

# Project Report

## **Cloud Computing and Big Data**

**TeleEasy: Seamless Teleconsultation Experience**

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IN THE CITY OF NEW YORK

# About our project

## What is the app?

- We have built a subscription based appointment scheduling platform for making healthcare affordable and accessible.
- Features for subscribed customers:
  1. A seamless digital consultation experience for the patient
  2. Tele/Video consultation
- Patients can purchase credits via a weekly/monthly/quarterly/yearly subscription plan at discounted prices

## Why is it innovative and interesting?

- We are able to subsidize consultation costs by leveraging underlying buffet economics (<https://thehustle.co/the-economics-of-all-you-can-eat-buffets/>)  
Doctor
- It will drive the doctor's revenue (more consultations, incentivization)  
Patient
- Reduced cost of healthcare for the patient
- Our app will provide a seamless personalised user experience to the patient even during these pandemic times. Ability to book video consultations with the doctors, with real-time scheduling enhances the interaction experience.

## What kind of data we'll need?

- A catalogue for doctors with specialities, location and other information - 1000+ doctors currently available
- Doctor's appointment times/doctor's availability
- Customer Information - 1000+ user information available

## What are some existing platforms?

- *Practo* enables subscription plans for patients along with doctor discovery and appointment booking.
- *Teladoc* enables video consultations

# **Clickable Prototype**

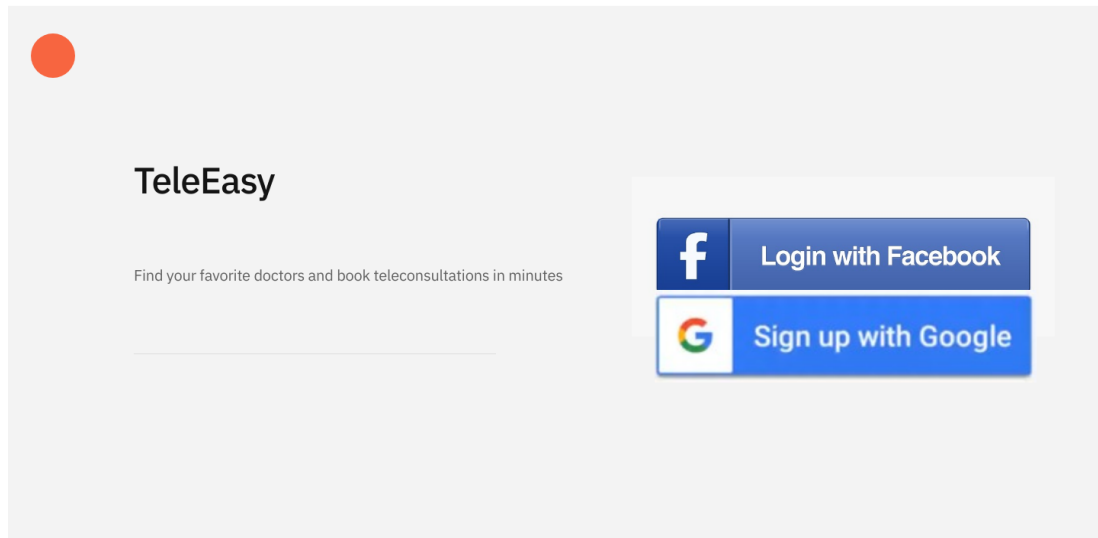
Link to access the clickable prototype - <https://pr.to/NSA1Z9/>

(Note - Unfortunately, the platform has expired our access to the clickable prototype. But as we have confirmed with Peter over email and he was able to view and evaluate our clickable prototype before it expired. )


Please find the screenshots of the same on the next page onwards.

## Screenshots of the Clickable Prototype

### LOGIN PAGE



## APPOINTMENTS


 **Patient X**

HomeAppointmentsSubscriptionContact Us

**2021**  
Upcoming


Book Appointment

**10**  
Feb

04:00 PM   
Dr. Animesh Bhasin  
📍 Adu Kodi


>

**08**  
Mar

04:00 PM   
Dr. Animesh Bhasin  
📍 Adu Kodi

>

**04**  
Apr


03:45 PM   
Dr. Anju Bhasin  
📍 Vasant Kunj


>


< Chatbot


## CHATBOT INTERACTION WINDOW OPEN

Chatbot  
Typically replies within 5 minutes


 Chatbot  
Hi, How may I help you?  
5 minutes ago



  
Please describe how are you feeling?  
Open article  
Dismiss  
5 minutes ago

 Write message Send

## PAST APPOINTMENTS

 Patient X

Home Appointments Subscription Contact Us

2020  
Past

10  
Jul

04:00 PM  
Dr. Animesh Bhasin  
📍 Adugodi

Completed

08  
Jul

04:00 PM  
Dr. Animesh Bhasin  
📍 Adugodi

No Show


04  
Dec

03:45 PM  
Dr. Anju Bhasin  
📍 Vasant Kunj

Completed

< Chatbot

## PURCHASING SUBSCRIPTION

 Patient X

Home Appointments Subscription Contact Us

Mini

Pro

Premium

\$10/appointment  
Number of Appointment: 7

\$8/appointment  
Number of Appointments: 30

\$4/appointment  
Number of Appointments: 120


Select this plan

< Chatbot

PURCHASE SUCCESS

 Patient X

Done



Congratulations

You have succesfully ordered your package.

OK!

## VIDEO CALLING PAGE



Patient X

[Home](#)

[Appointments](#)

[Subscription](#)

[Contact Us](#)



Dr. Animesh Bhasin



Dr Animesh Bhasin



Chatbot

## CONTACT US PAGE



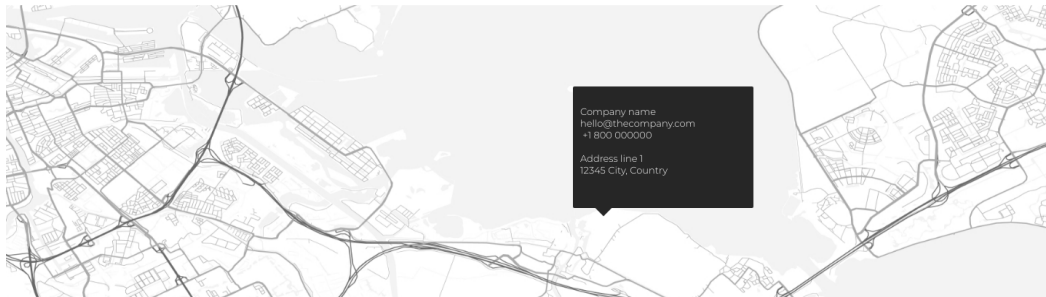
Patient X

[Home](#)

[Appointments](#)

[Subscription](#)

[Contact Us](#)



Talk to us on  
the phone

+1 (0) 800 000000

Get in touch  
by email

hello@thecompany.com



Chatbot

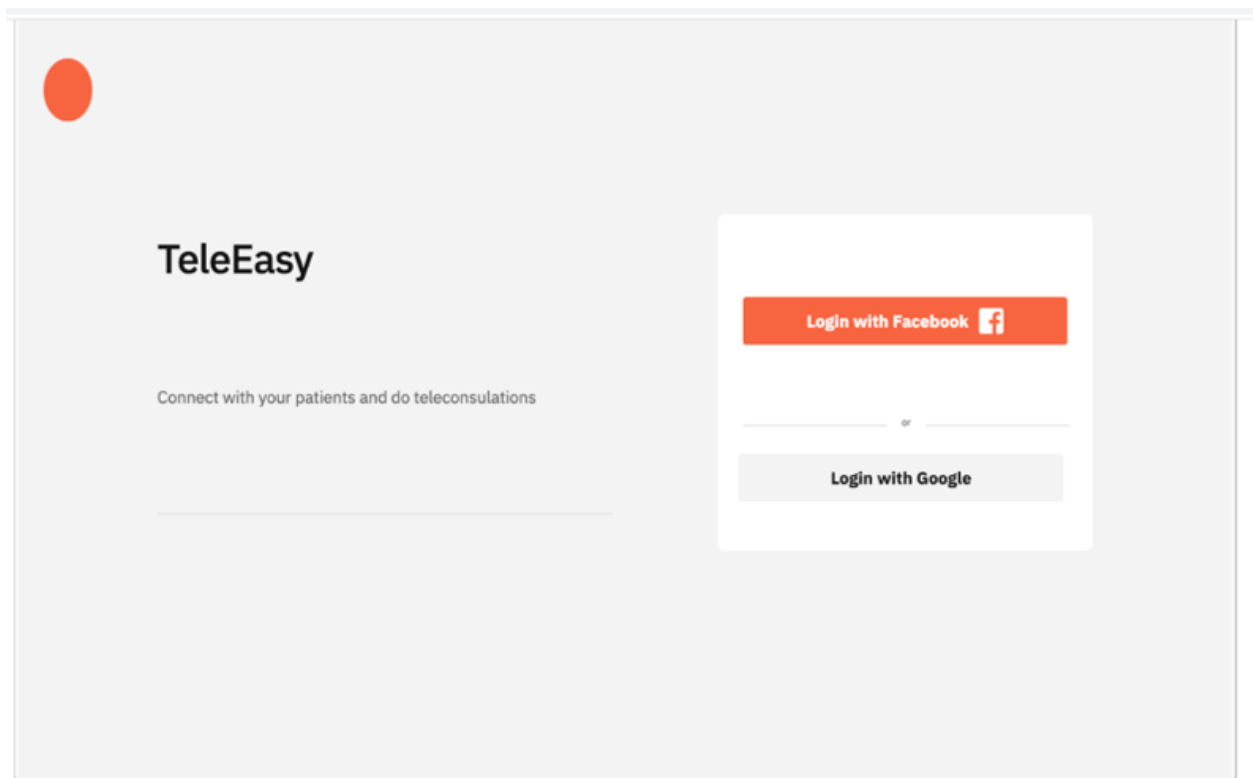


Clickable Prototype - Doctor's side


**Link for the prototype** - <https://invis.io/HG10D7ONF8VN>

Screenshots

Login Screen




## Home Screen

**Dr. Animesh Bhasin**

HomeSchedule


### Upcoming Appointments




< 3 Mar 2021 >

Scheduled (01)

Chahat  
M, 33y

04:30 PM  


## Schedule Screen

**Dr. Animesh Bhasin**

HomeSchedule

### Set Schedule

Select set of days :

MON

TUE

WED

THU


FRI


SAT


SUN

[Save](#) [Cancel](#)

Select hours of shift 1 : ☐ Video consultation shift

Start Time  
9:00 AM 

End Time  
2:00 PM 

Type of shift  
Appointment with slots 

Slot duration (in mins)  
10

Booking per slot  
1

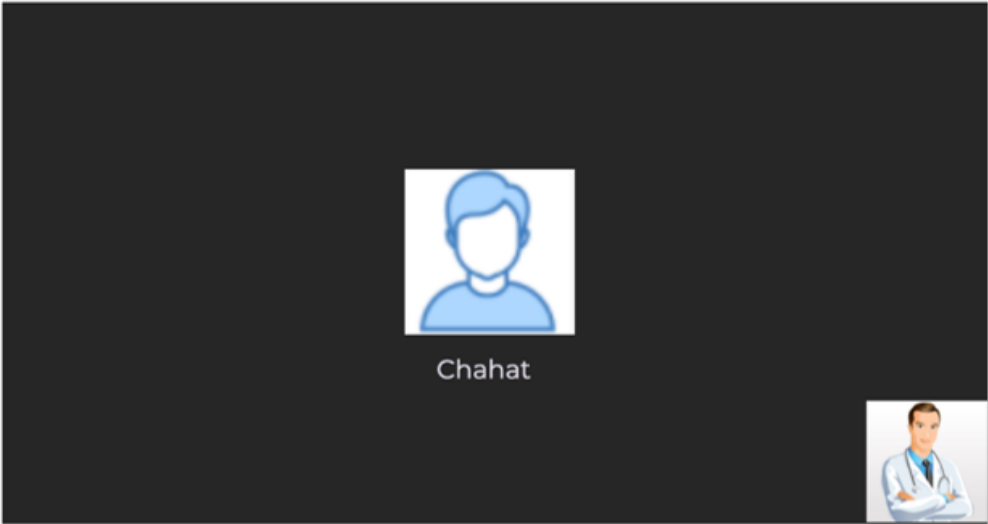
☒ Allow online booking

Video Consultation Screen



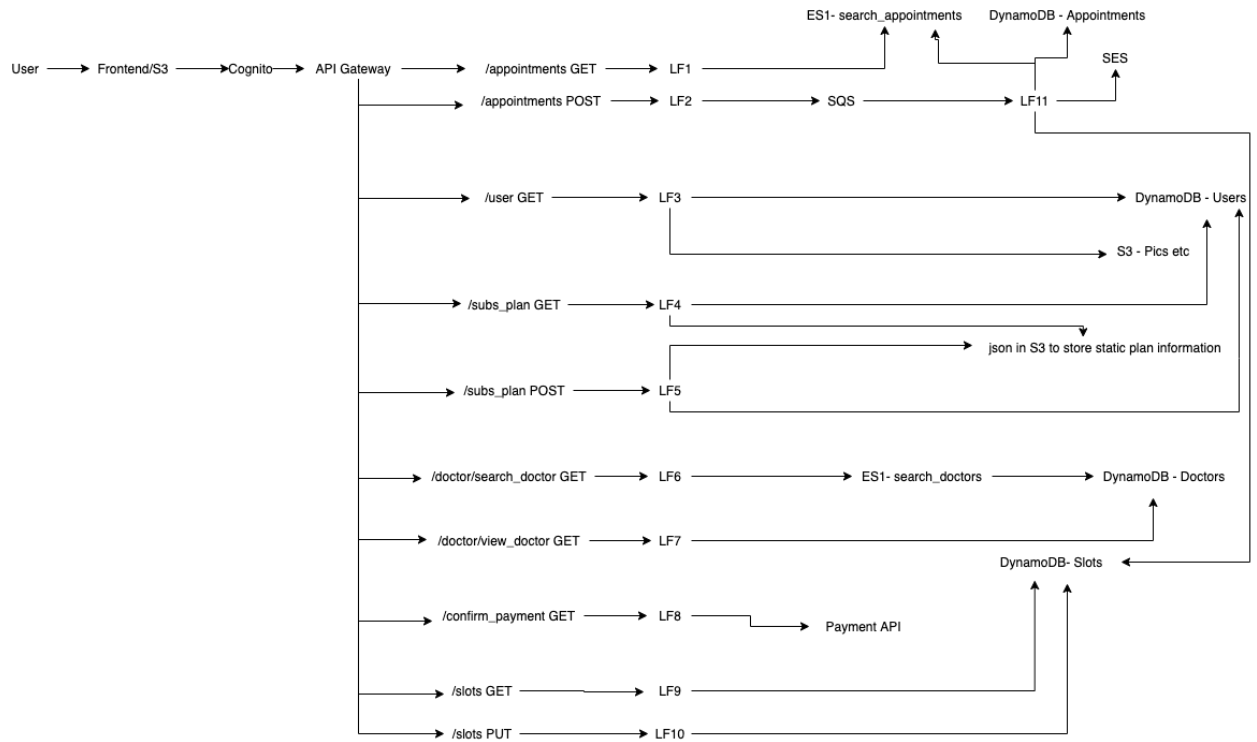
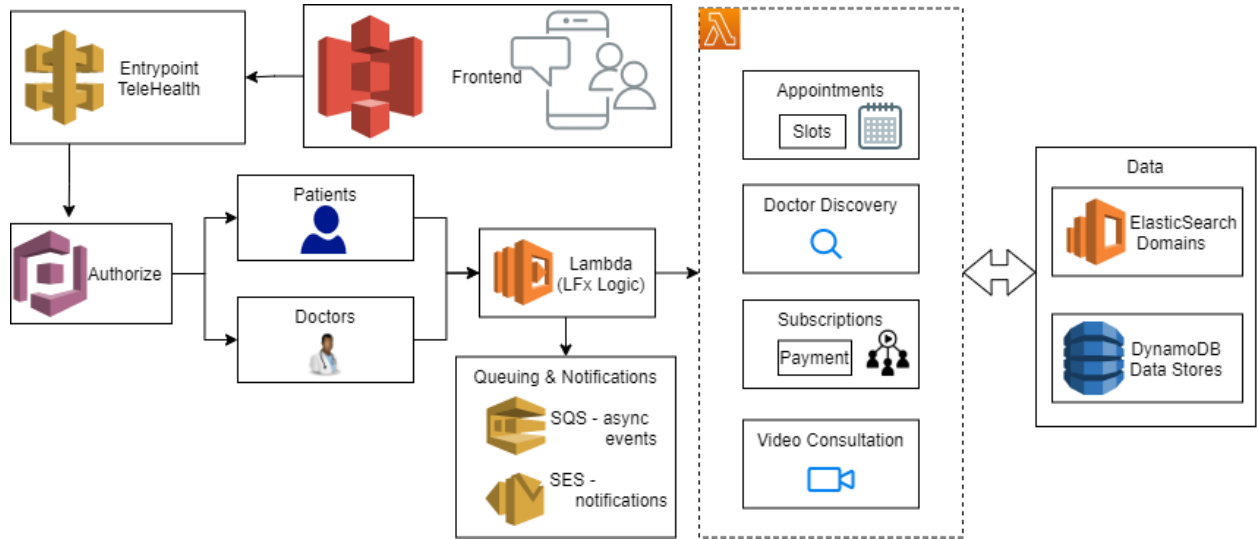
Dr. Animesh Bhasin

[Home](#)   [Schedule](#)



Patient Chahat

# Architecture



# **Datastores**

These are the datastores that we have used. The schema for each datastore has been specified. Type of the datastore(such as, DynamoDB, ElasticSearch etc. has also been indicated).

## 1. DynamoDB - appointments (PRIMARY KEY - appointment\_id)

appointment\_id  
doctor\_id  
zoom\_meeting\_id  
zoom\_meeting\_password  
patient\_context  
patient\_id  
start\_datetime

## 2. DynamoDB - patients (PRIMARY KEY - patient\_id)

patient\_id  
address  
email  
first\_name  
last\_name  
mobile\_no

subs\_plan\_plan\_id

subs\_plan\_remaining\_num\_appointments

subs\_plan\_start\_datetime

### 3. DynamoDB - doctors

doctor\_id

address

email

first\_name

last\_name

mobile\_no

speciality

units\_per\_appointment

image\_url

no\_of\_ratings

rating

location

### 4. S3 bucket - profile\_pics

folder patients

naming - patients/patient\_id.png

5. **Subscription Plan** static information in a json file(company\_plan\_information.json) hosted in S3

```
plan_id: int
plan_name: "string"
cost_per_appointment: int
number_of_appointments: int
plan_duration: datetime
desc: "string"
```

## 6. **DynamoDB: SLOTS**

```
doctor_id: string,
start_datetime: string,
end_datetime: string,
valid: boolean
```

## **Elastic Search Domains**

1. index - doctor\_id, document - {"speciality": , "name": , "cost\_low": , "cost\_high":, "region": }
2. index - patient\_id, document - appointment\_id

// all the appointments (past and present) for the current patient can be obtained in an efficient manner.

# **API**

We have two APIs - the main TeleEasy API and the authentication API.

Please find the SwaggerHub links to access our Swagger APIs for the two APIs listed above.

1. <https://app.swaggerhub.com/apis/animeshbhasin1994/tele-easy/1.0.0>
2. <https://app.swaggerhub.com/apis/animeshbhasin1994/TeleEasyAuthentication/1.0.0>