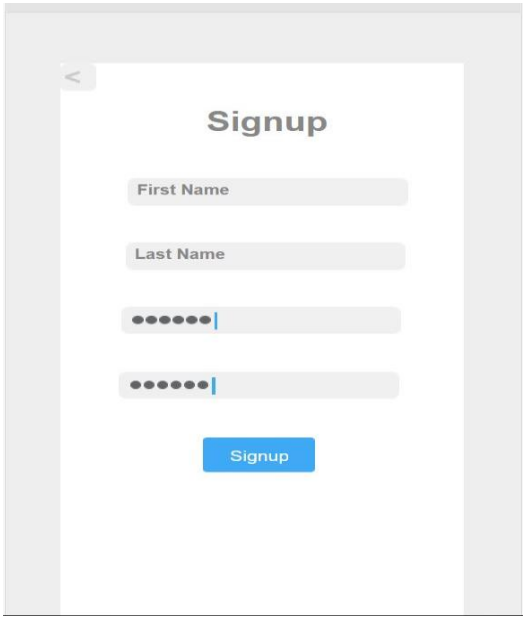
Introduction and Login Screen:

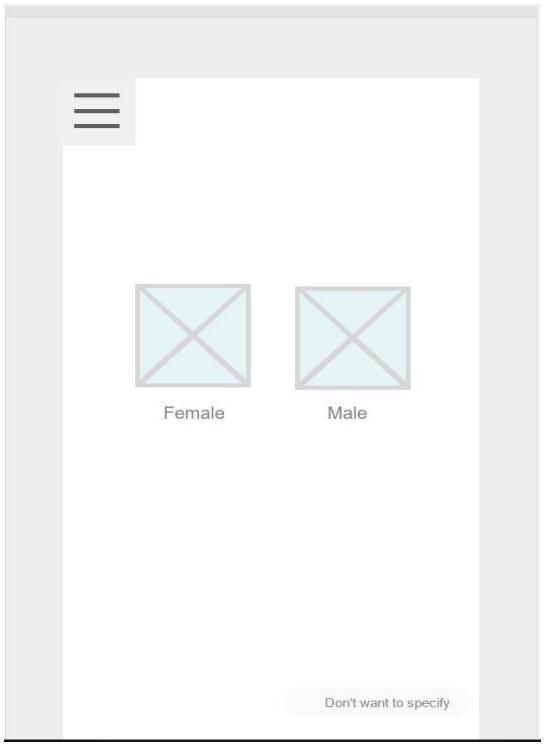


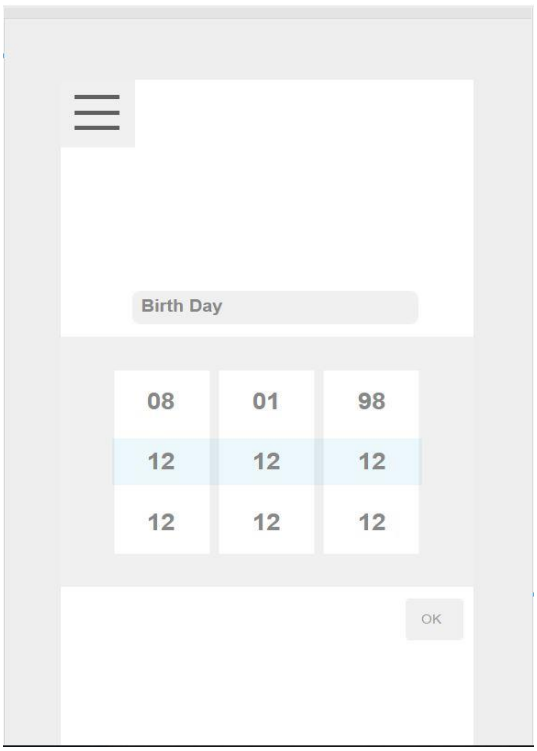


Sign Up Screen:

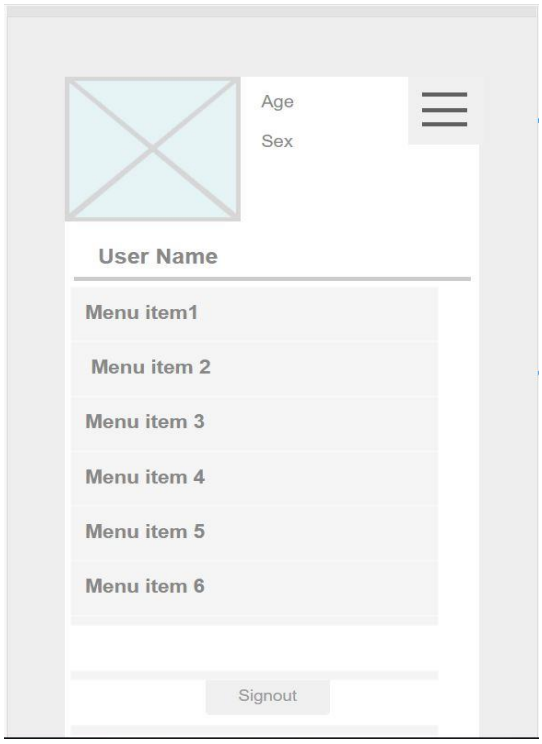


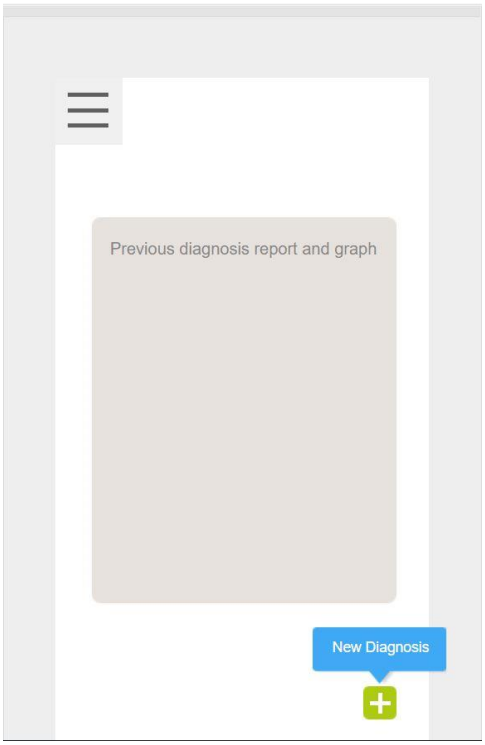




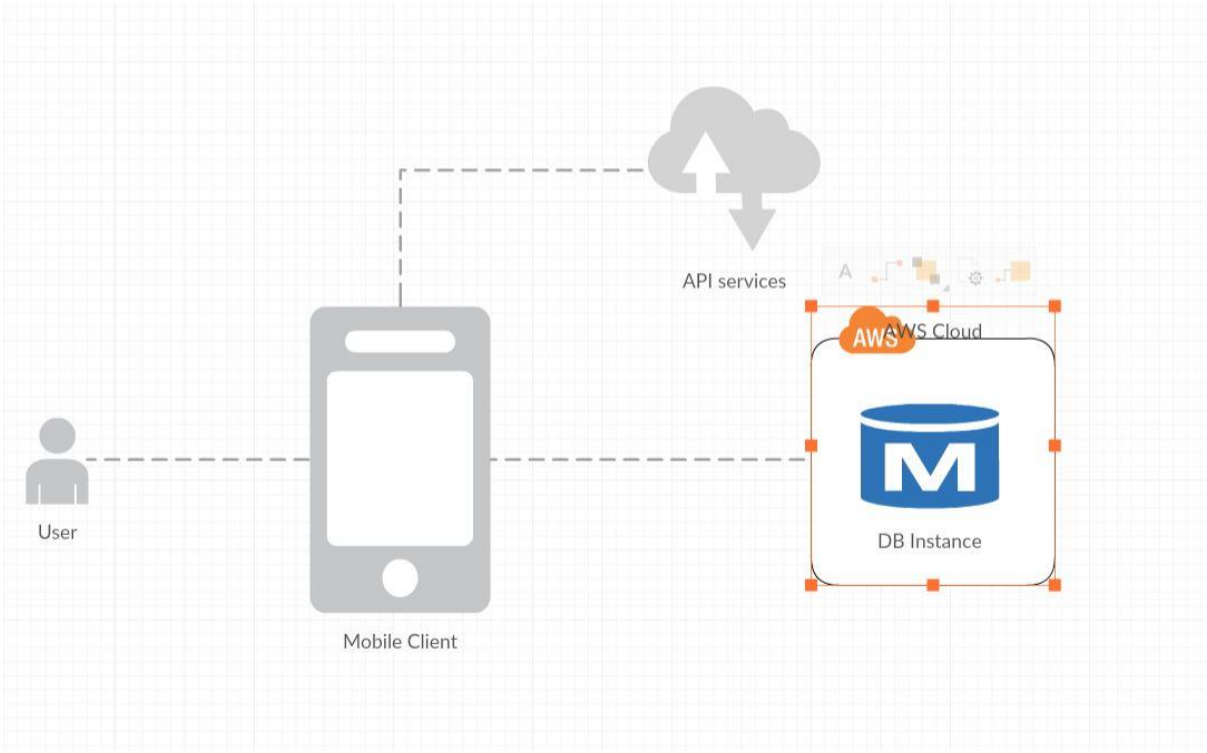


Home and Diagnosis Screen:

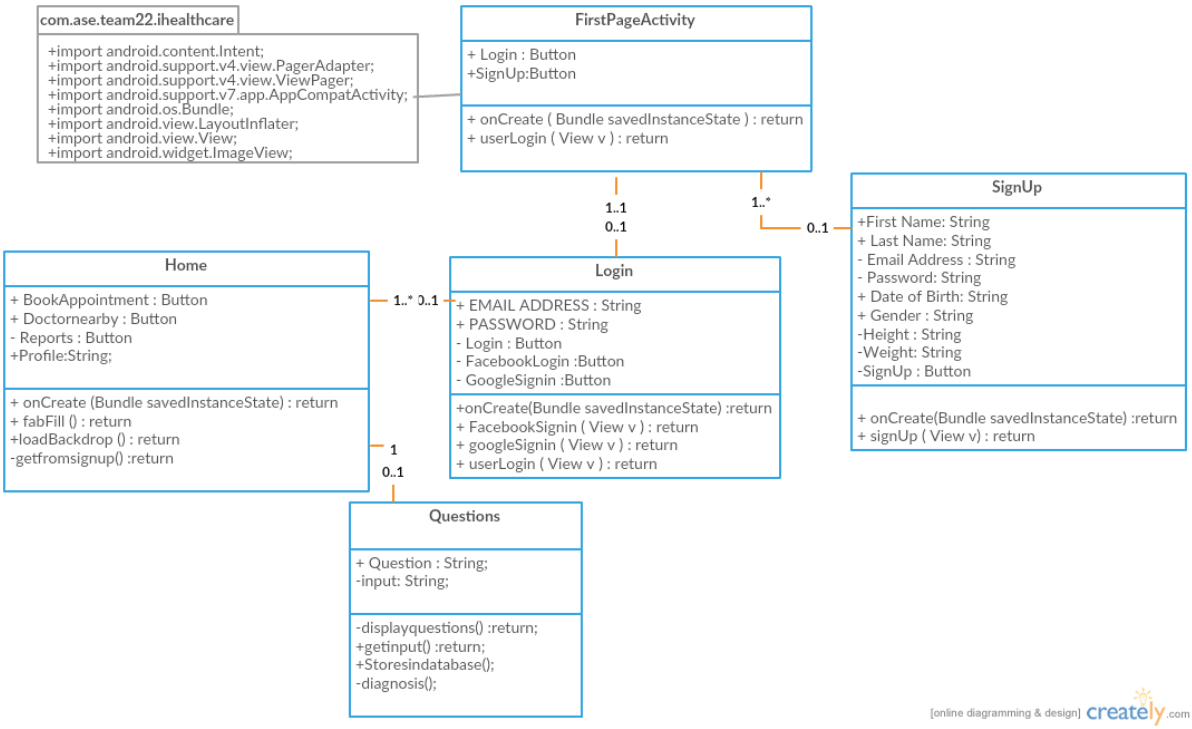




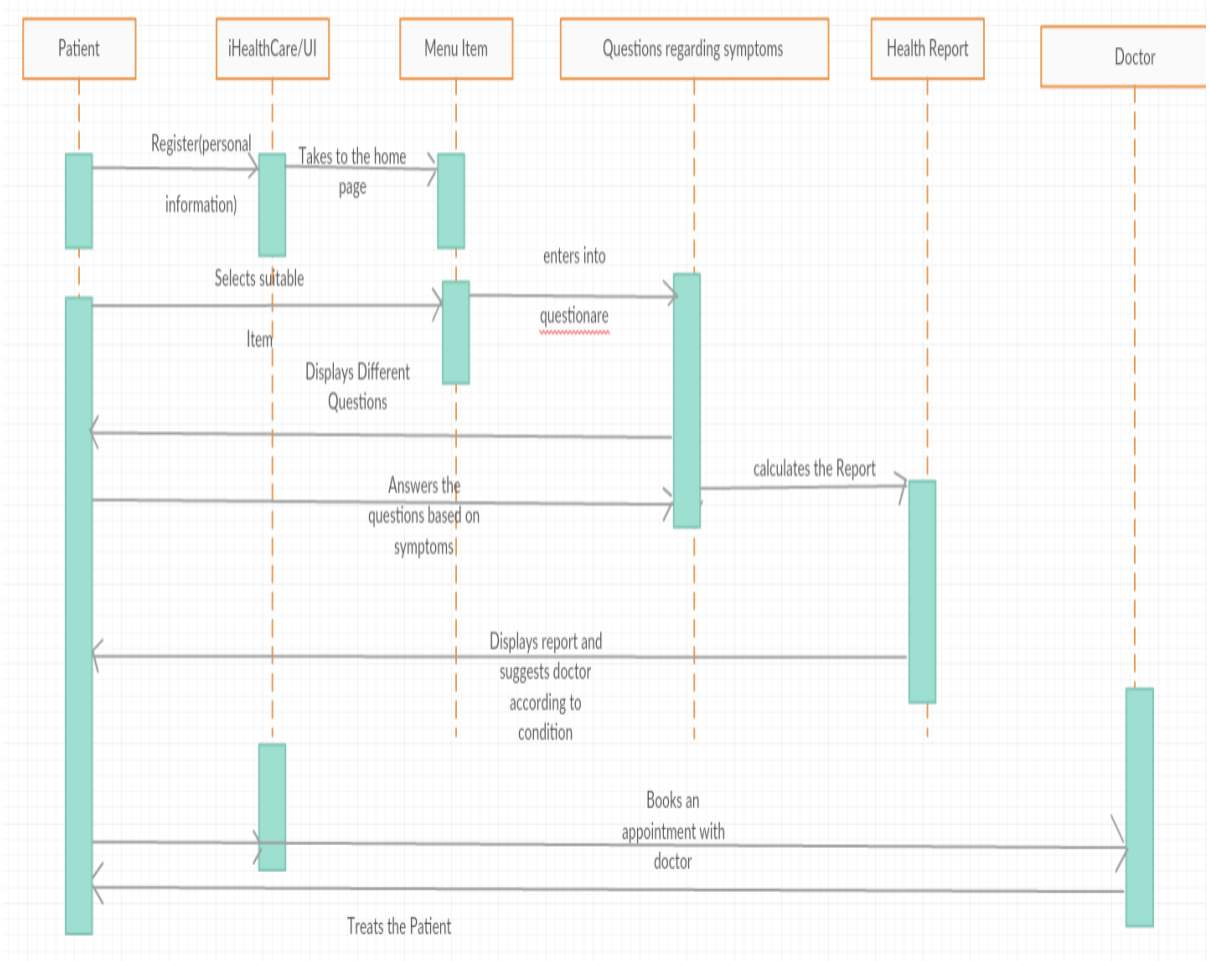
4.2.2 Architecture Diagram:



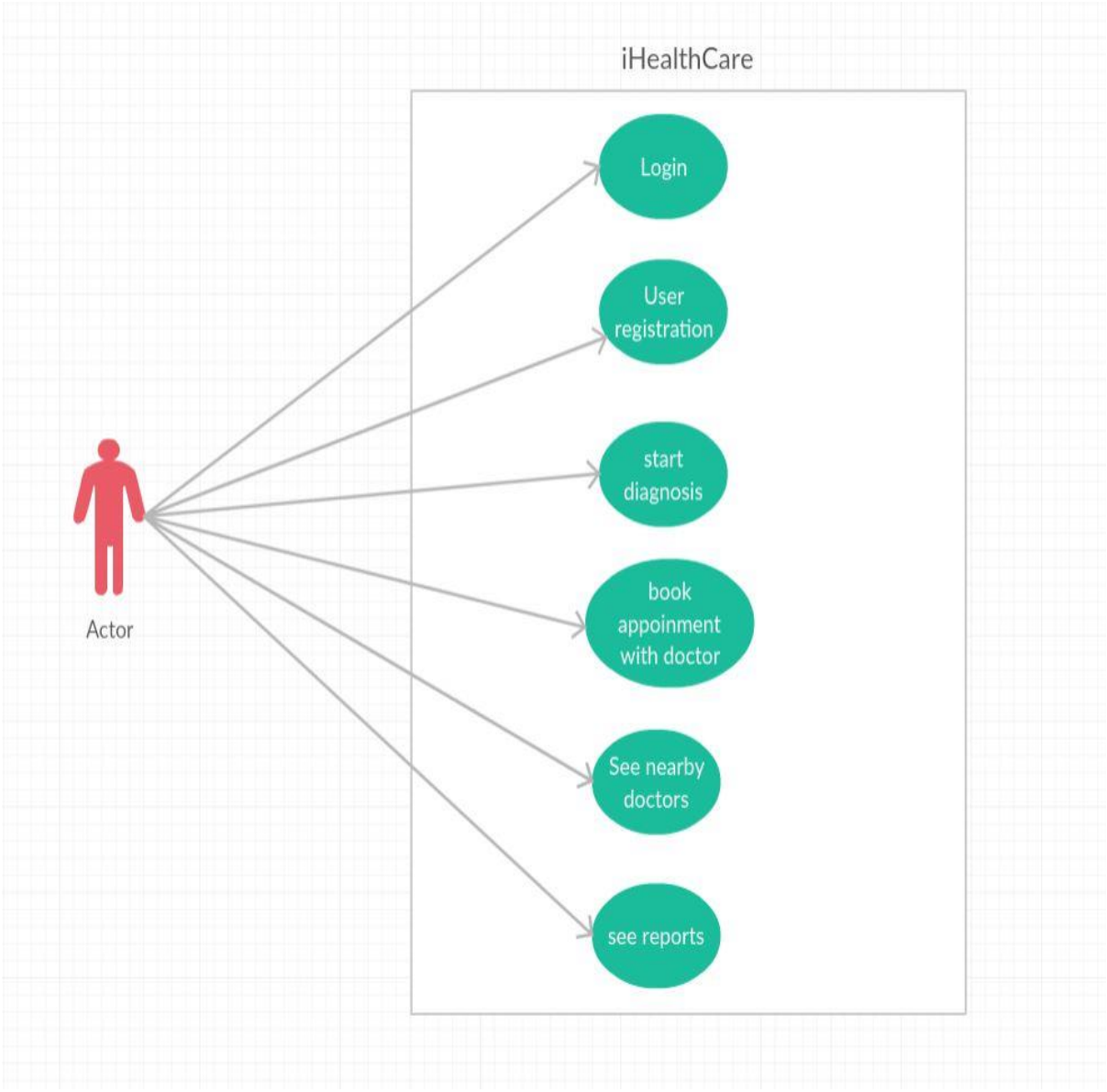
4.2.3 Class Diagram:



4.2.3 Sequence Diagram:



4.2.4 Use Case Diagram:



5. Implementation and Deployment

The application is developed in Android Studio and is deployed in the Emulator and Android Mobile.

Screenshots:

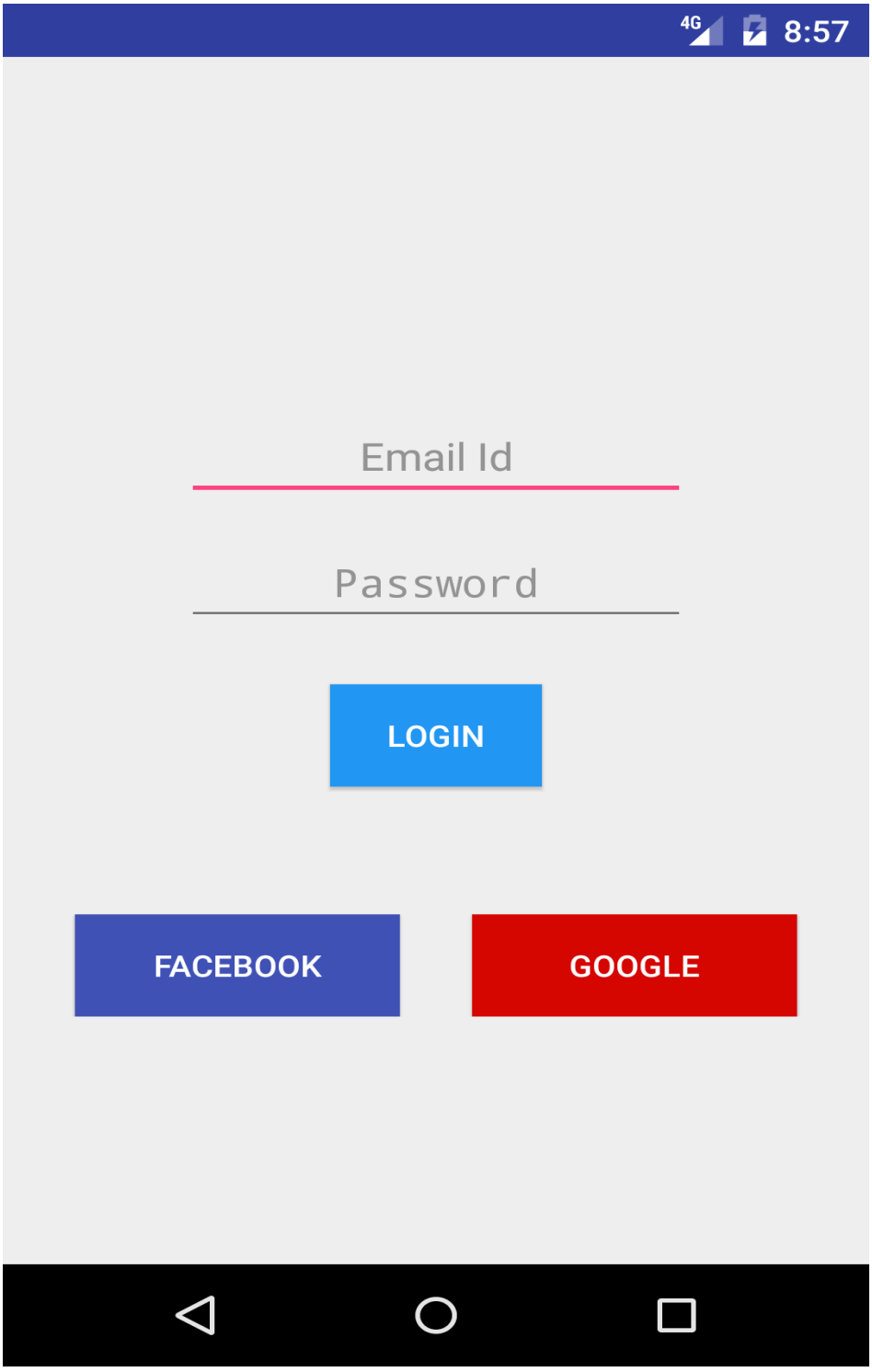
Below are the screen shots of the Introduction Page where Login and Sign up buttons are present. Apart from that the images present in this screen scrolls automatically which represent the facilities we are providing like diagnosis, doctors appointment and near by doctors.

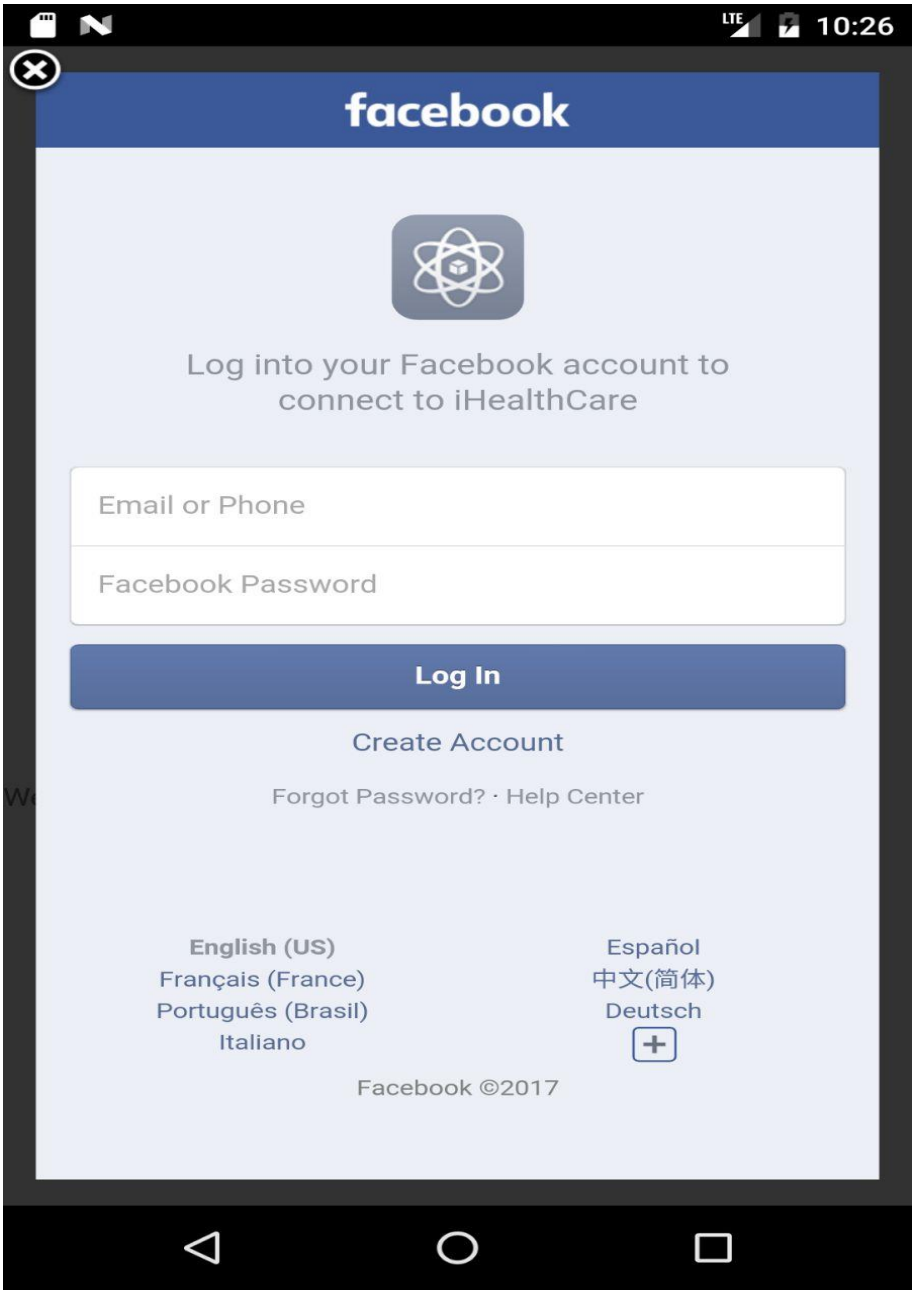
Introduction Screen:


8:57
15
16
22
Doctor's Appointment
Signup
Login

Login Screen:

In the login screen, we give the username and password to login and apart from that we can also login through Facebook and Google. On clicking on Facebook button, we are navigated to the Facebook login window and it is similar for Google too.




10:26
facebook
Log into your Facebook account to connect to iHealthCare
Email or Phone
Facebook Password
Log In
Create Account
Forgot Password? · Help Center
English (US)
Français (France)
Português (Brasil)
Italiano
Español
中文(简体)
Deutsch
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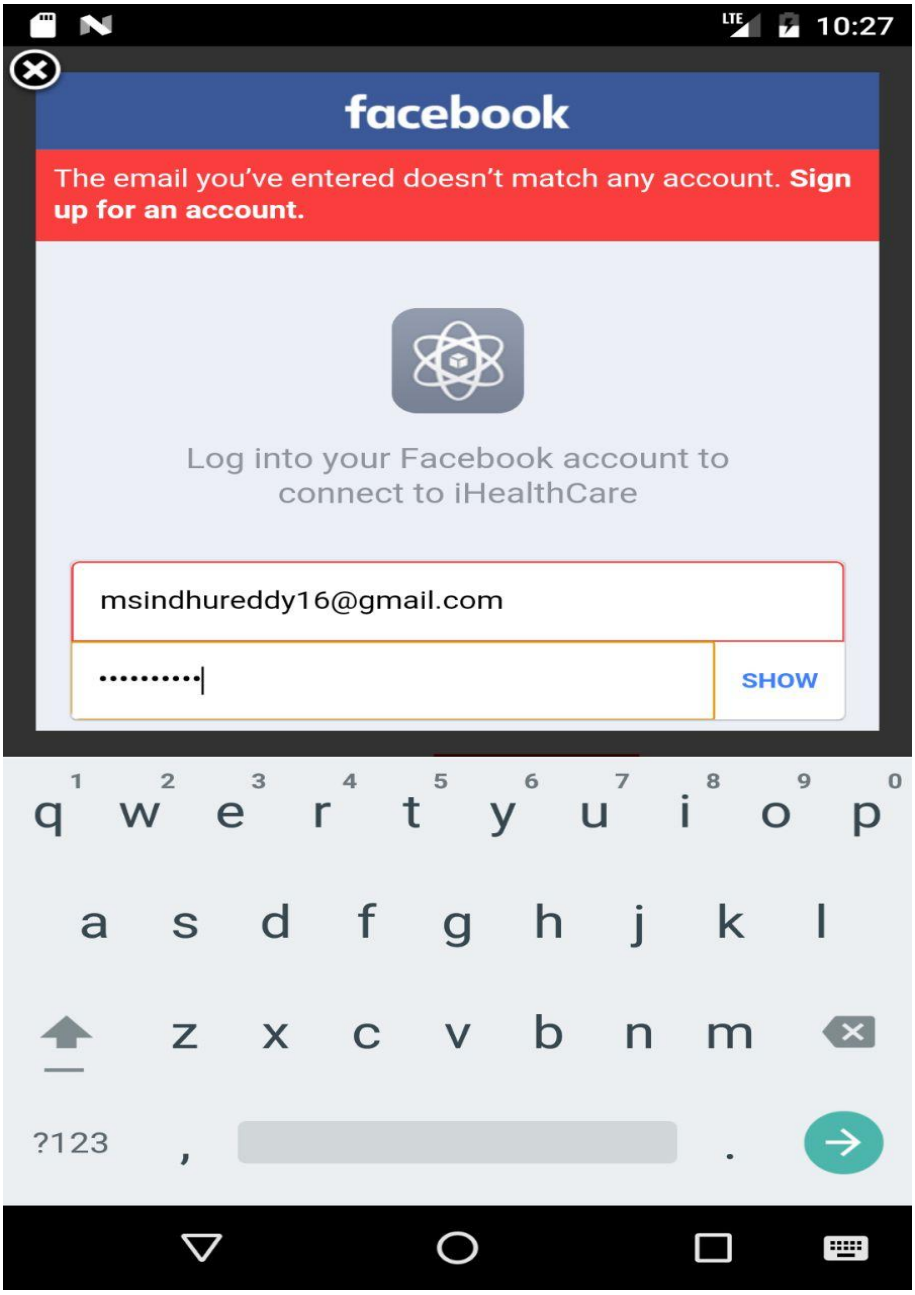
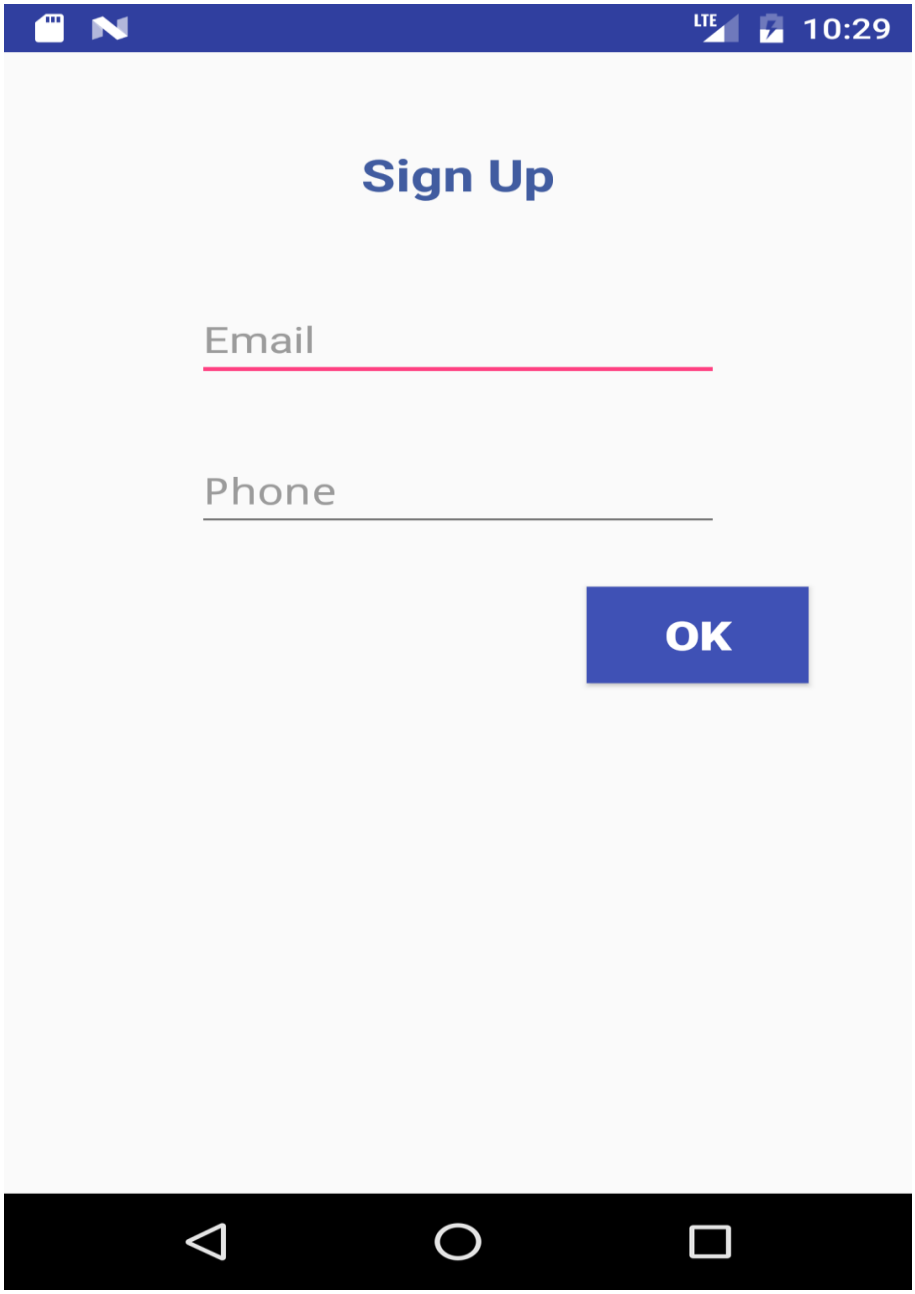
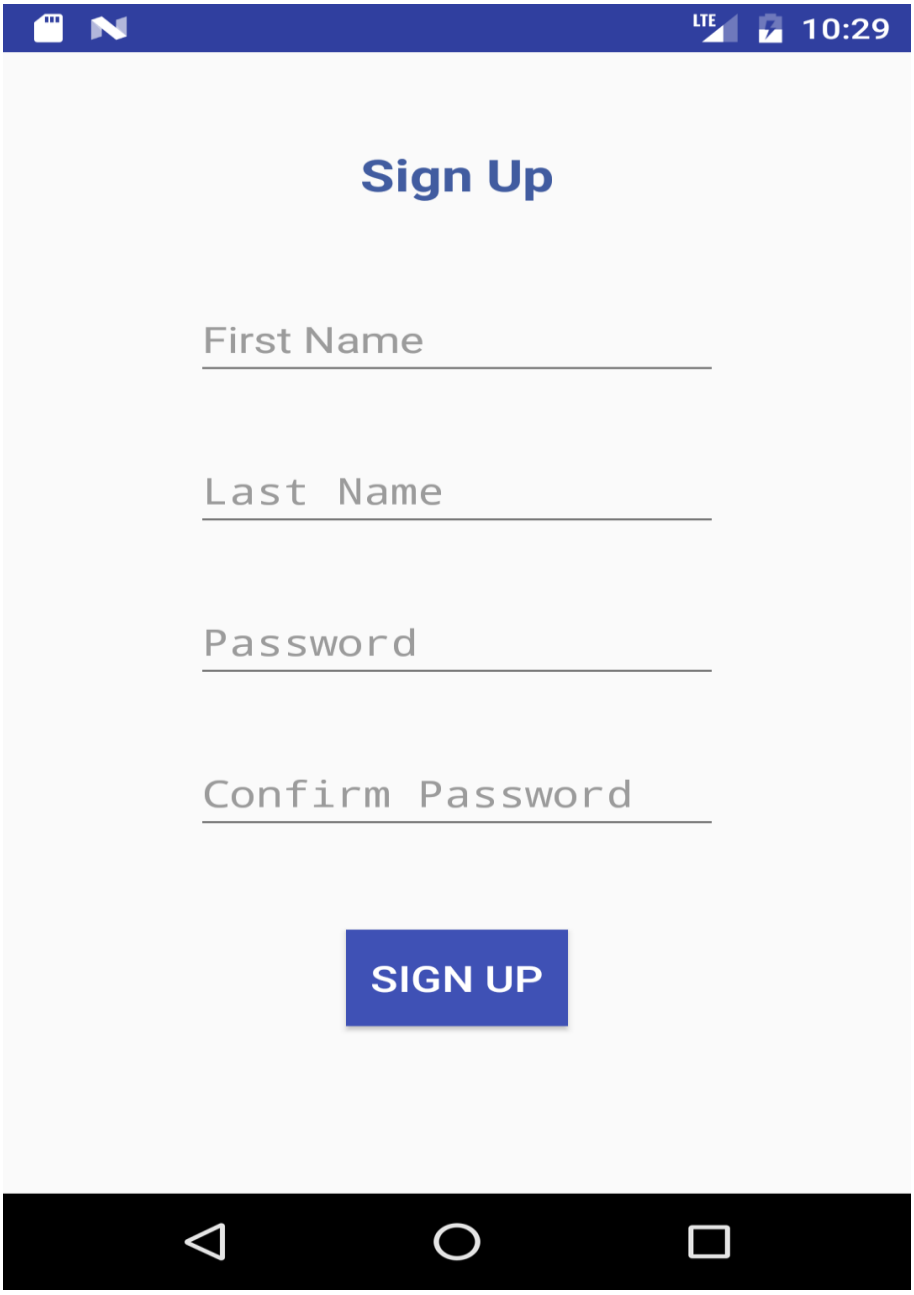
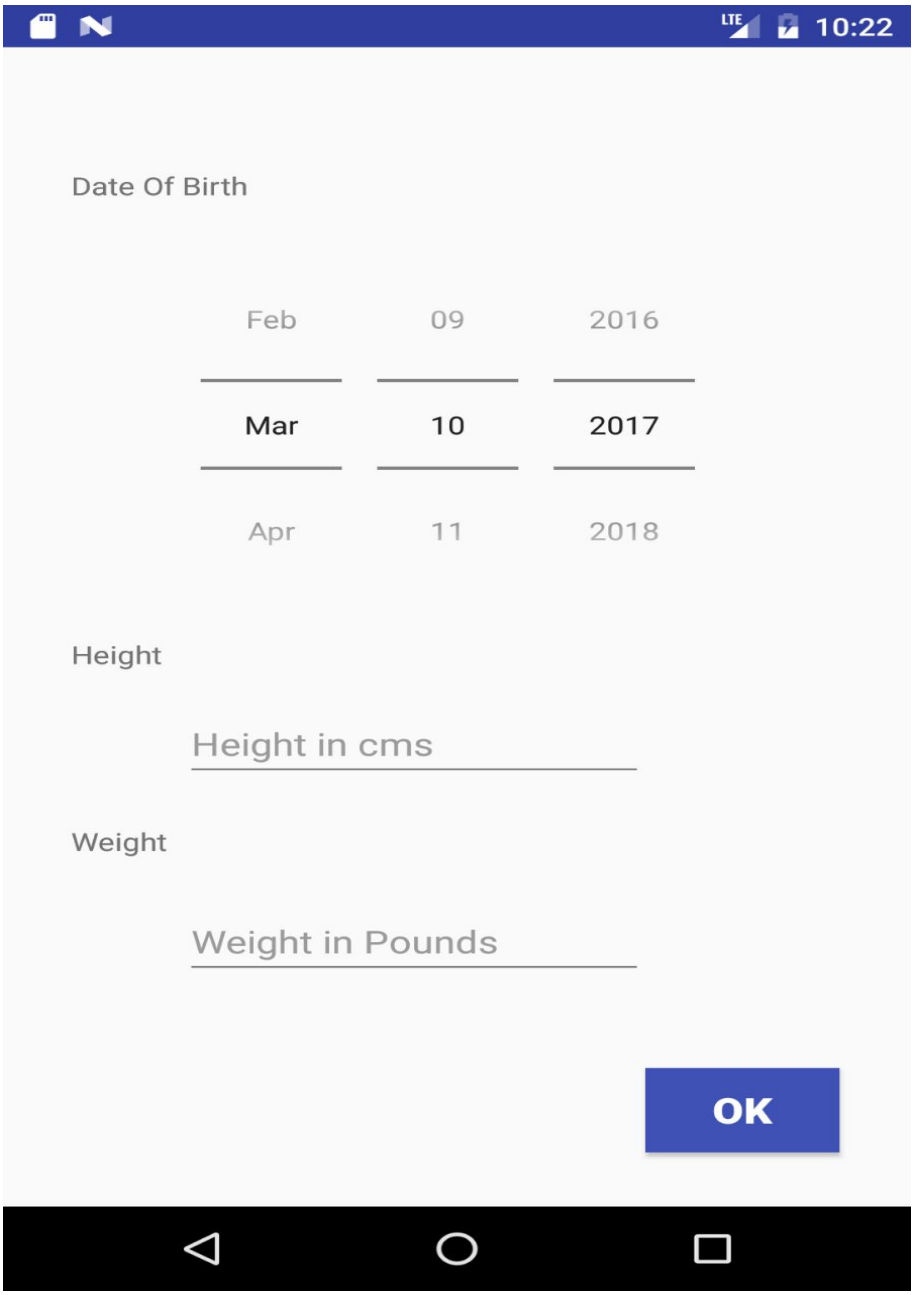

10:27
facebook
The email you've entered doesn't match any account. Sign up for an account.
Log into your Facebook account to connect to iHealthCare
msindhureddy16@gmail.com
SHOW

Sign Up Screen:

In the Signup screen, we take the basic details of the user. We created four fragments for various details with one activity. The basic details like gender, age, height and weight are taken so that it can be used for the patient's diagnosis.

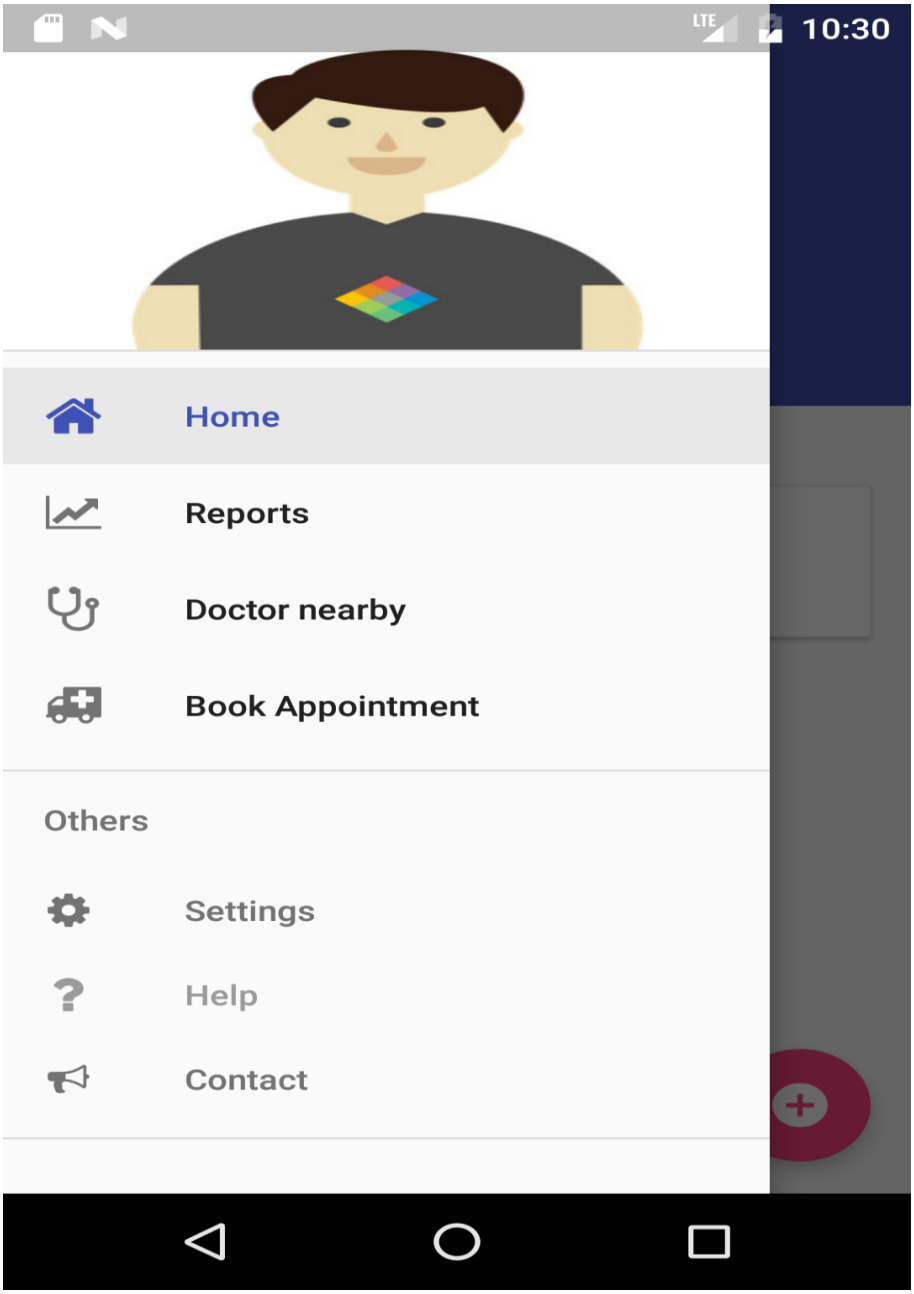


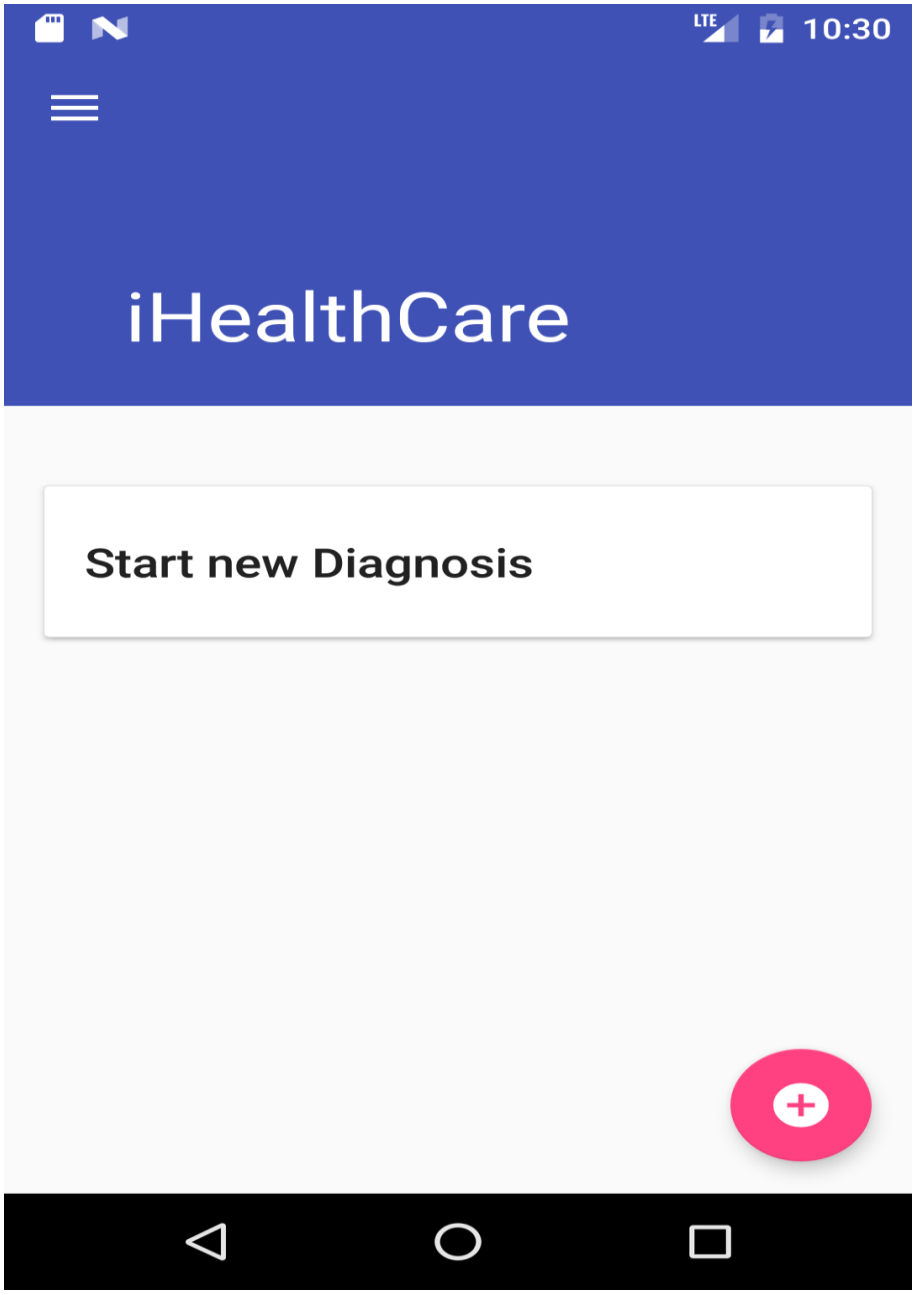

10:29
Sign Up
First Name
Last Name
Password
Confirm Password
SIGN UP

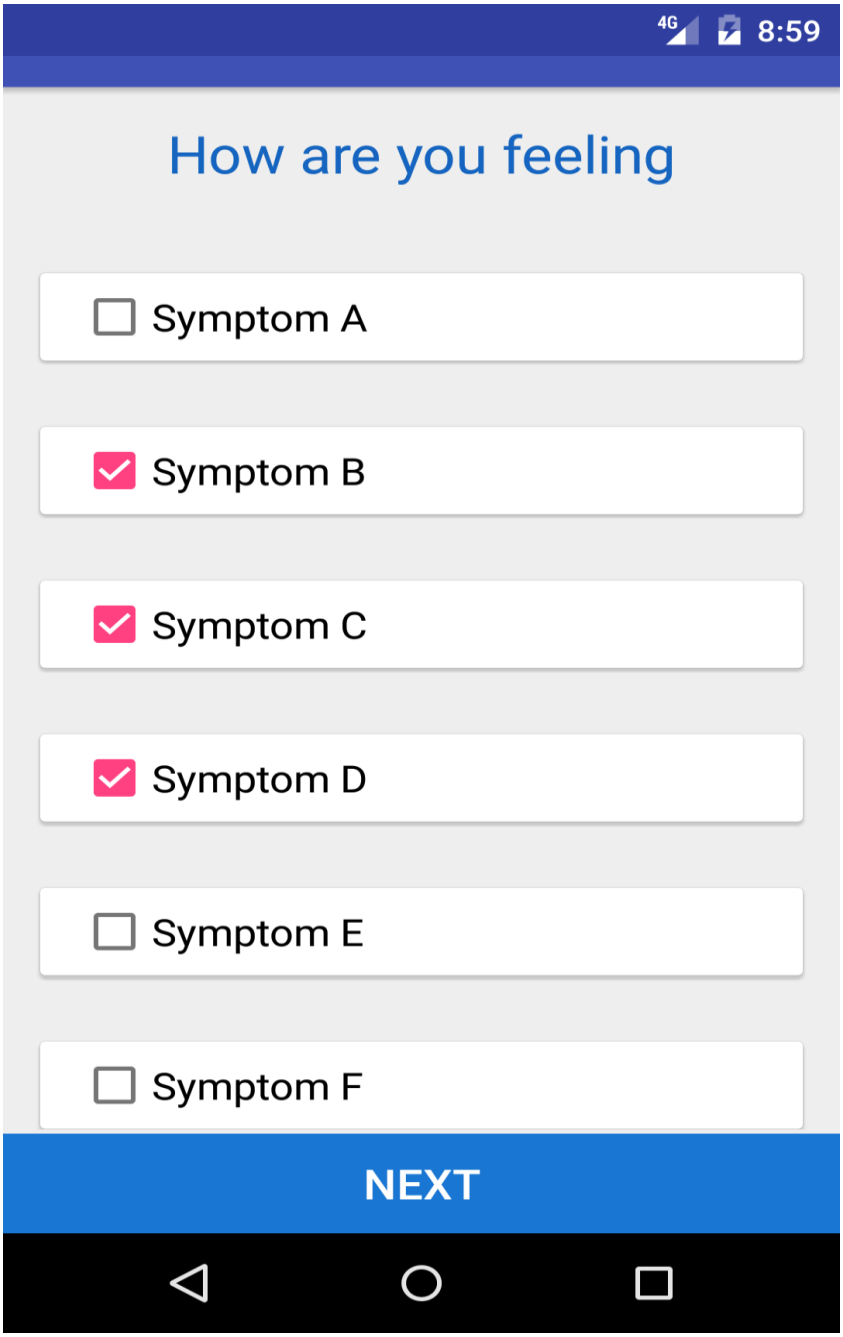

10:22
Date Of Birth
Feb 09 2016
Mar 10 2017
Apr 11 2018
Height
Height in cms
Weight
Weight in Pounds
OK

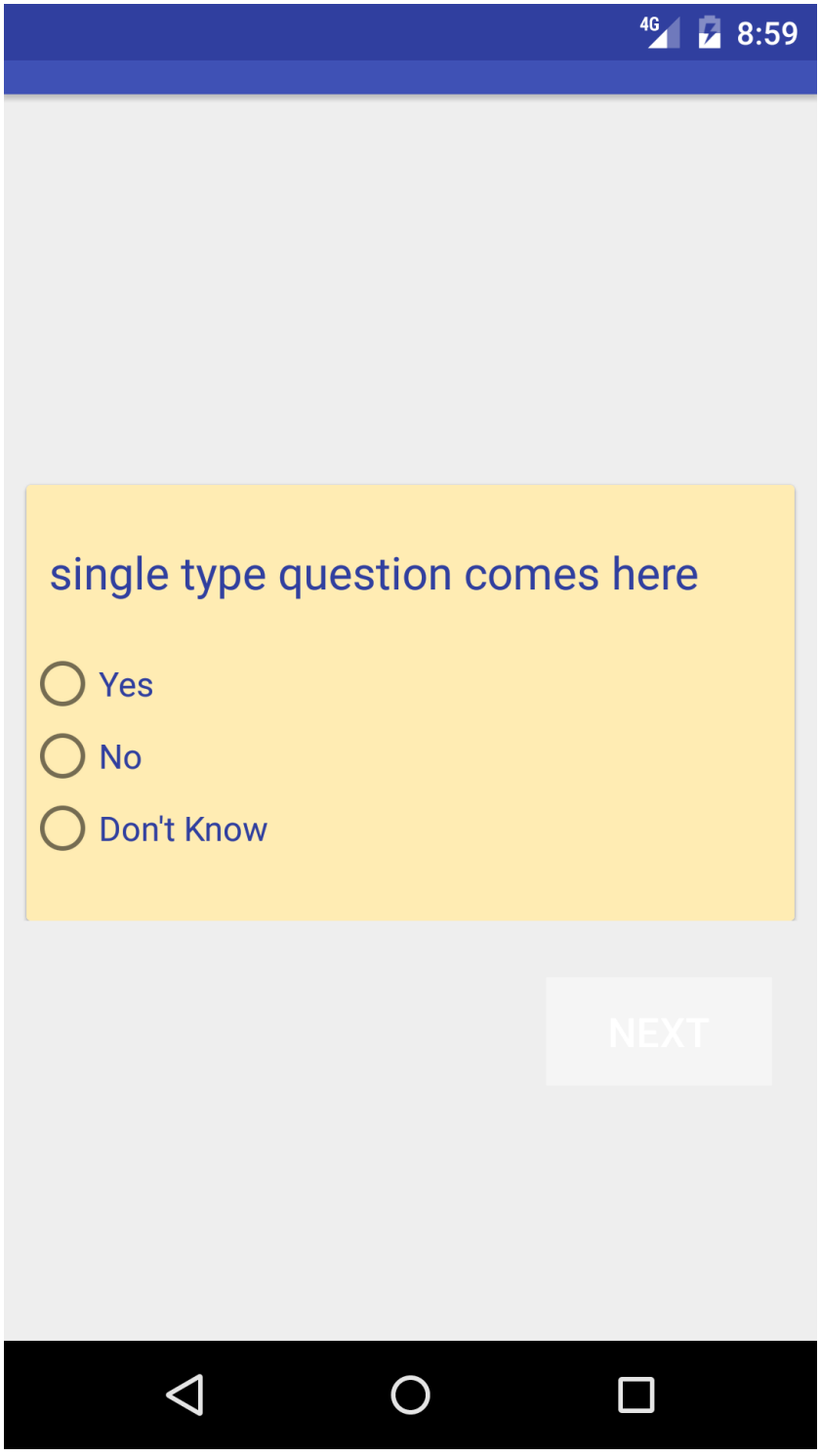
Home Screen:

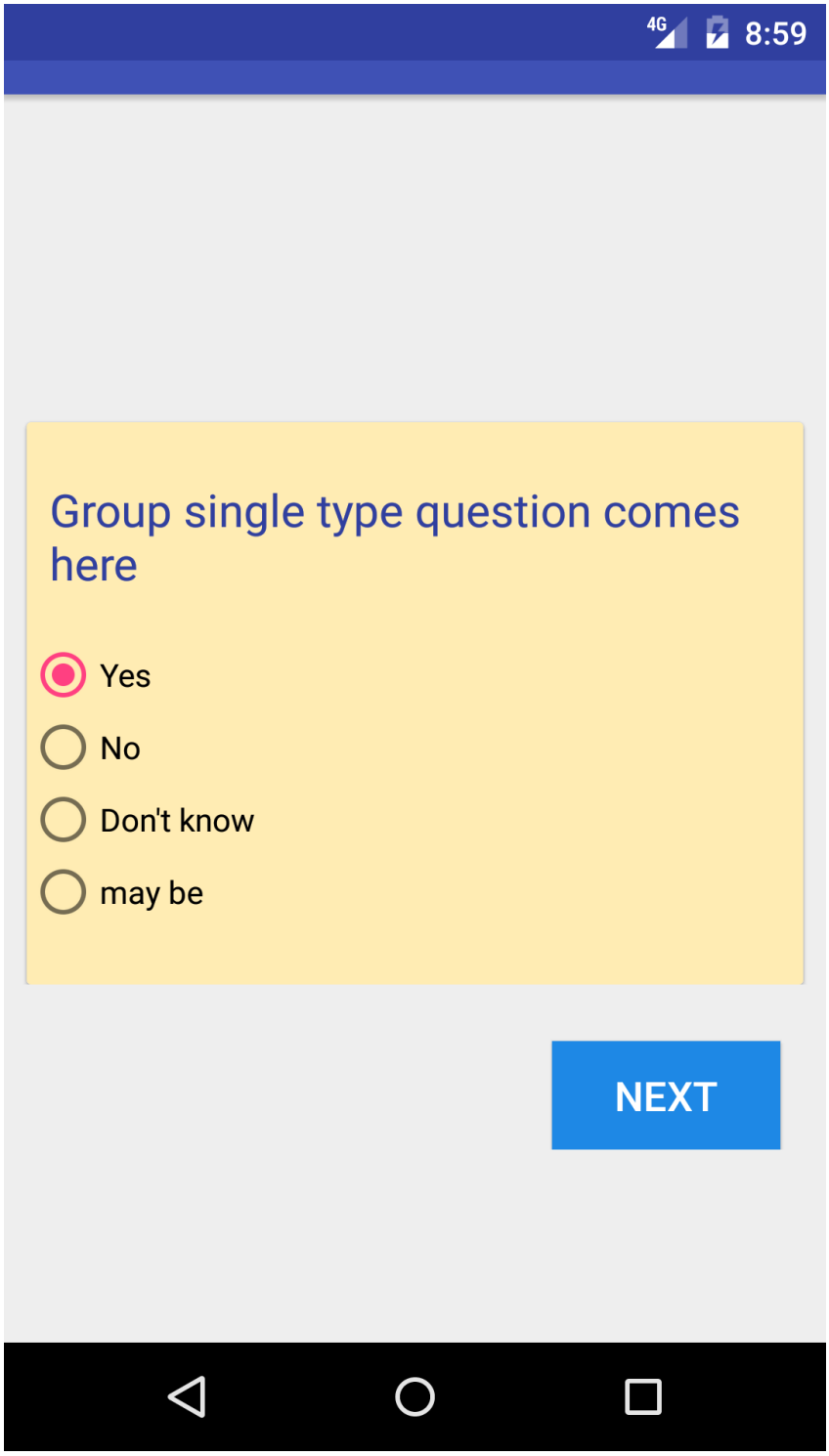
The user can start the diagnosis here by responding to some questions that are posted in this screen and depending on the user's response to the previous question the next question will be posted. Apart from the diagnosis the user can check the previous reports here.

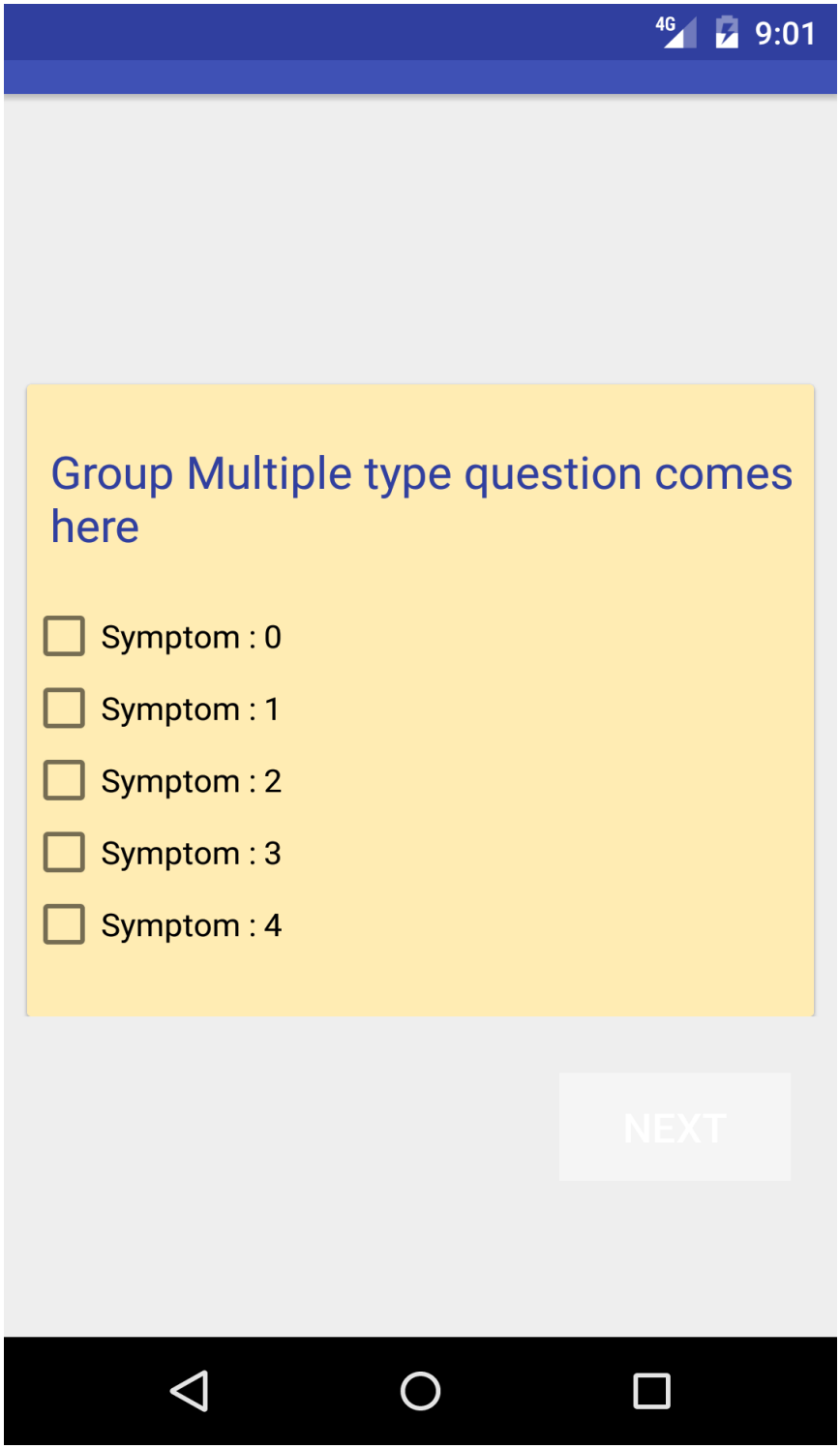

10:30
Home
Reports
Doctor nearby
Book Appointment
Others
Settings
Help
Contact


10:30
iHealthCare
Start new Diagnosis


8:59
How are you feeling
Symptom A
Symptom B
Symptom C
Symptom D
Symptom E
Symptom F
NEXT


8:59
single type question comes here
Yes
No
Don't Know
NEXT


4G
8:59
Group single type question comes here
Yes
No
Don't know
may be
NEXT


4G
9:01
Group Multiple type question comes here
Symptom : 0
Symptom : 1
Symptom : 2
Symptom : 3
Symptom : 4
NEXT

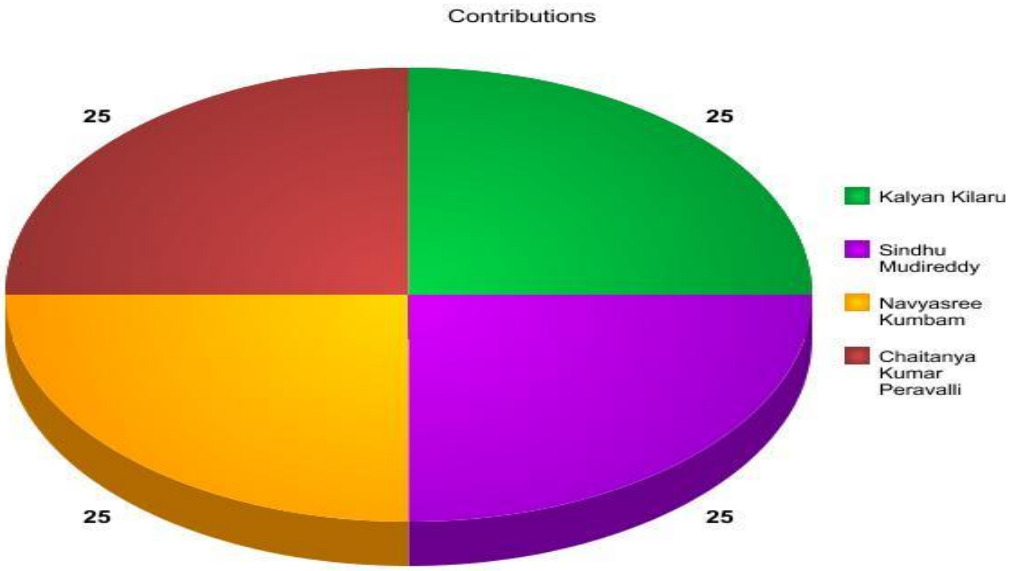
6. Project Management

Work Completed:

- Design and Architecture of the application
- Introduction Screen with implementing Auto-Scrolling of images
- Login Activity with Facebook and Google Authentication
- Sign up Activity with four fragments for getting basic details.
- Home Activity where we can start the diagnosis by using Infermedica API
- Collecting the API's Information that need to be implemented in the next increment

Contributions:

- Sindhu Mudireddy - 25%
- Navyasree Kumbam -25%
- Kalyan Kilaru -25%
- Chaitanya Kumar Peravalli -25%



Work to be Completed:

- Implementing all the web services, Plugins and API's
- Storing the data of the user

- Displaying the reports of the user
- Displaying different questions based on the symptoms faced by the user.
- Using Better Doctor API and Google Maps API
- Improving the User Interface if still required.

7. Bibliography

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- https://developers.google.com/identity/protocols/OAuth2
- https://developer.infermedica.com/
- https://creately.com/
- http://stackoverflow.com/
- https://www.fluidui.com/