

CP 301 Progress Report

PGIMER app

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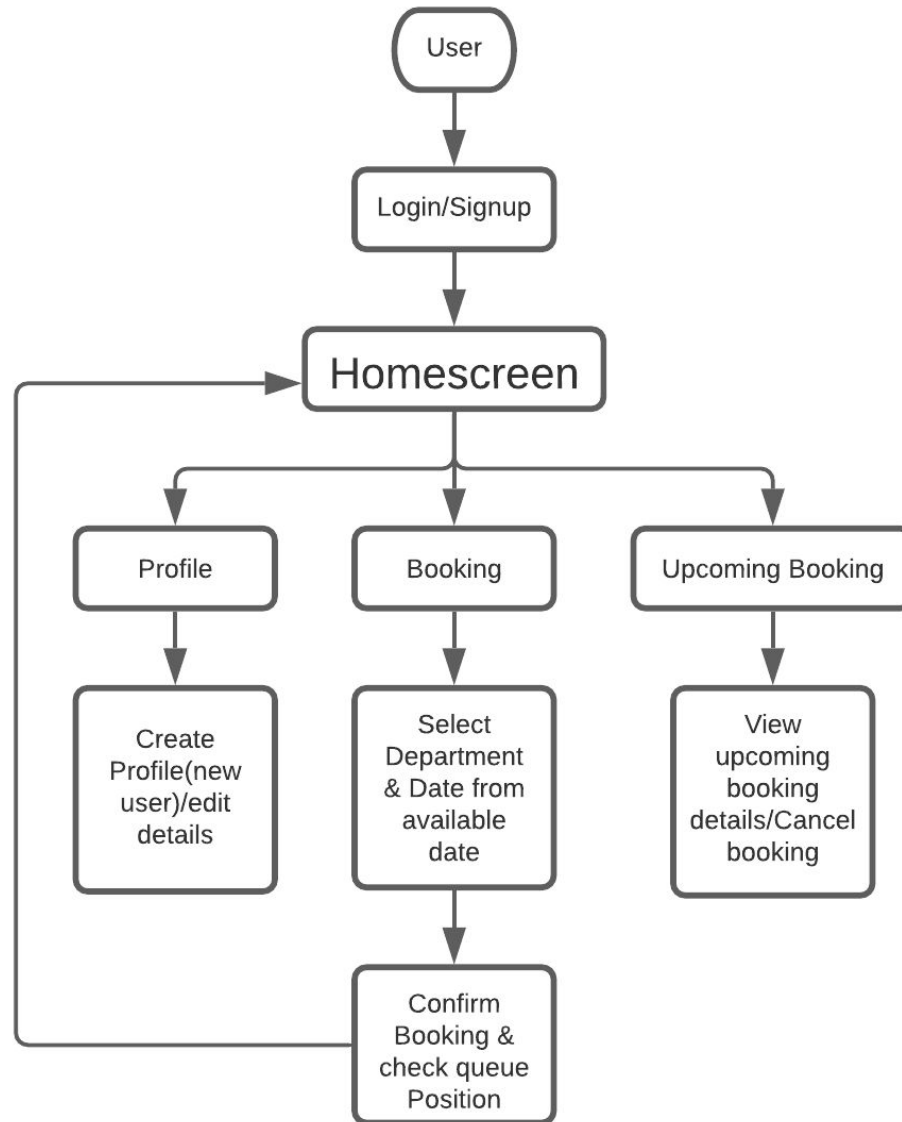
Koduri Ashish: 2018CSB1099

B. Mahidar Varma: 2018CSB1079

Problem Description

- The main motive of this app is to give the patients an expected waiting time so that they don't need to wait for long time.
- The expected waiting time can be calculated using the info of no. of people in the queue and average consultation time.
- And further we can also get patient past medication using its patient id using this app.

Workflow diagram of user side



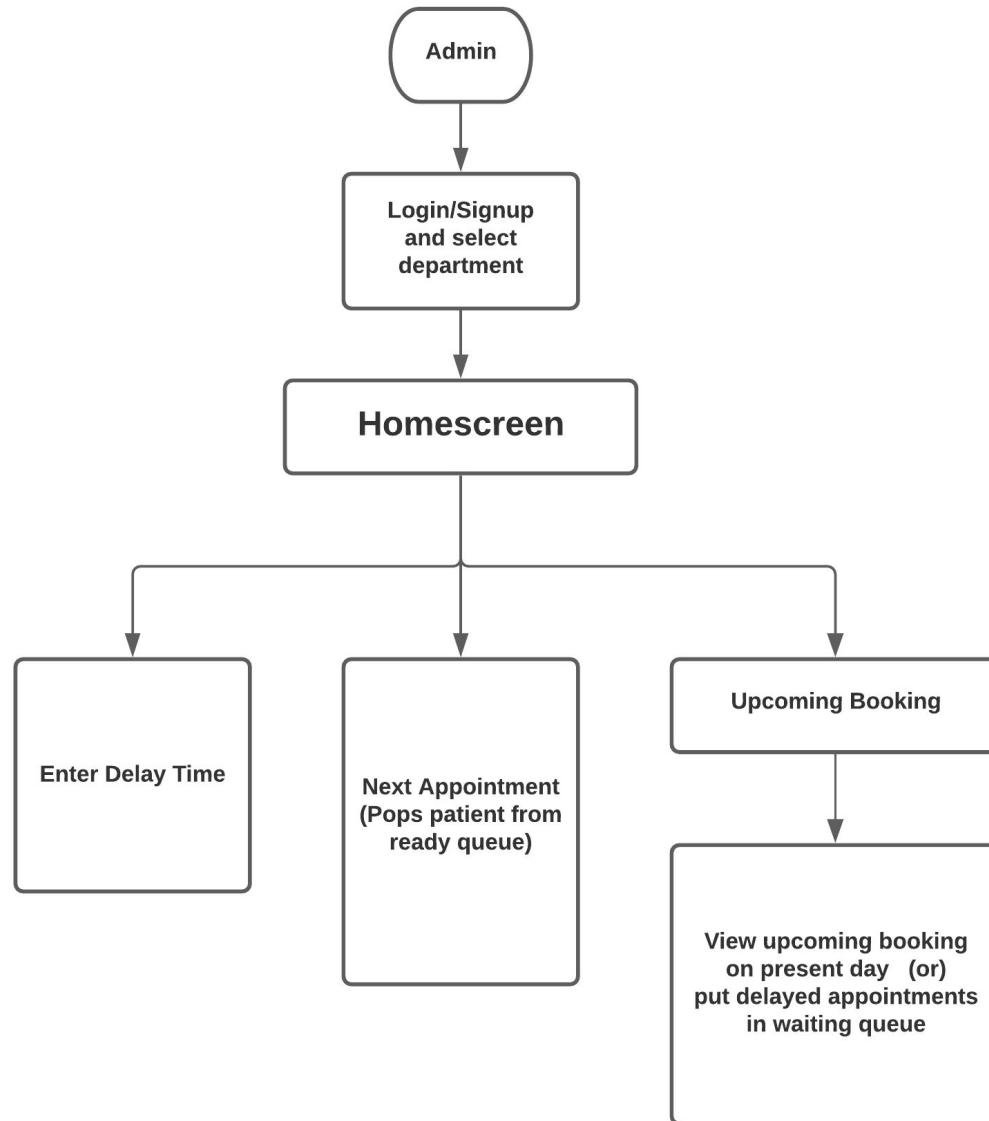
Algorithm

- We maintain two queues- ready queue(for storing patient appointments) and waiting queue(for storing delayed patients)
- First you choose your account type- user account or admin account.
- If you choose user account:
 - Log in with your user account, if you don't have an account sign up by creating an account. After creating account, log in.
 - After you log in you will be taken to the home page.
 - Make profile by clicking on profile button on the top bar.
 - To make an appointment click 'Book

- Next select the date of appointment(only available dates, which are highlighted can be selected).
- If duplicate exists, it will be terminated.
- If duplicate doesn't exist then we push the patient into the ready queue. And we show that the appointment is confirmed.
- —The user can view active appointments in the bookings section.
- The user can view app notifications and Google calendar for reminder of appointments.
- If the patient has a change of plans they can cancel their appointments. If the appointment is cancelled the patient is

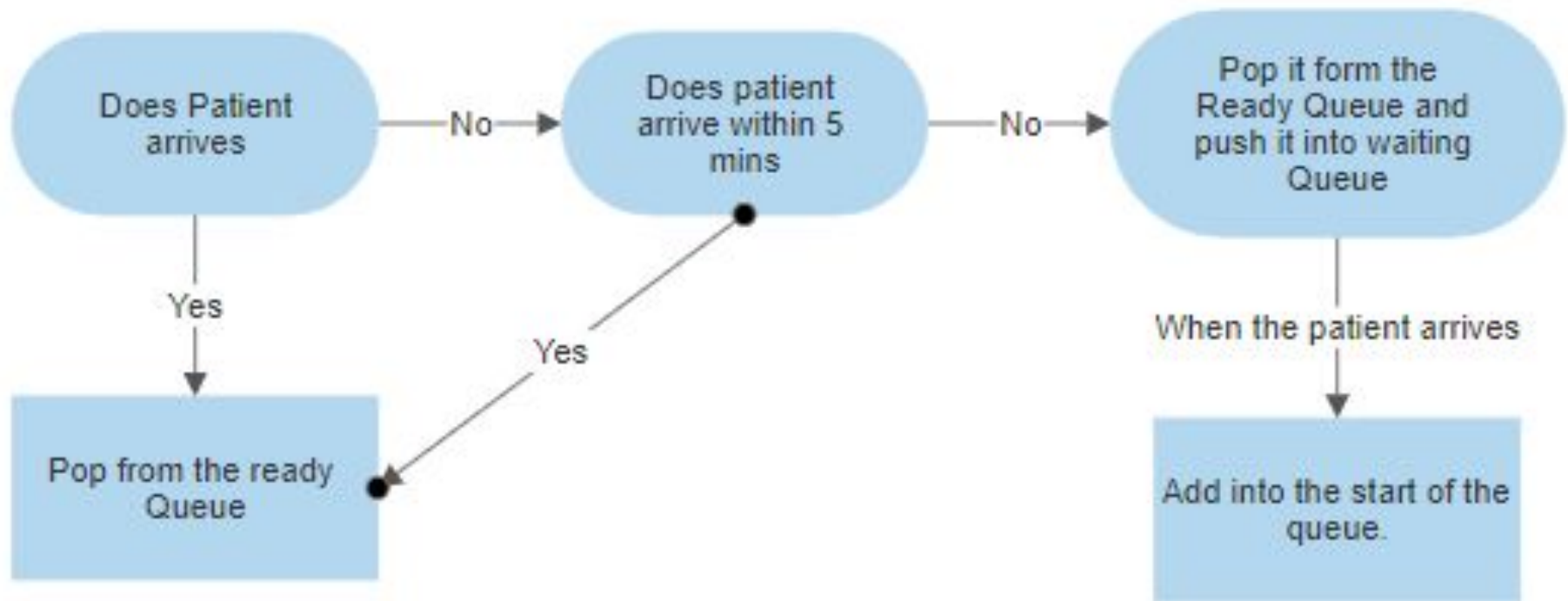
- If there is simultaneous booking then firebase concurrency will handle it.
- Cloud Firestore resolves data contention by delaying or failing one of the operations.
- In the Mobile/Web SDKs, a transaction keeps track of all the documents you read inside the transaction. The transaction completes its write operations only if none of those documents changed during the transaction's execution. If any document did change, the transaction handler retries the transaction. If the transaction can't get a clean result after a few retries, the transaction fails due to data contention.

Workflow diagram of Admin side



- If you choose admin account:
 - Log in with your admin account, if you don't have an account sign up by creating an account. After creating account, log in.
 - Next select a specialty.
 - After you select a specialty, you will be taken to the admin home page.
 - In the home page the admin can view list of patient appointments. After patient arrives they can remove them from the list.
 - The admin can also adjust the delay time.
 - The admin can also decide the maximum number of appointments in a day.

Workflow Diagram of time management if patients delay



Algorithm if patients delay

- If patient arrives, pop them from the ready queue.
- If patient doesn't arrive, wait for n minutes(here 'n' can be set by the admin). If patient arrives within this time, pop them from the ready queue.
- If patient doesn't arrive even after waiting then pop them from the ready queue and push them into the waiting queue.
- If this patient arrives after some time then pop from the waiting queue and add to the start of the ready queue.

Screenshots of app

Select account Type

5:01

Select Account Type

User

Next



5:01

Select Account Type

User

Admin

Next



User log in and sign up

4:39

leso



user@gmail.com



.....



LOGIN

Don't have an Account ? [Sign Up](#)



4:50

leso



Your Email



Password



SIGNUP

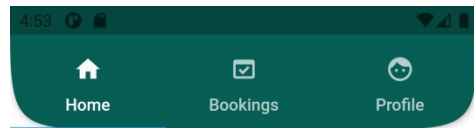
Already have an Account ? [Sign In](#)

OR

G+



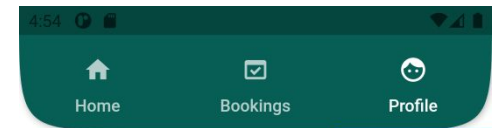
Home , Bookings and Profile pages



Book Appointment

View/Cancel Bookings

Contact Us



Profile

Name

John

Gender

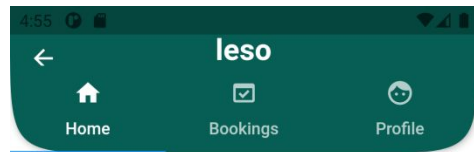
Age

Phone no.

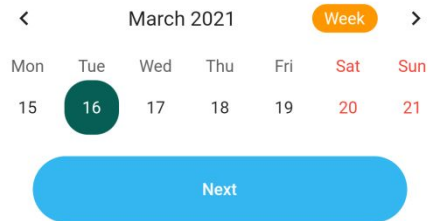
Create Profile



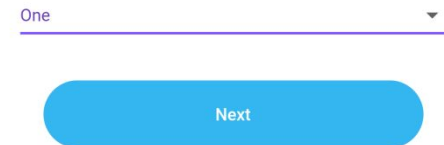
Date and Specialty



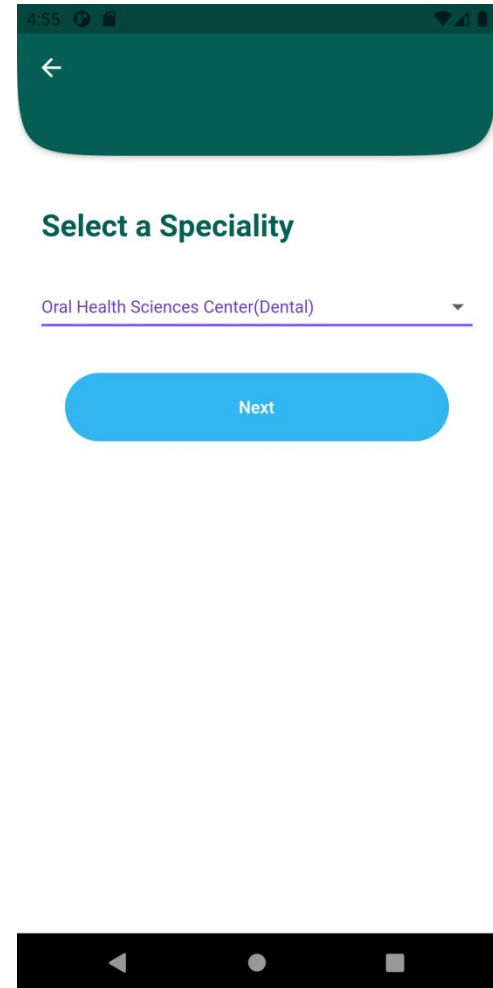
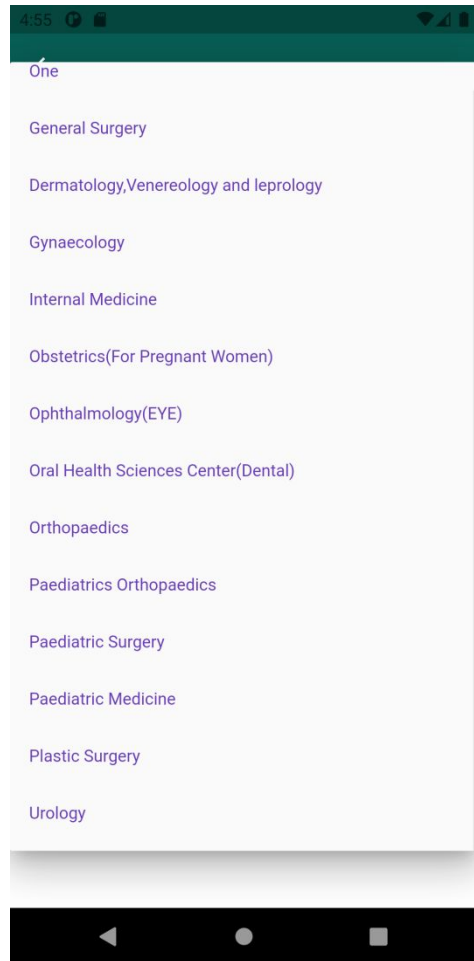
Select Date Of Appointment



Select a Speciality



Selecting a Specialty



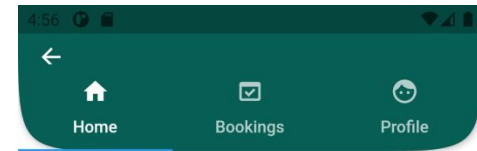
Appointment booked



**Department: Oral Health Sciences
Center(Dental)**

**Date: 2021-03-16
16:37:08.520870**

Confirm Details



**Appointment
Booked
Successfully..**

Check Queue Position

Current Queue Position: 1




Admin log in and sign up

5:03

leso



 adminn@gmail.com

LOGIN


Don't have an Account ? [Sign Up](#)



5:04

Signup



 Your Email

 Password 

SIGNUP

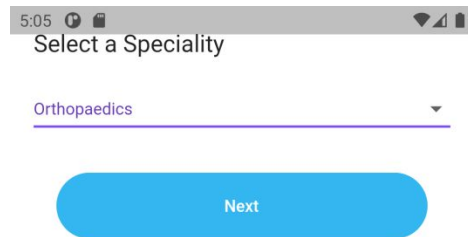
Already have an Account ? [Sign In](#)

OR





Selecting a Specialty and delay



Admin can
specify delay of
doctor

15

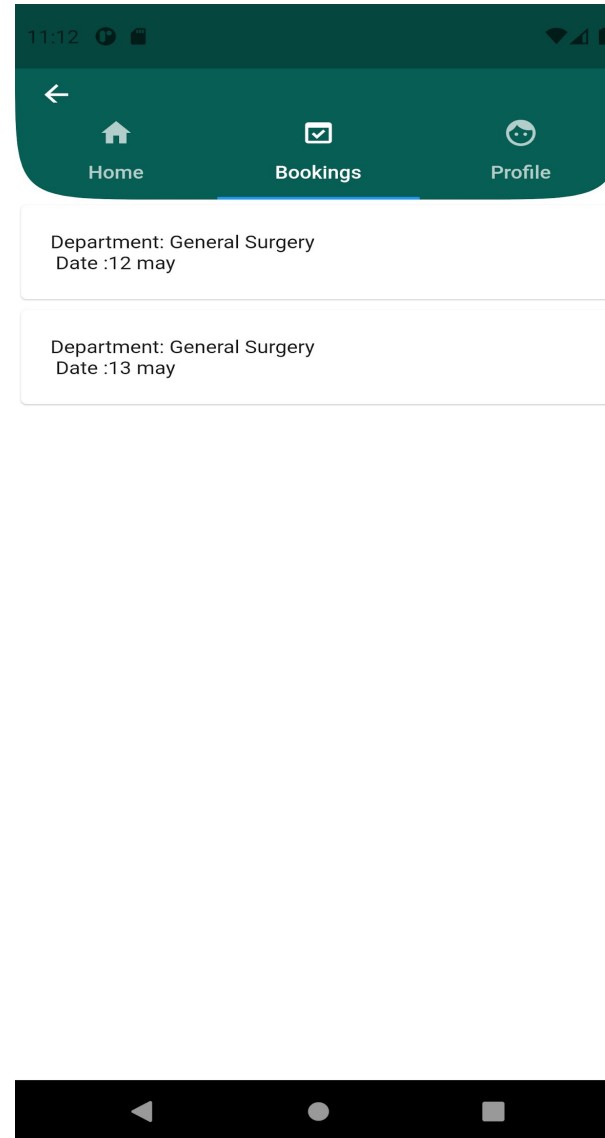
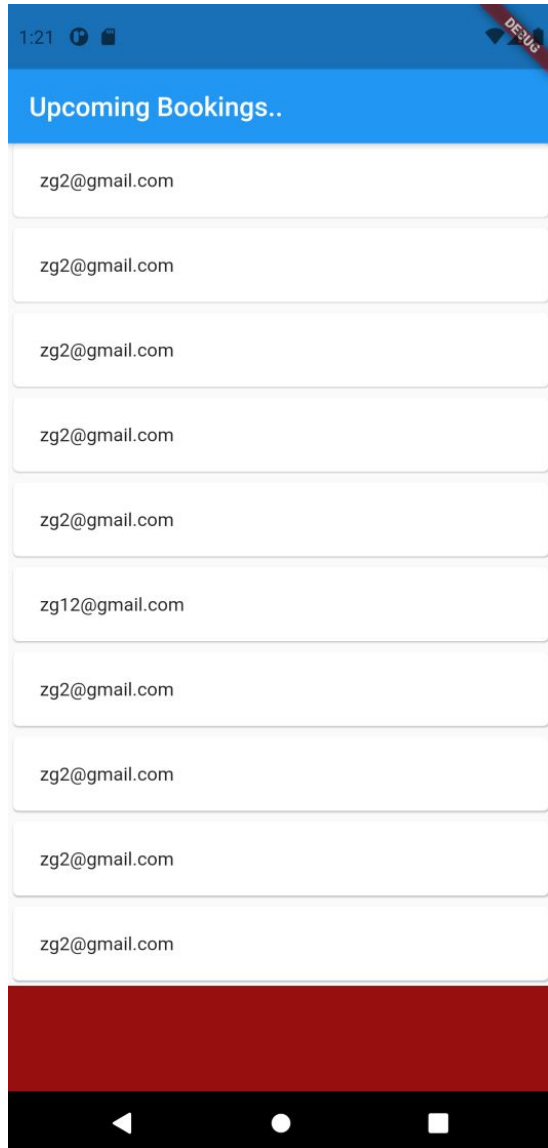
Confirm Delay

Next Appointment

On pressed
sends pop
appointment
request to the
server



List of all appointments page



Individual contributions

- Harsh Srova:

Worked on work flow diagram, Worked on Backend (http trigger functions, insert user into queue, Implemented cancel and pop appointment methods, Position of user in queue, number of bookings of specific department), booking details page, success page, app bar, admin login and signup page, waiting queue, Show booking in user and admin side.

- G. Stephen Sugun:

Worked on work flow diagram, profile page, sign up page, select account type page, admin login and signup pages, Backend (insert user into queue), ready queue, created collections and documents in firestore.

- **Koduri Ashish:**

Worked on Select a Specialty, debugging, server setup, implemented cancel and pop appointment methods and app testing, show bookings in admin page.

- **B. Mahidar Varma:**

Worked on server setup, admin pages, debugging, implemented cancel and pop appointment methods and app testing, show bookings in admin page, waiting queue.

Pending work

- Notifications and reminders.
- We need to expand the admin part by finishing delay option.
- Managing multiple profiles.
- Project deployment will be in around the weeks.