Advanced Software Engineering

Project Increment 3

FettleUp

Team 8

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1. Introduction

FettleUp

When we feel sick, we need to go to hospital and take an appointment with doctor. The severity of the disease is less this will be a time taking process in our day-to-day busy life. In this smart world, we thought of having one application that will be handy to opt for a doctor and make an appointment with him in online and discuss regarding our problem and get the necessary suggestions from him, so we can save our time. Finally, we came up with this thought to save time for everyone.

2. Project Goal and Objectives

Overall Goal:

The main goal of this application system is to provide an end-to-end communication between the common people and their consultation doctors. The gap between them is filled by using various resources of communication such as online chat, request for appointment consultation and ease of search in nearby emergency.

Specific Objectives:

Technology is evolving everyday, so creating an interactive web application by reaching our goal within the time frame is our major objective. The key thing of the application is to provide end-to-end relationship between doctor and patient. We personally take care in building a real time system that is user friendly and reachable to patients round the clock. To make a system, which feeds instant guidelines to people, regarding their appointment status, doctor availability and other related information.

Specific Features:

The features are classified as

- Make a hassle free appointment and consultations with doctor,
- Round the clock advice from doctors by using the chat option,
- Provide daily diet for future reference to doctor's in case of health checkup,
- View prescription and shop for them on e-commerce sites i.e. Wal-Mart pharmacy,
- Look for nearby emergency and pharmacy with single click,
- Feedback option on their experience.

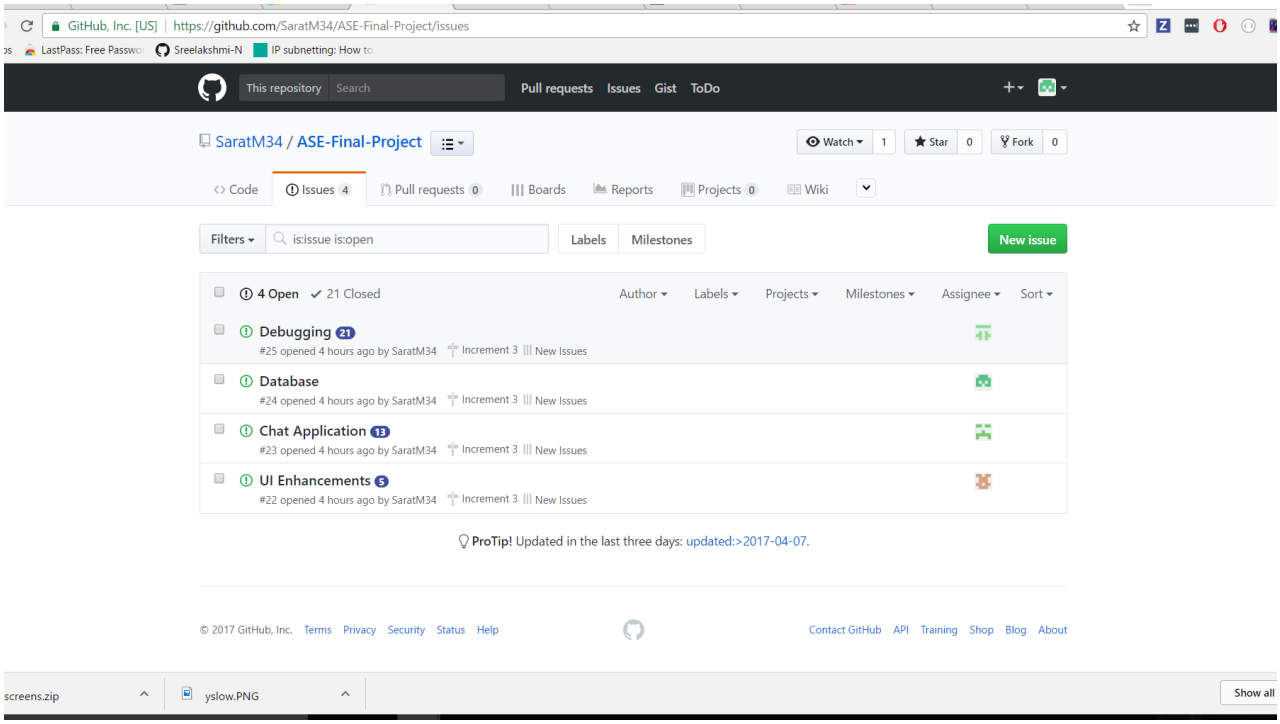
Significance:

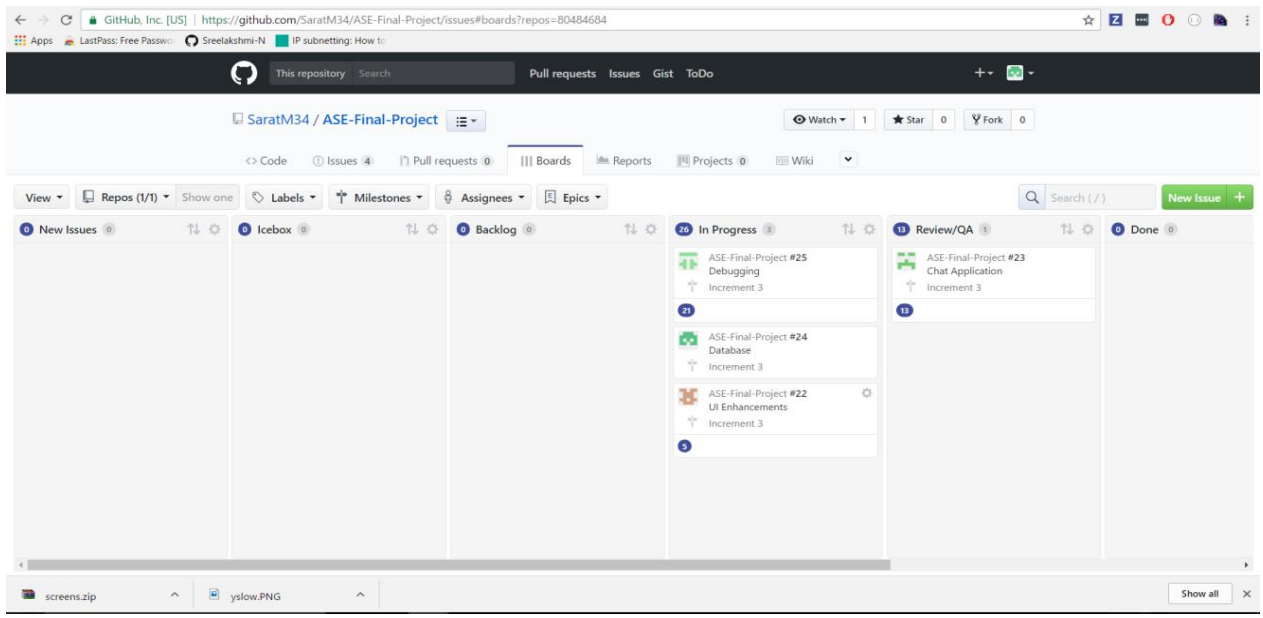
As we can see there are many applications for health care but our application is stand out from others. In this application we can quickly check for the availability of doctor in particular categories and schedule an appointment with him or else we can chat with him from our desk itself, which is time saving process. Therefore, this application will become the dominant form of interaction.

3. Project Plan

Zen-Hub Screenshot:

For the third increment we had issues regarding the functionality of Home page which includes text to speech API and implemented the database and writing unit test cases.





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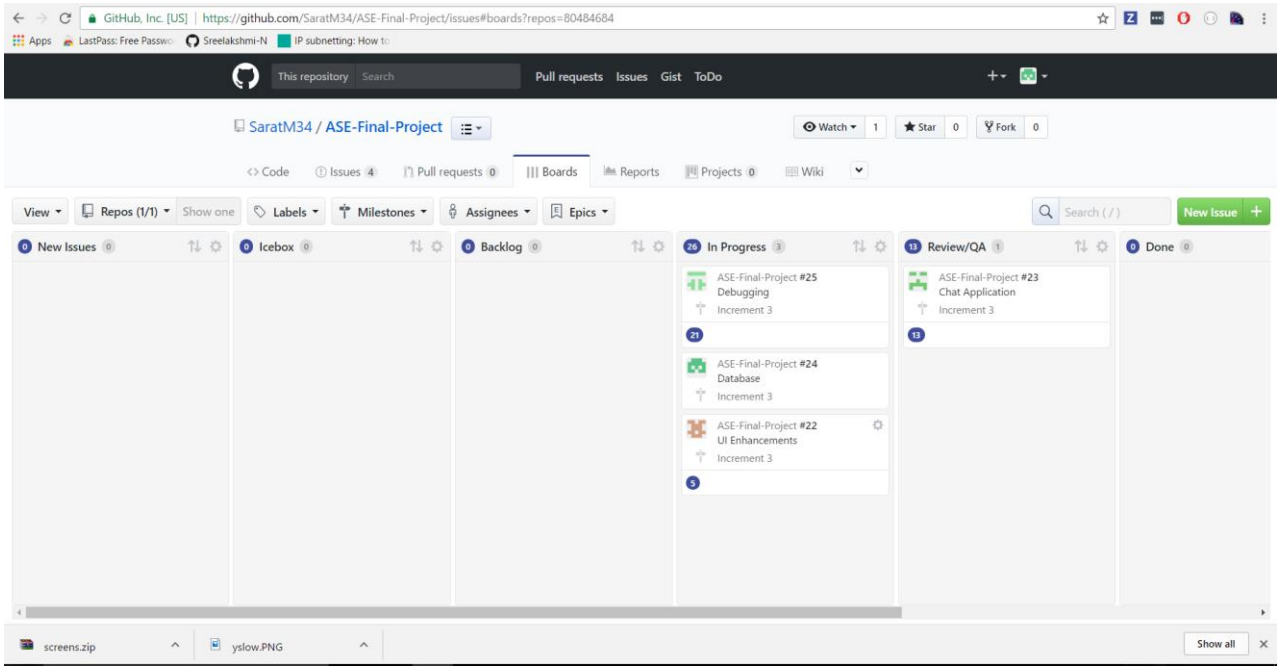
Project Timeline, Members and Task Responsibility

The issues that are registered and current one's which we are working are updated and can be viewed in github repository. The below screenshot will show you the issues and their respective categorization's i.e. New issues, Icebox, Backlog, In Progress.



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Burn-Down Chart:

Burn-Down chart is created for the above issues via Milestones in github. Below is the screenshot for more information.

4. Third Increment Report

Existing Services/REST API's Used

Google API:

We also included Google API in our login module using OAuth 2.0 so users can easily login into our web application by using their respective existing accounts.

Bootstrap:

Bootstrap 4.0 is used in creating the web pages and has a major role in designing the CSS elements and layouts.

Google Maps API:

We have included Google Maps API to search for the nearest location of the pharmacies.

API's Forthcoming:

- Mail service API
- Speech to Text API

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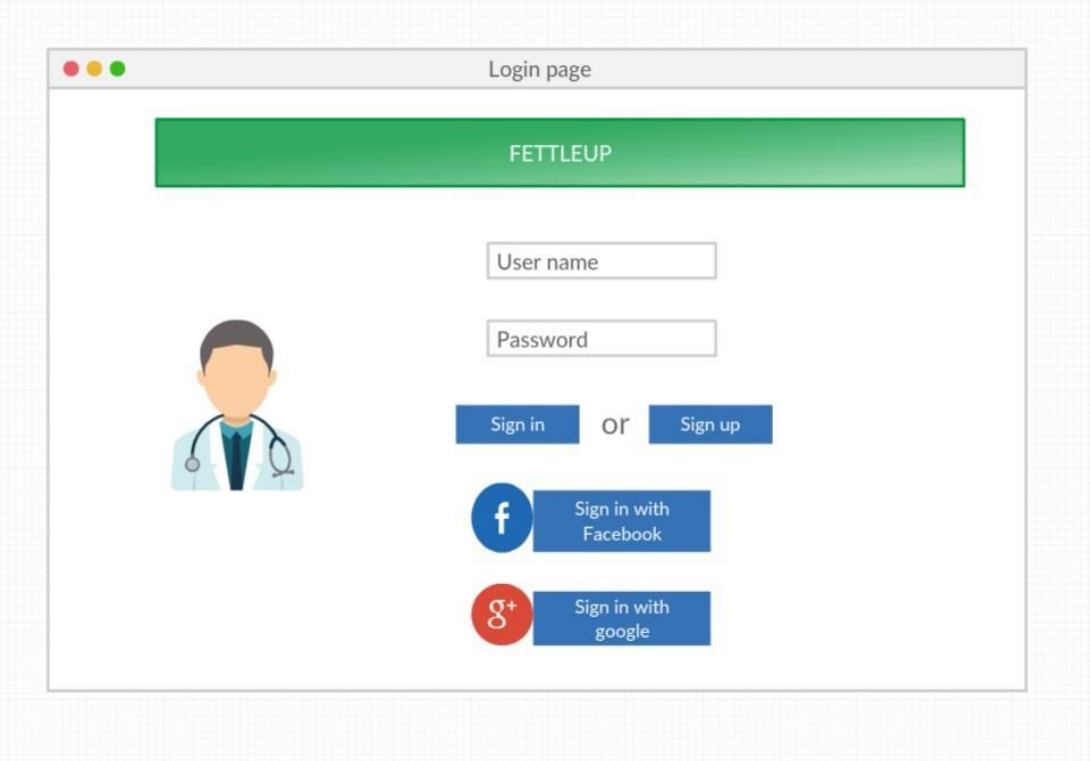
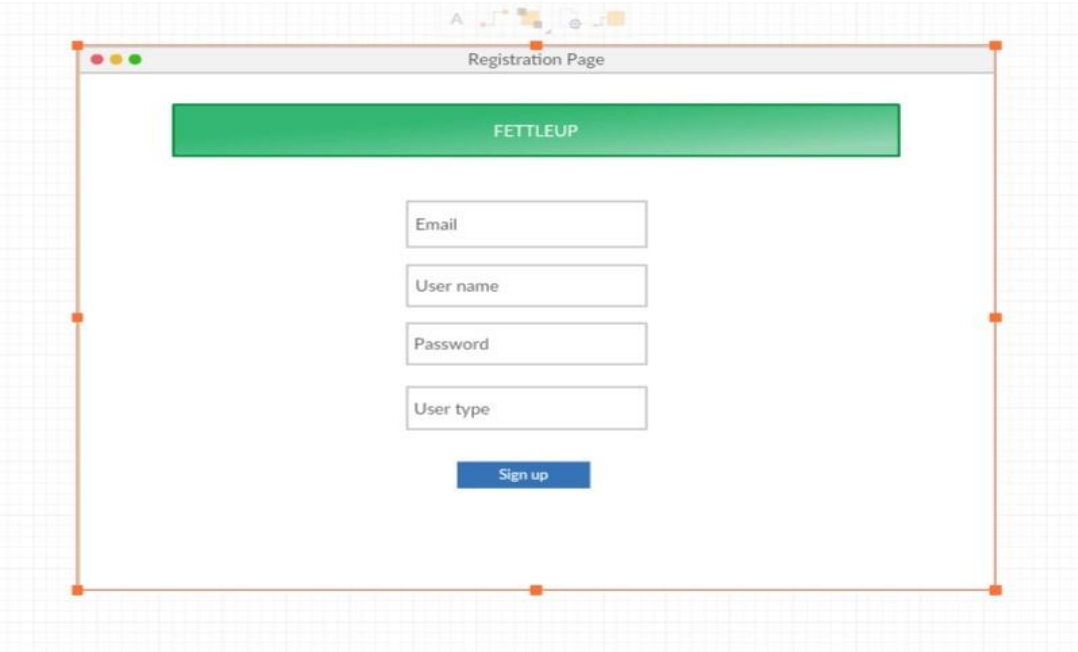
Detail Design of Features (using tools)

Wireframes

Login Page Wireframe:



Register Page Wireframe:



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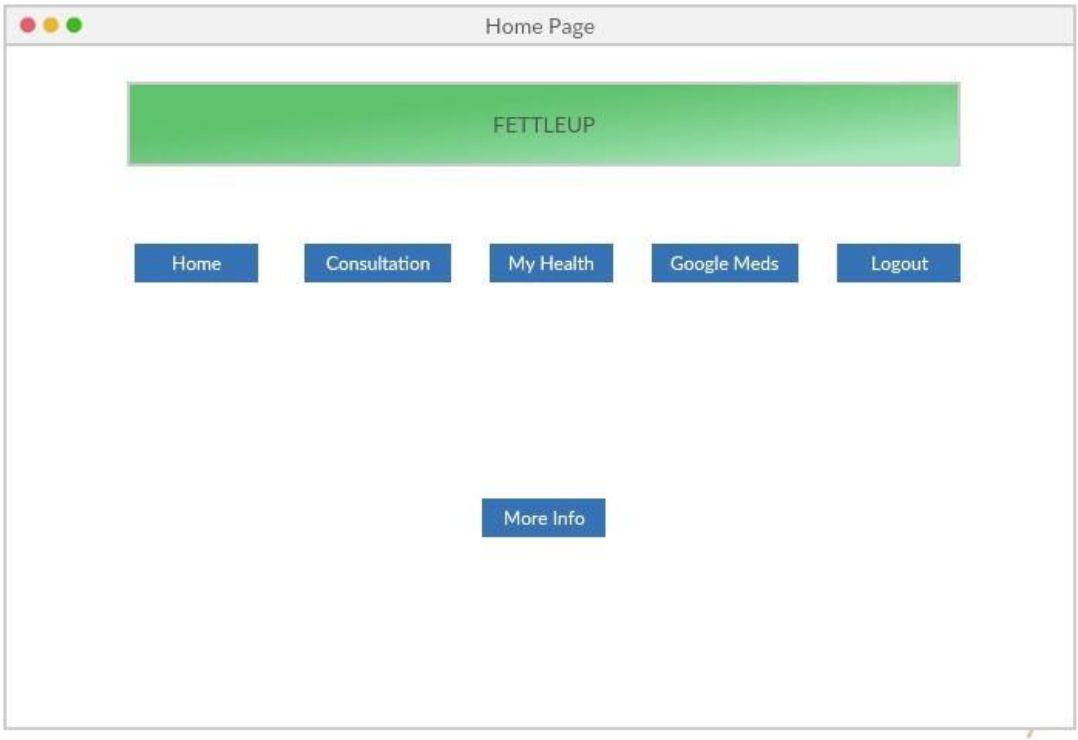
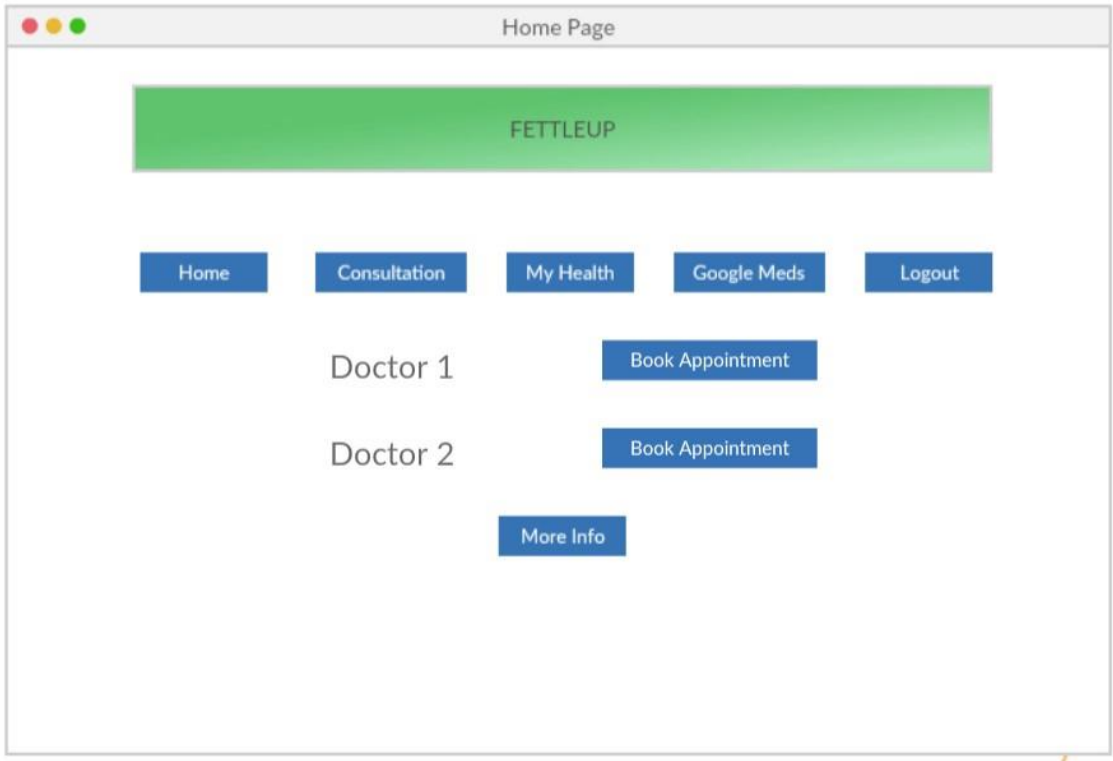
Patient Home Page Wireframe:



Consultation Page Wireframe:



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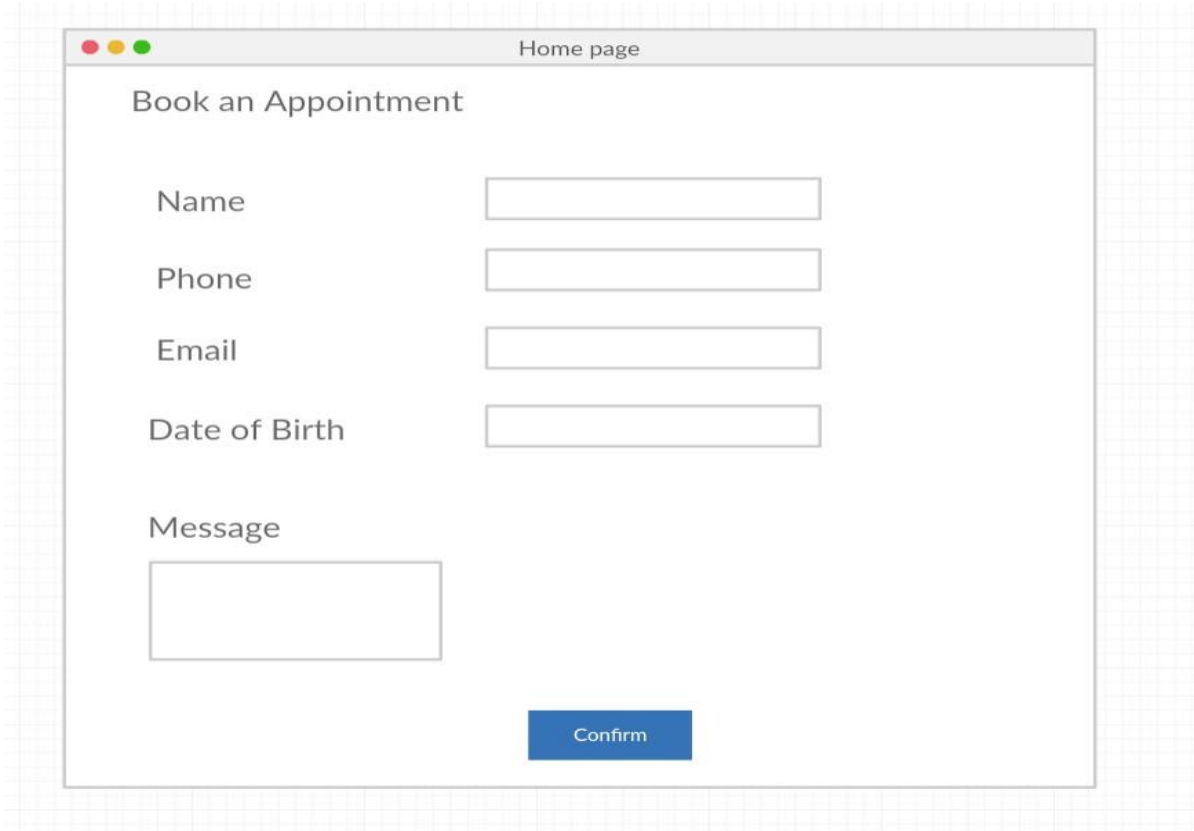
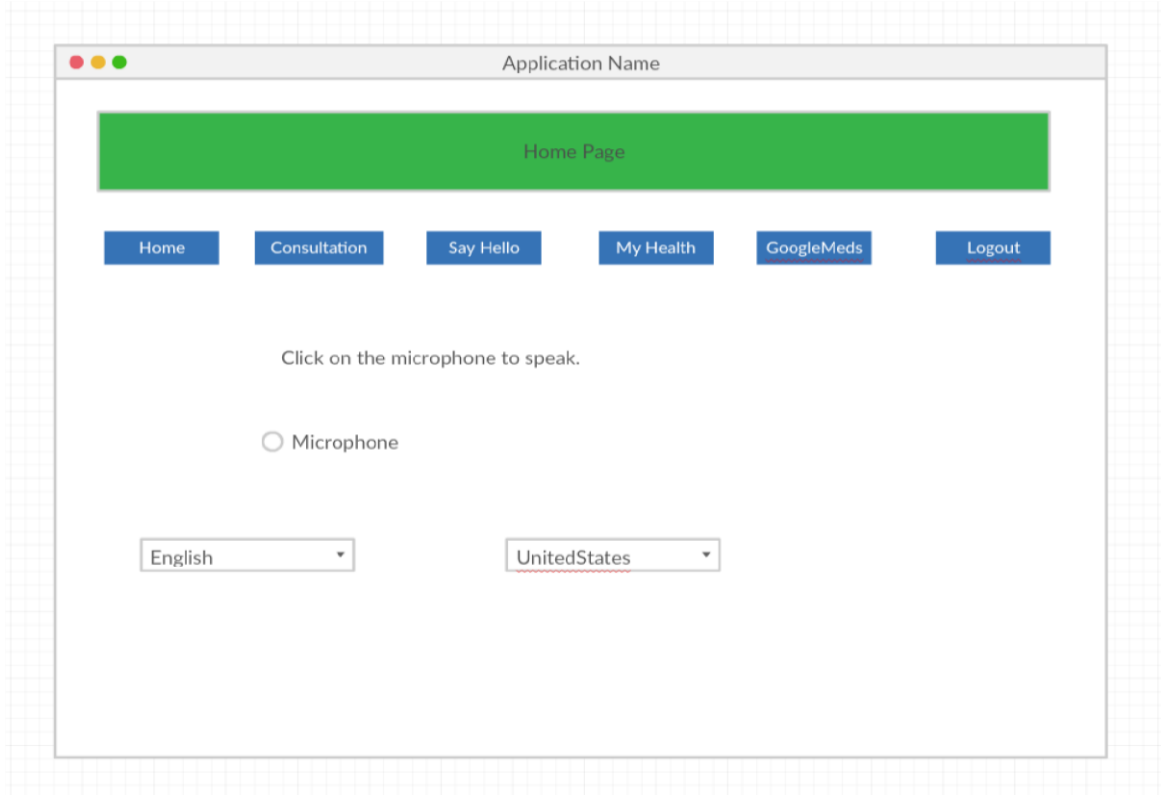
Book an Appointment Page Wireframe:



Say Hello Page Wireframe:



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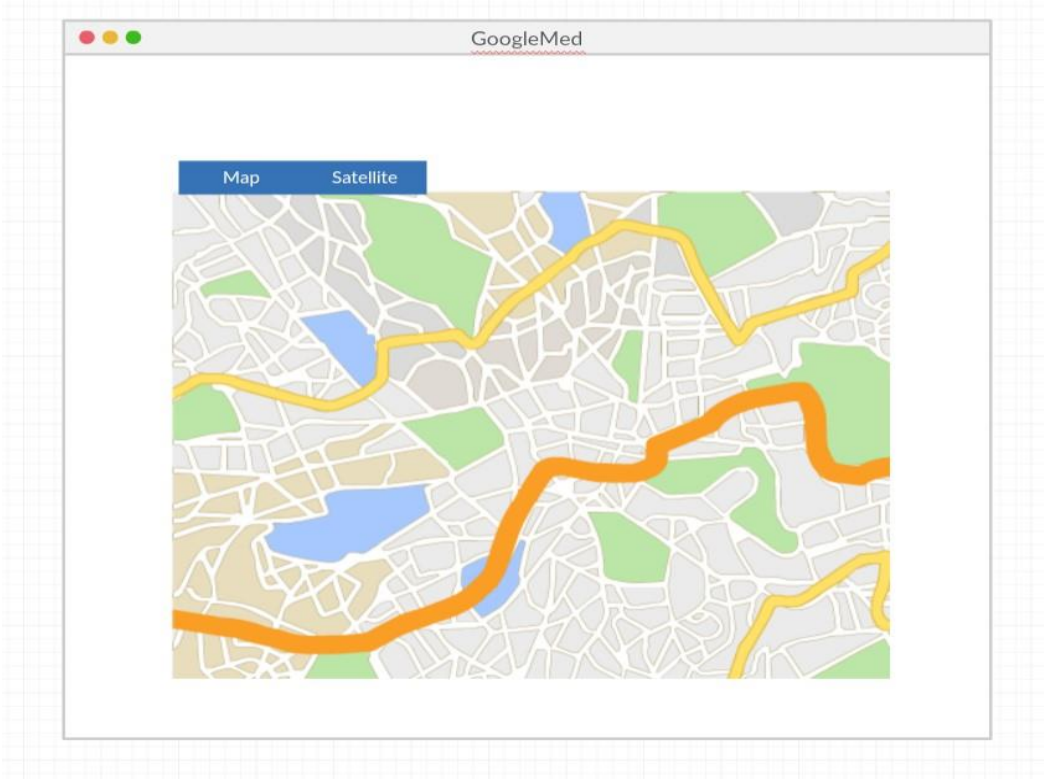
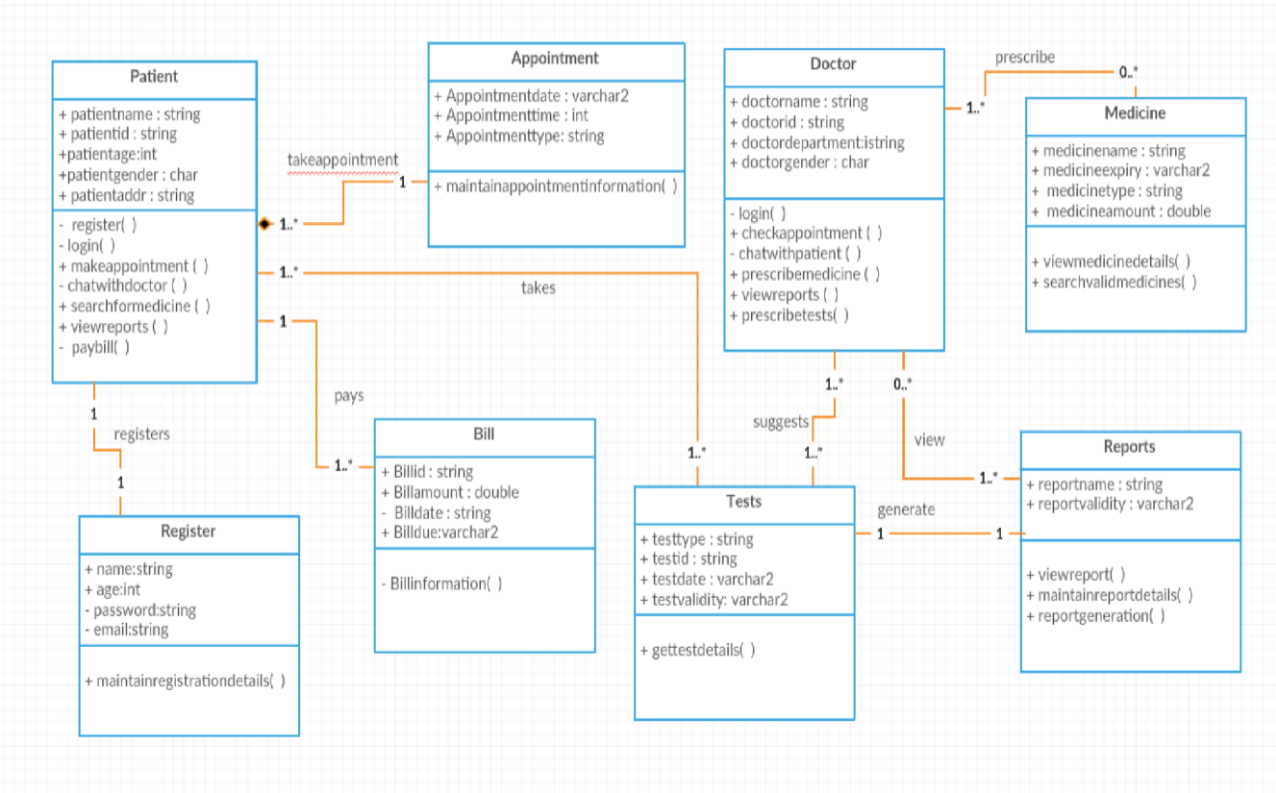
Google Meds Page Wireframe:



Class Diagram



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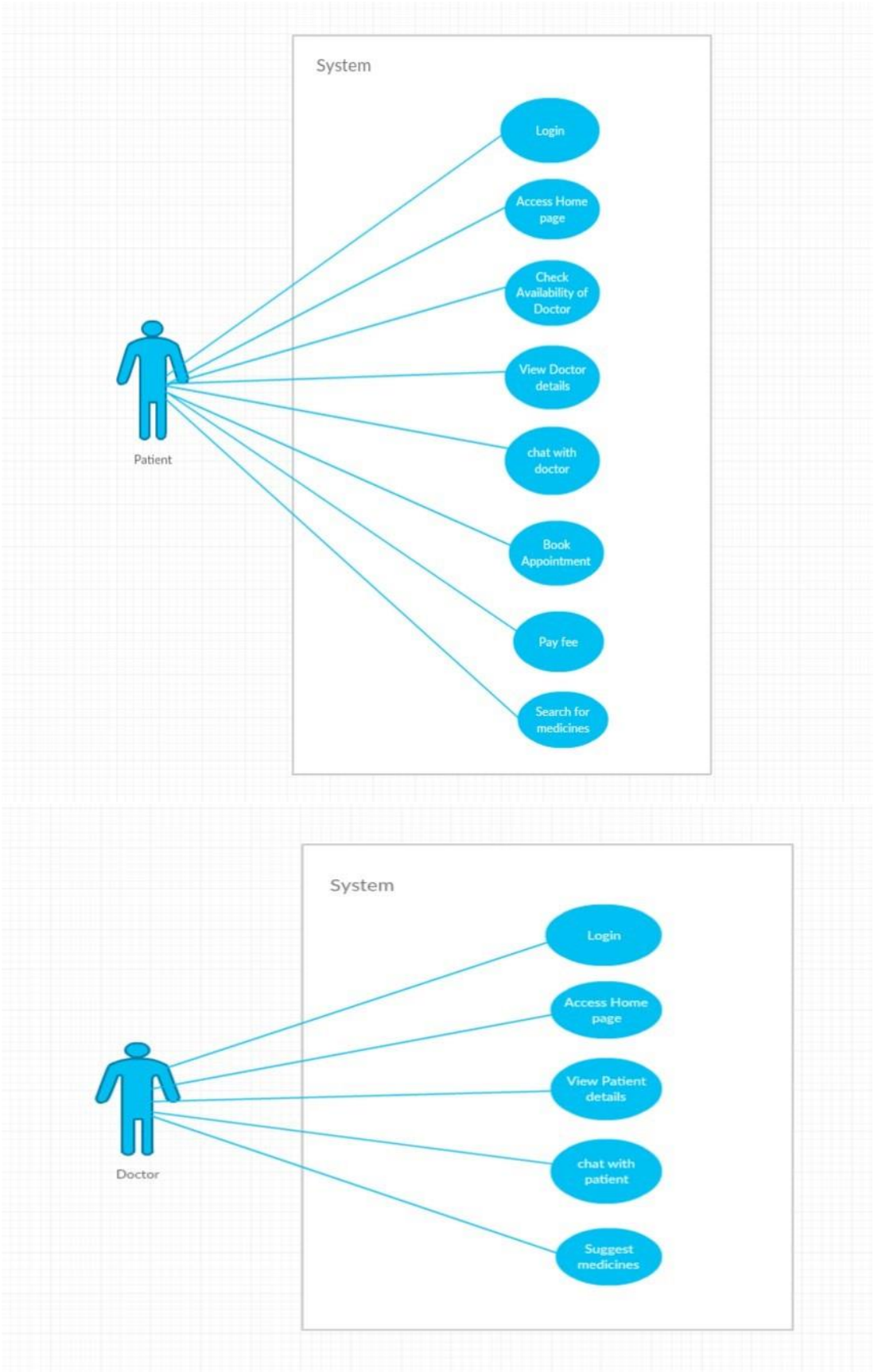
Usecase Diagram



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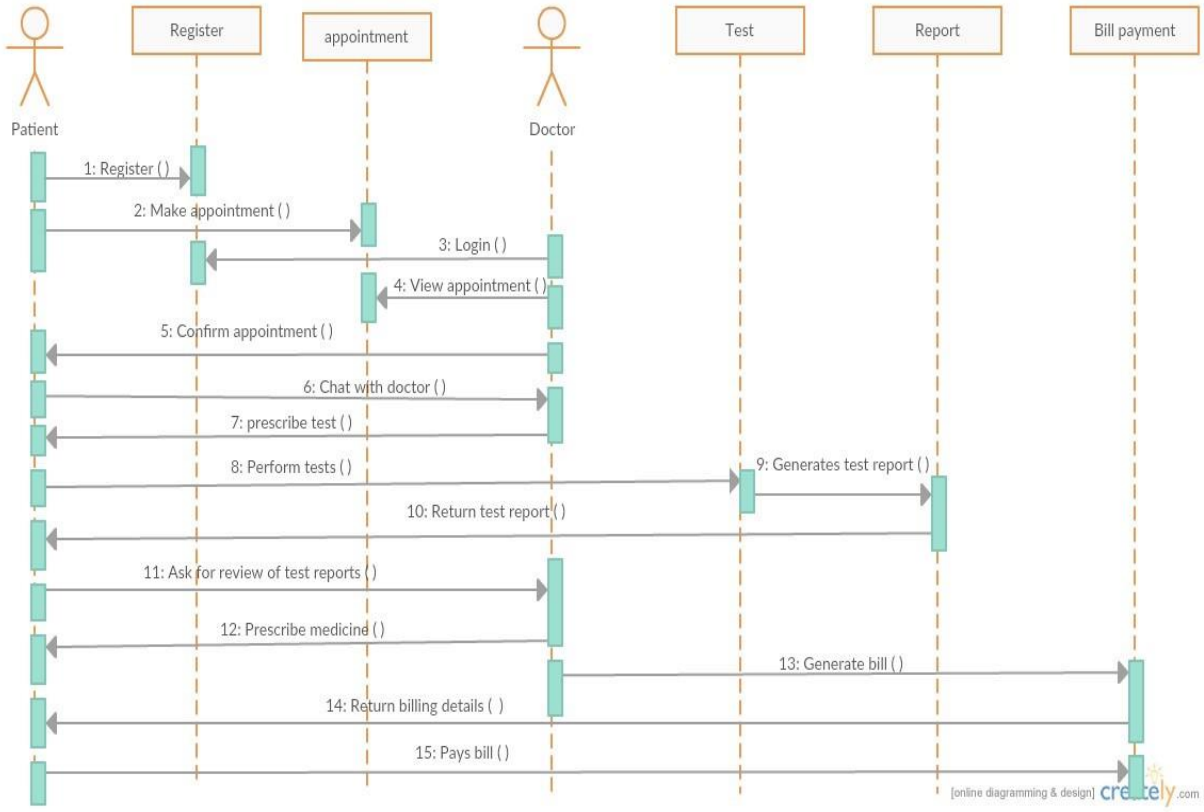
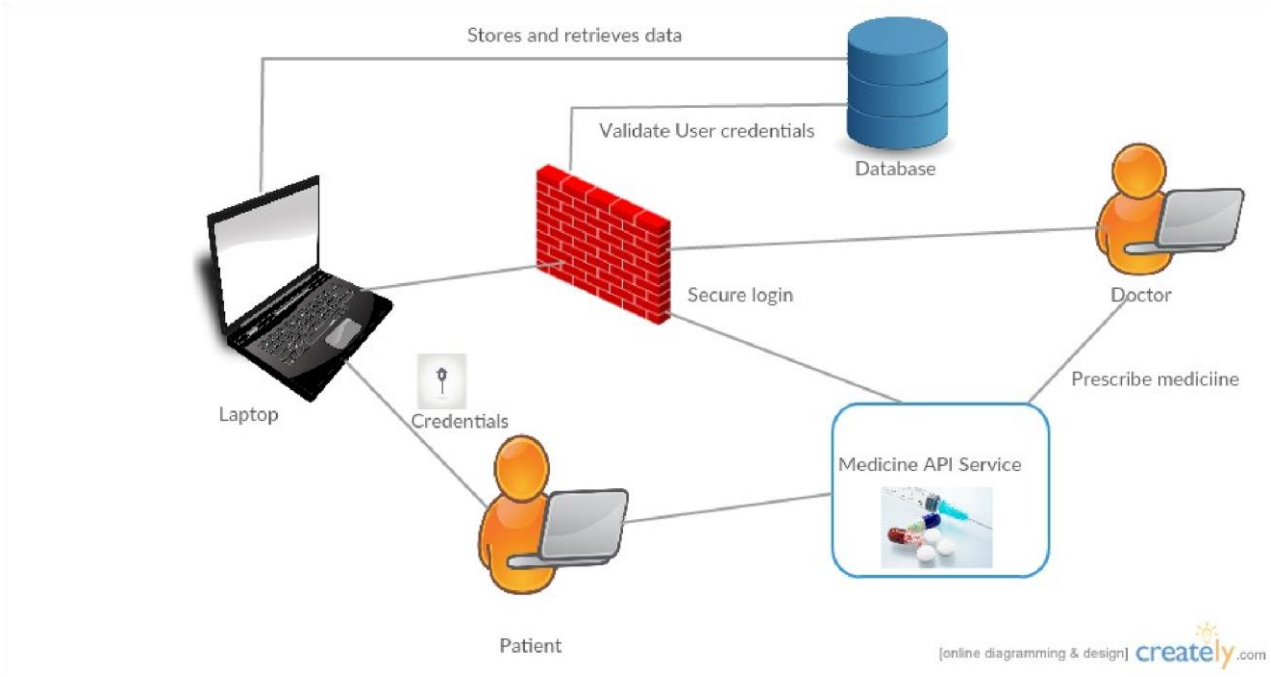
Sequence Diagram



Architecture Diagram



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User Stories

As a	I want to	So that
User	Book an appointment for consultation	I can discuss my condition with the doctor.
User	Chat with the designated person	I can able to get the help during emergency.
User	Search for a nearby pharmacy store	I’ll be able to reach them without hurry.
User	Upload my documents in the website	My doctor can view health condition and other general information.
User	Search for a nearby doctor	I’ll be able to reach him quickly in an emergency situation.

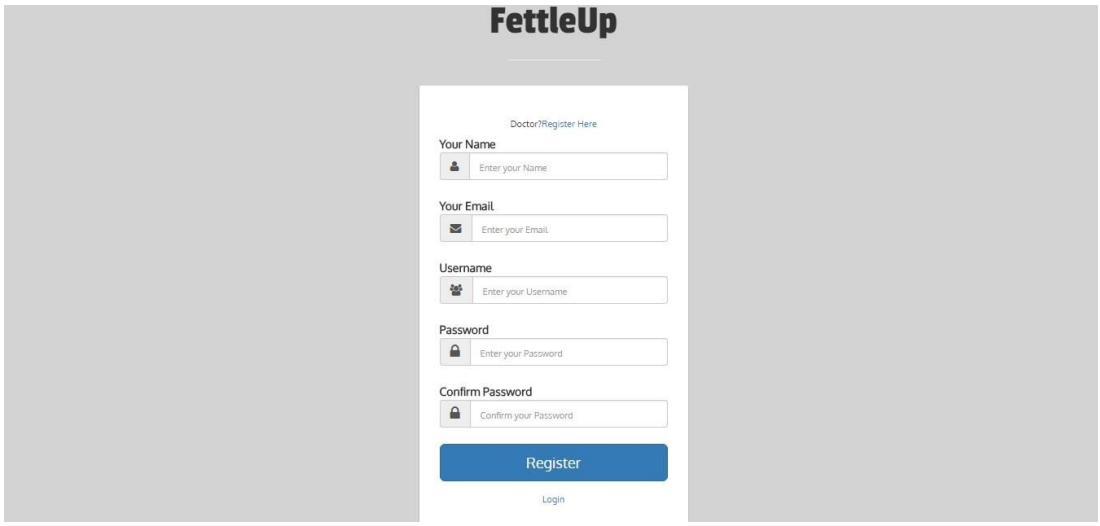
5. Implementation and Deployment

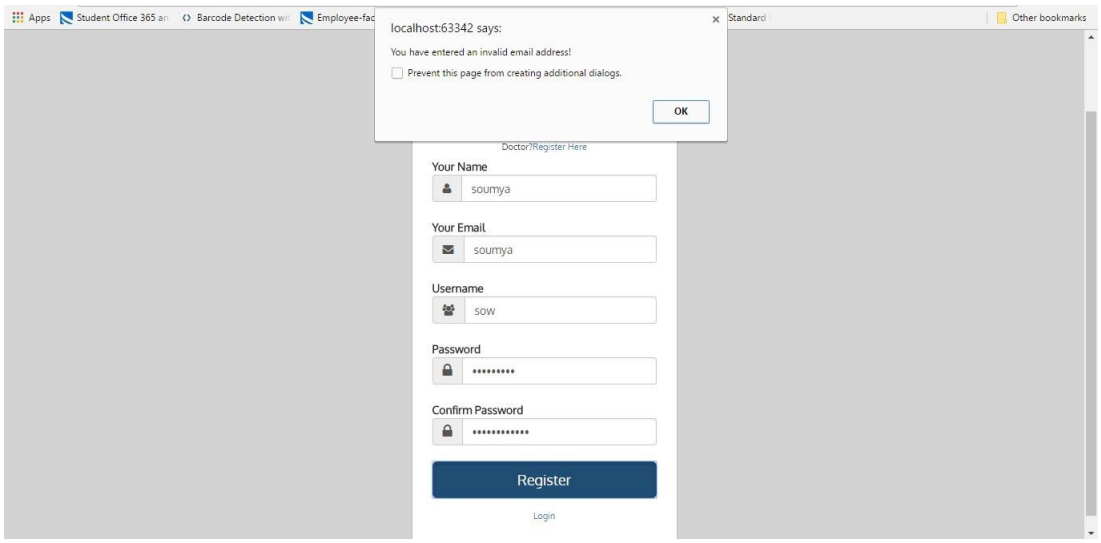
We have implemented our web application using the mentioned API's and modules.

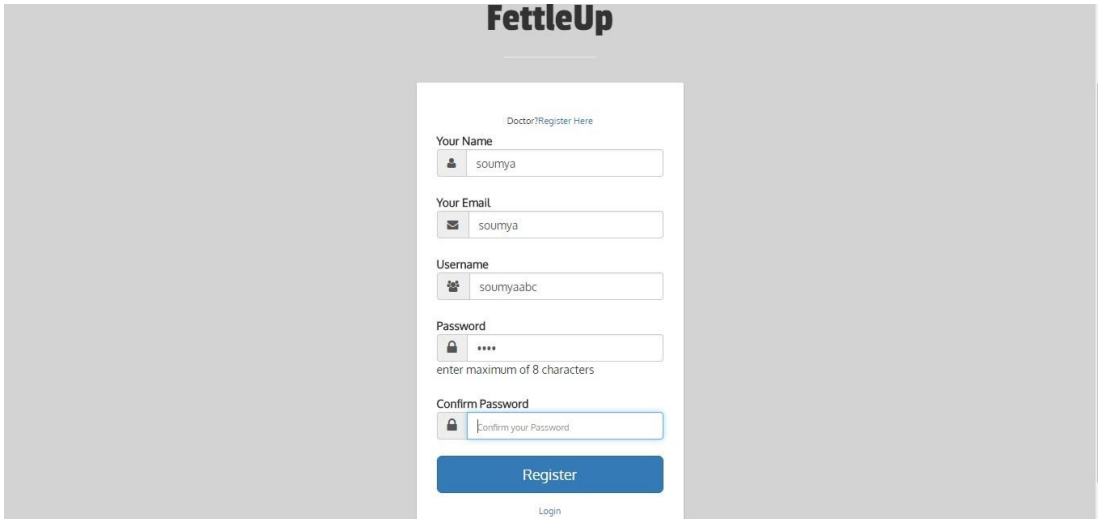
The process flow of the application can be viewed in the below screenshots,

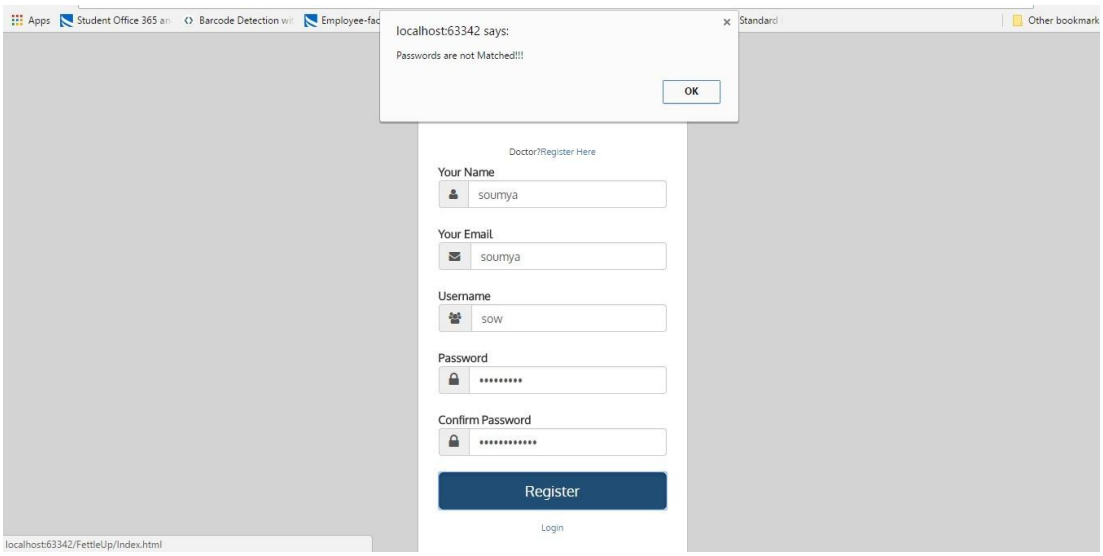
- The Login Page design and fields for user input are given in the FettleUp application. It also consists of Facebook and Google API's for user to sign in with their respective credentials.

- The Registration Page for new users consists of different fields in which they have to enter all of them to process for the access of FettleUp services. Validation is done for email ID, password and blank fields in this module. The screenshots of Registration Page and all validations can be observed below,

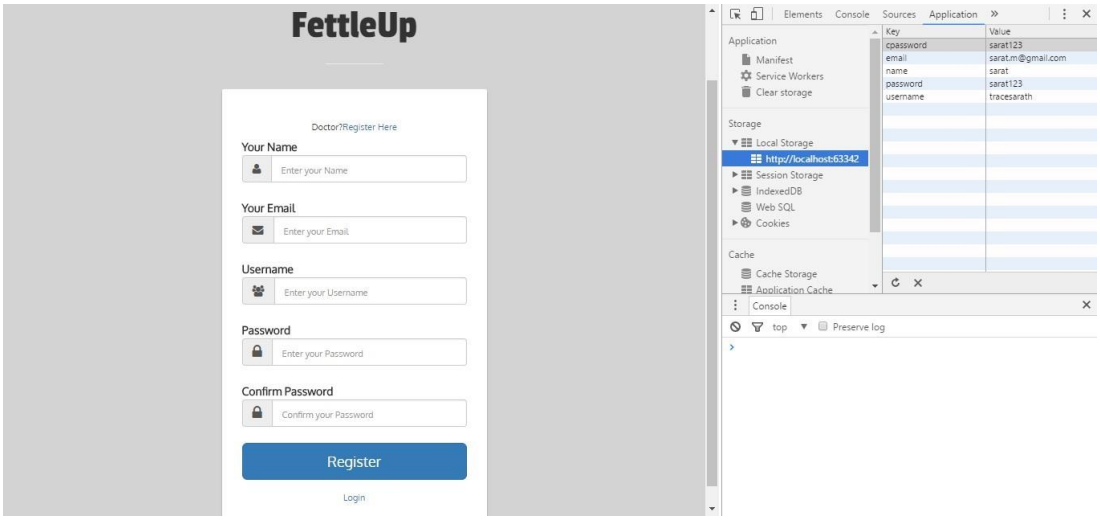
- 
FettleUp
Doctor?Register Here
Your Name
Enter your Name
Your Email
Enter your Email
Username
Enter your Username
Password
Enter your Password
Confirm Password
Confirm your Password
Register
Login


Apps
Student Office 365 an
Barcode Detection wit
Employee-fac
Standard
Other bookmarks
localhost:63342 says:
You have entered an invalid email address!
Prevent this page from creating additional dialogs.
OK
Doctor?Register Here
Your Name
soumya
Your Email
soumya
Username
sow
Password
Confirm Password
Register
Login


FettleUp
Doctor?Register Here
Your Name
soumya
Your Email
soumya
Username
soumyaabc
Password
enter maximum of 8 characters
Confirm Password
Confirm your Password
Register
Login

- 

- On successful registration the details of the user are stored in the local storage of the browser, which are used for future login authentication. Below screenshot will give you details,



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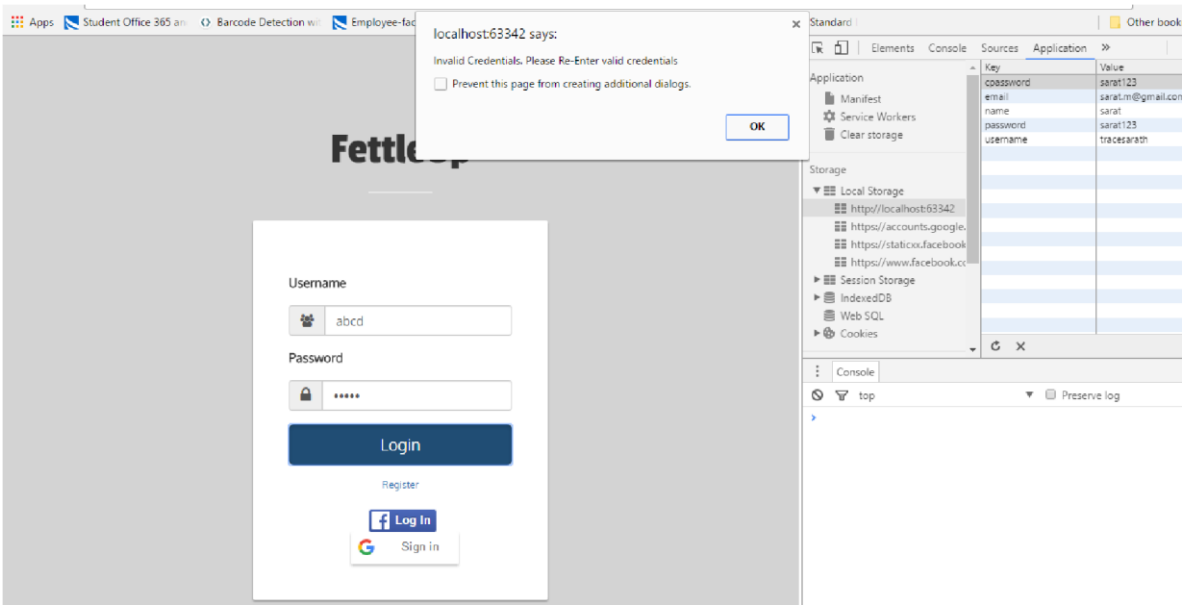
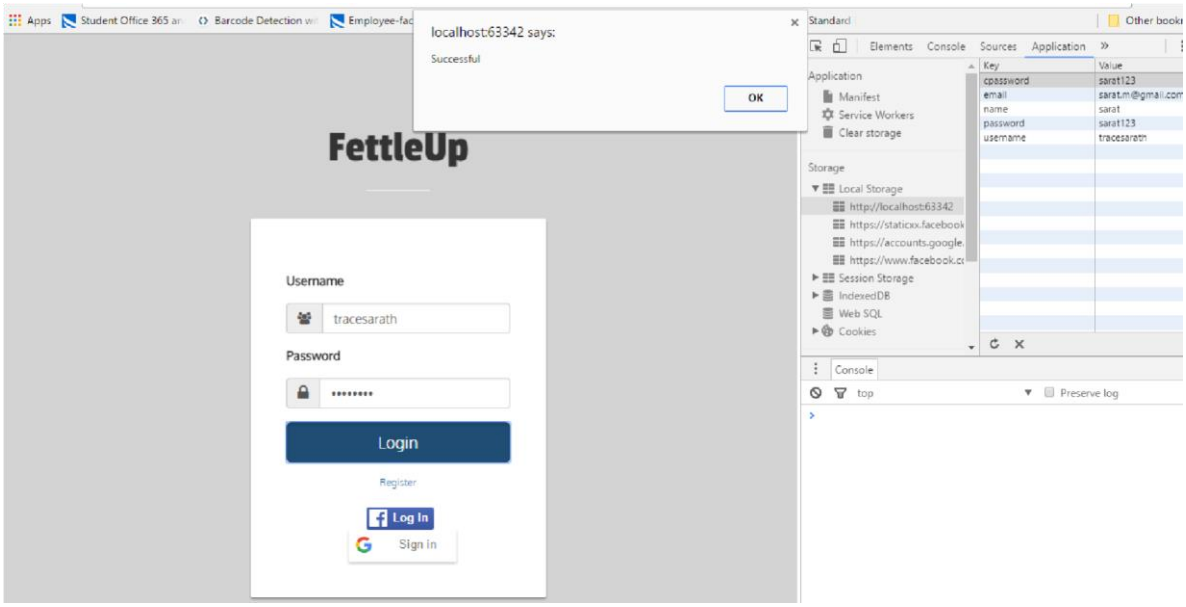
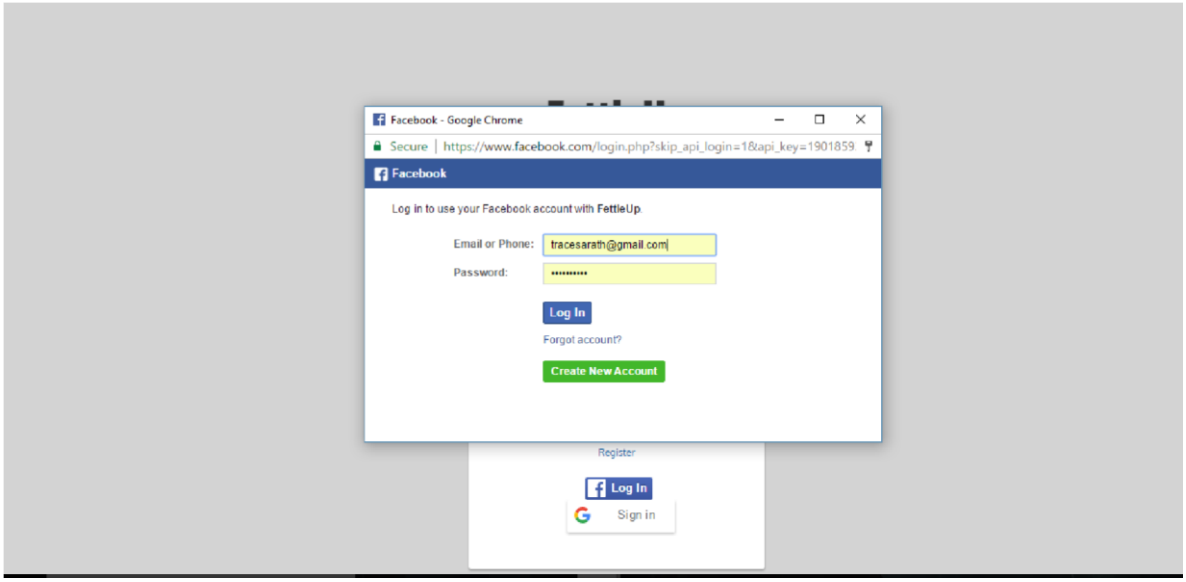
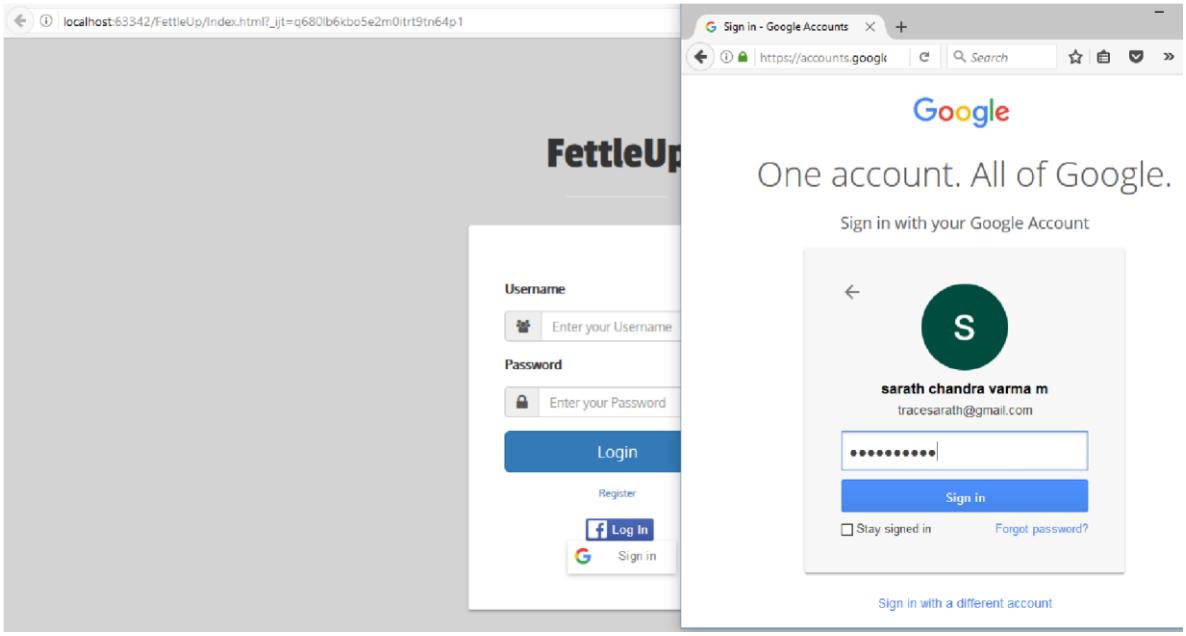
Now, user will give the registered details for accessing the FettleUp application system. Below are the screenshots for validation of Login Page and success pop up window,



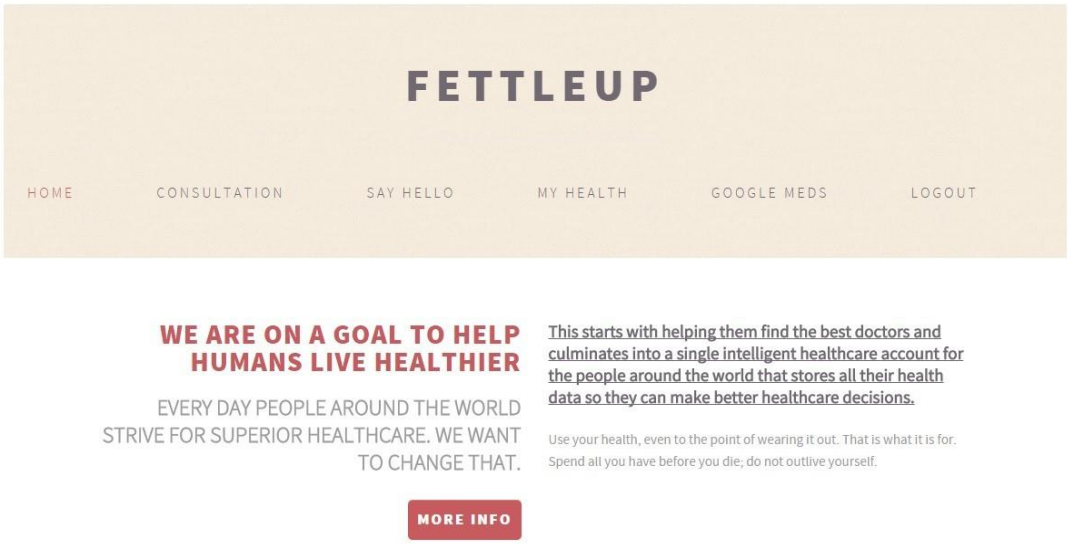


- Facebook and Google API’s screenshots are given below,

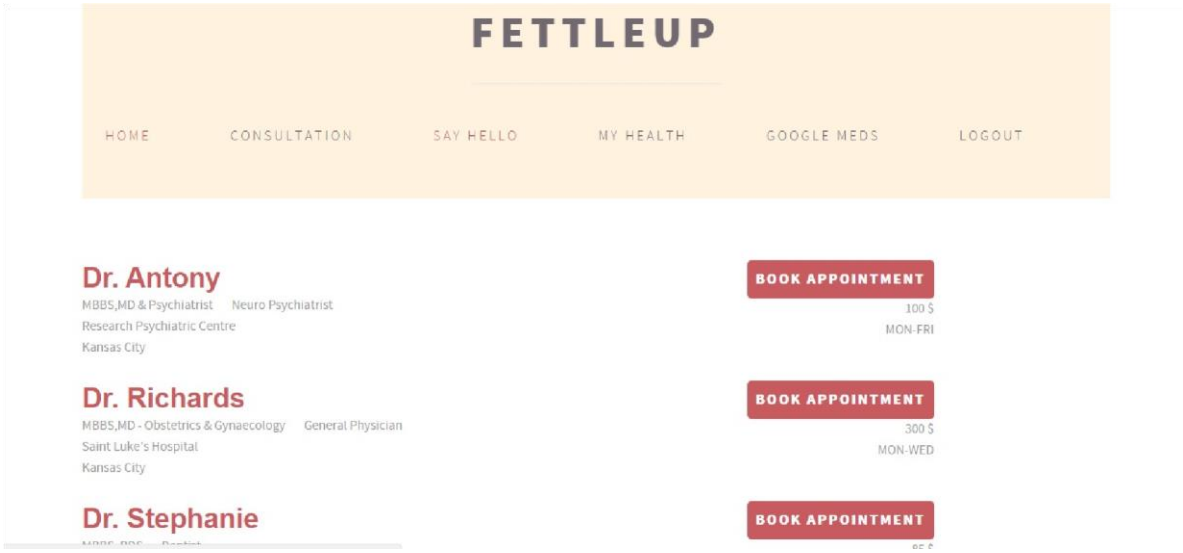




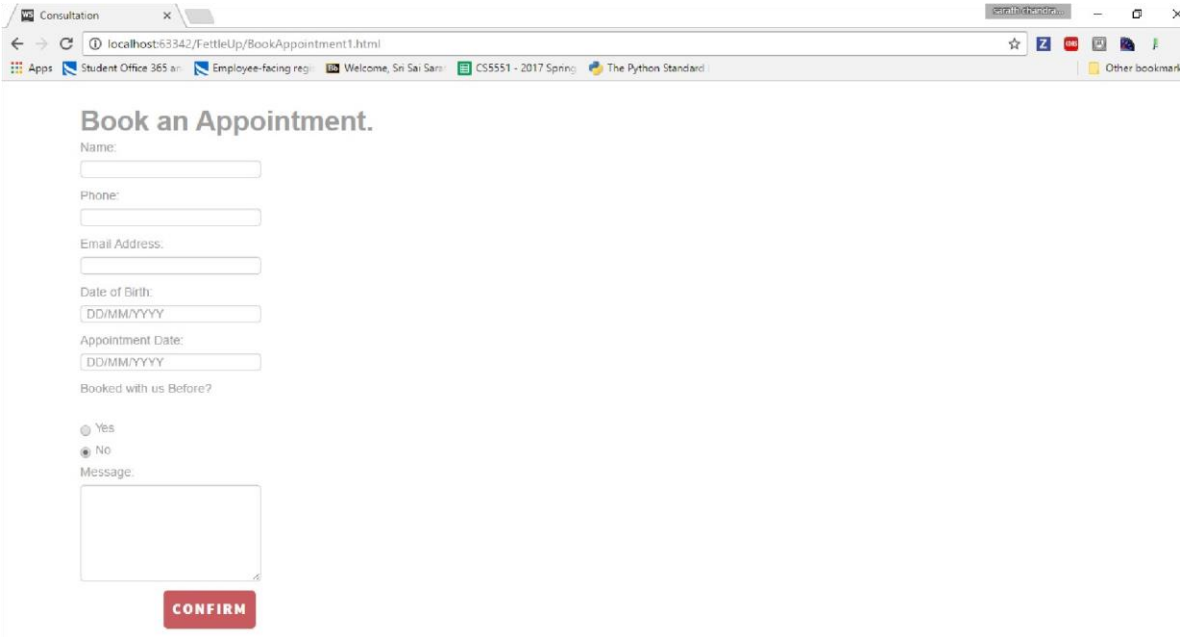
- On successful user login it redirects to main home page of FettleUp where user can be able to access all resources of the application,



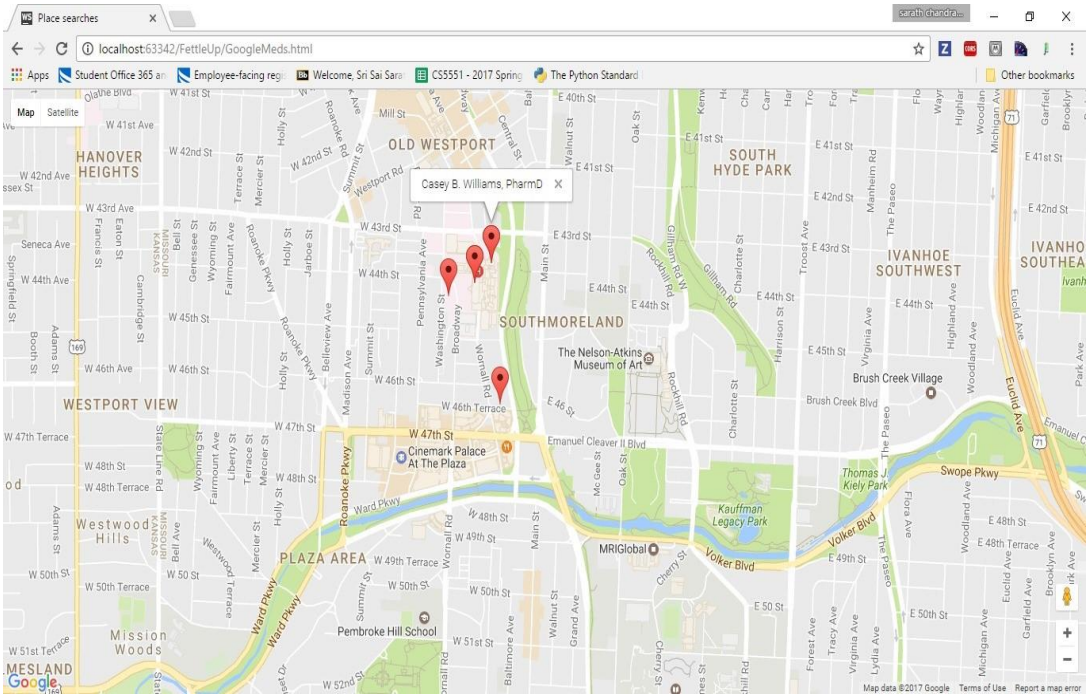
If the user clicks on the consultation tab he will be redirected to the page where he can a list of doctors and make an appointment option.



- User can check the doctor details and once he was satisfied with the doctor he can make an appointment with him by clicking Book Appointment option.



If the user clicks on the GoogleMed tab in the home page he will be redirected to the google maps where he can check for the nearby pharmacies.



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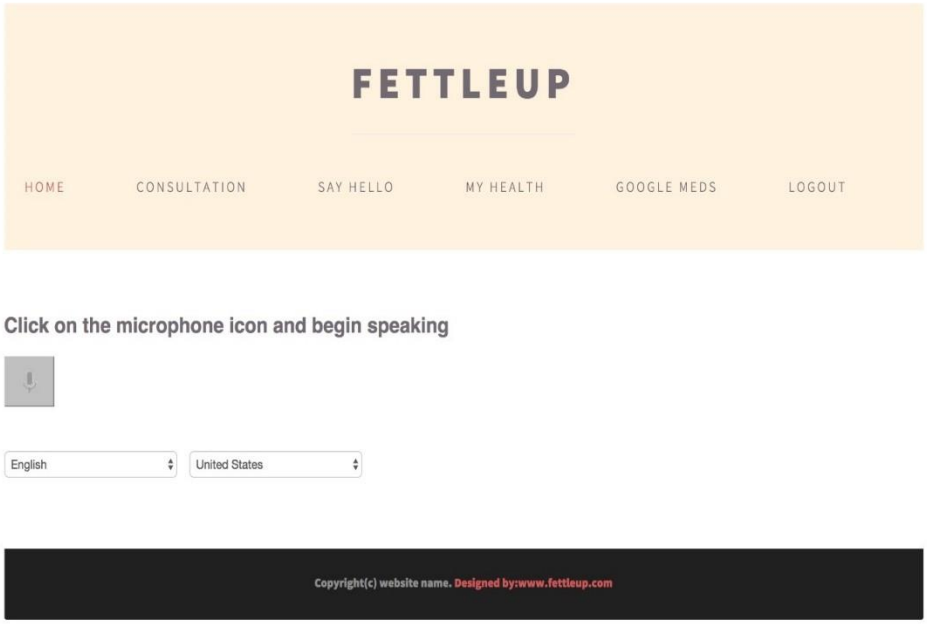
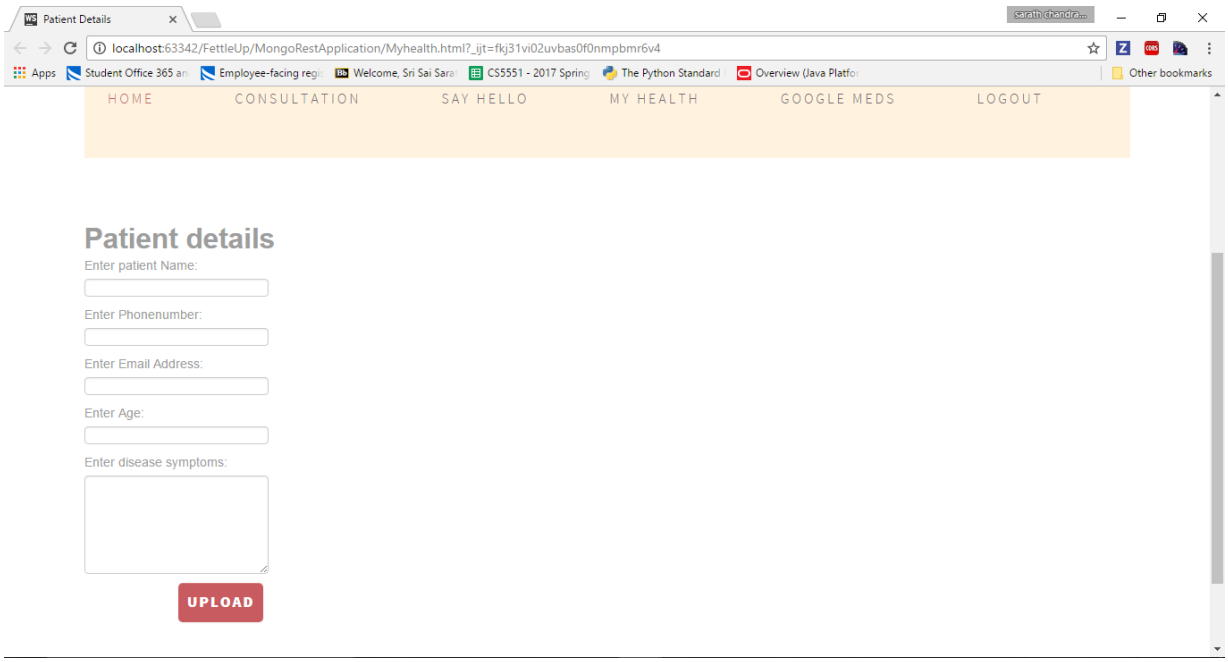
If the user clicks on Say Hello tab in the home page he will be redirected to the page where the user can chat.



The below screenshot depicts the myhealth page for the patient where he can enter the details of his health condition.



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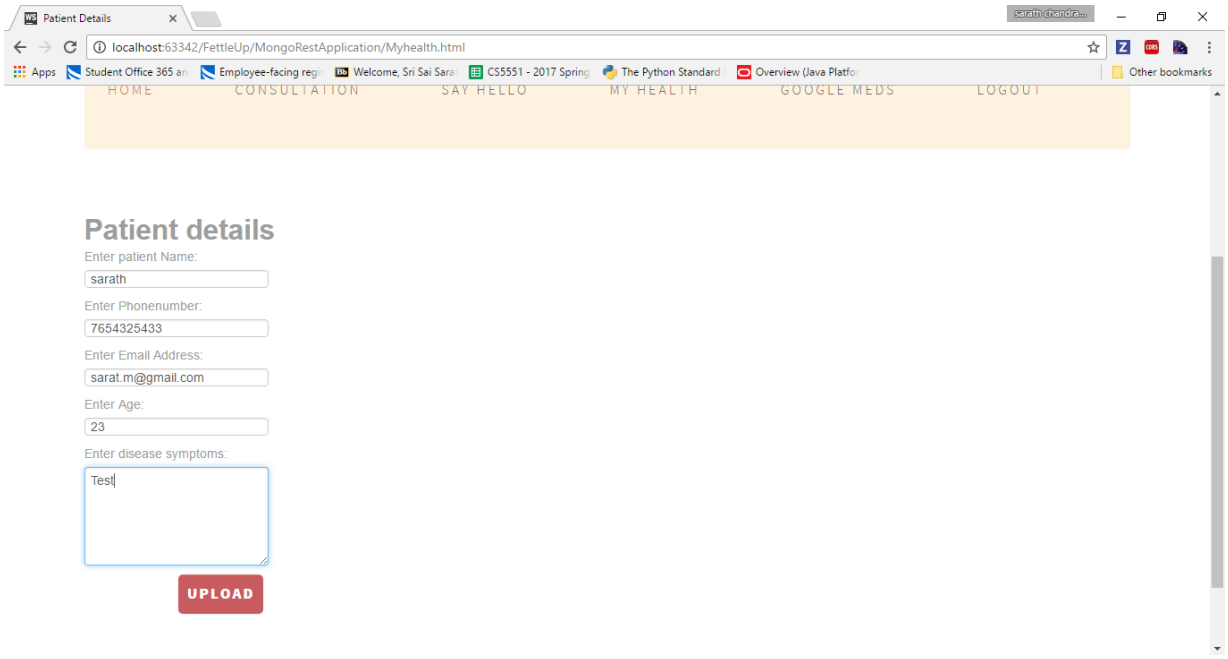

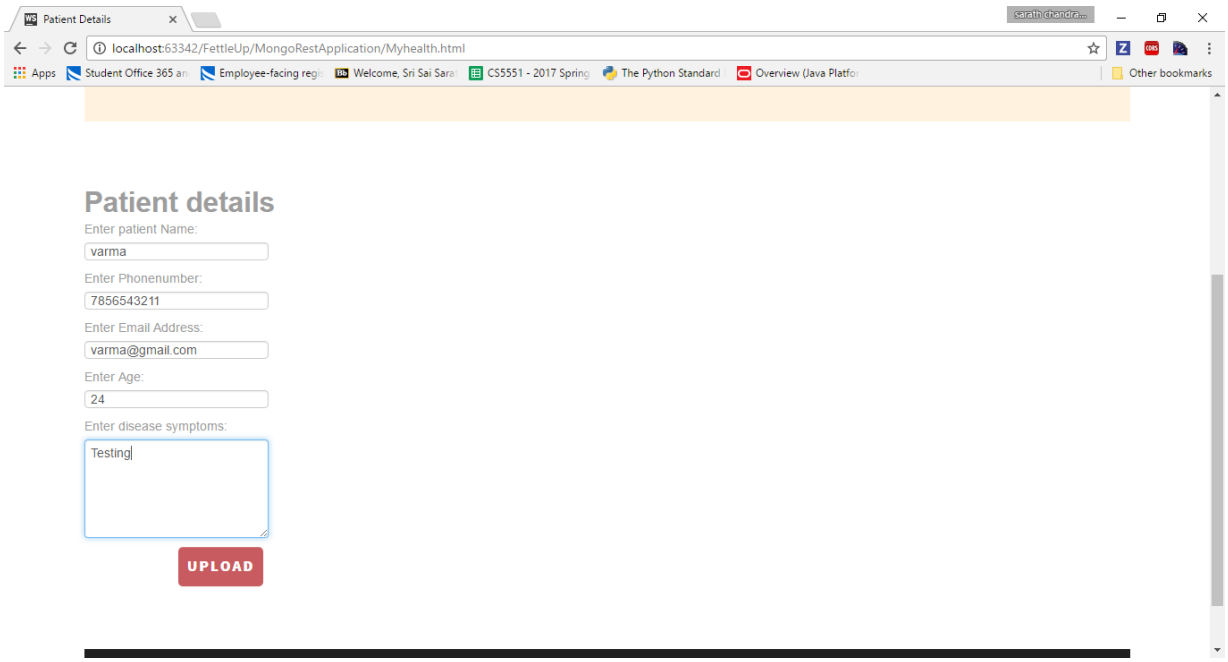

If the patient click on the upload button then he will be redirected to home page and the details are uploaded in the db.

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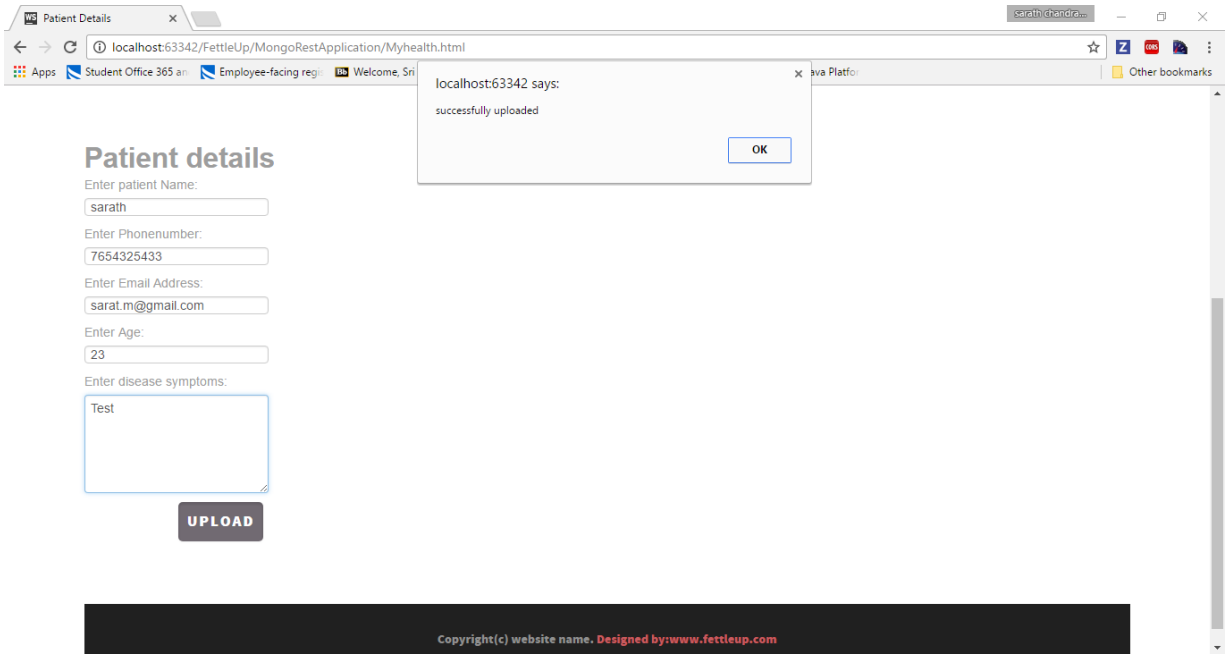
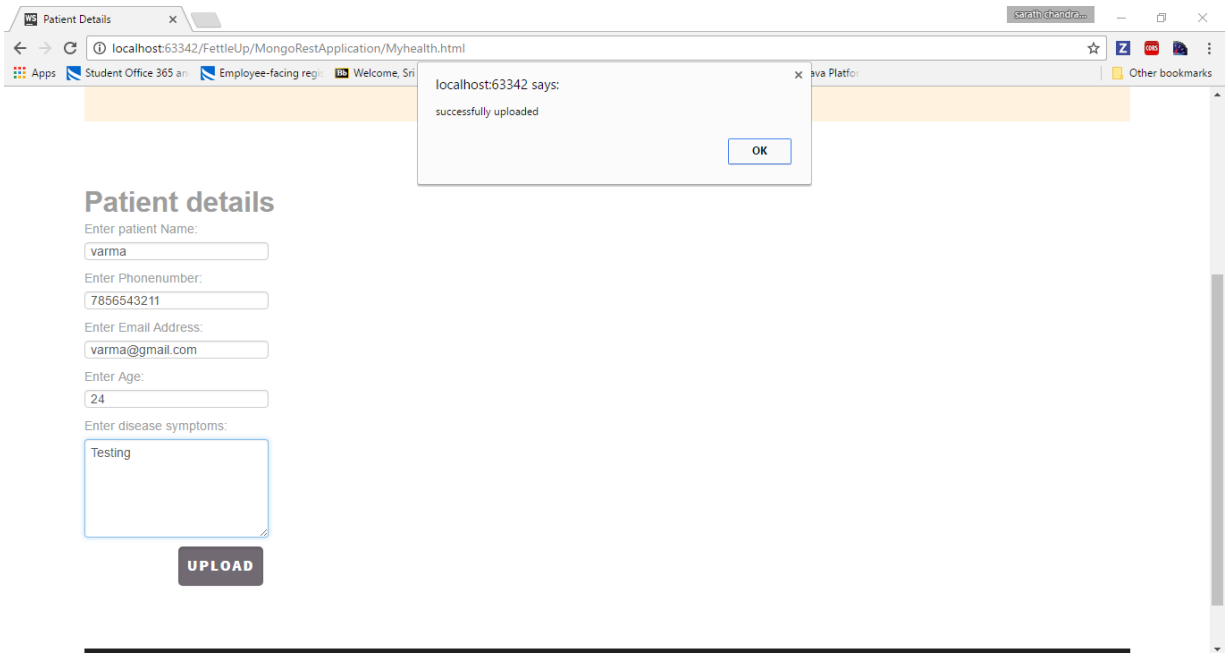

Patient Details
localhost:63342/FettleUp/MongoRestApplication/Myhealth.html
localhost:63342 says:
successfully uploaded
OK
Patient details
Enter patient Name:
sarath
Enter Phonenumber:
7654325433
Enter Email Address:
sarat.m@gmail.com
Enter Age:
23
Enter disease symptoms:
Test
UPLOAD
Copyright(c) website name. Designed by:www.fettleup.com


Patient Details
localhost:63342/FettleUp/MongoRestApplication/Myhealth.html
localhost:63342 says:
successfully uploaded
OK
Patient details
Enter patient Name:
varma
Enter Phonenumber:
7856543211
Enter Email Address:
varma@gmail.com
Enter Age:
24
Enter disease symptoms:
Testing
UPLOAD

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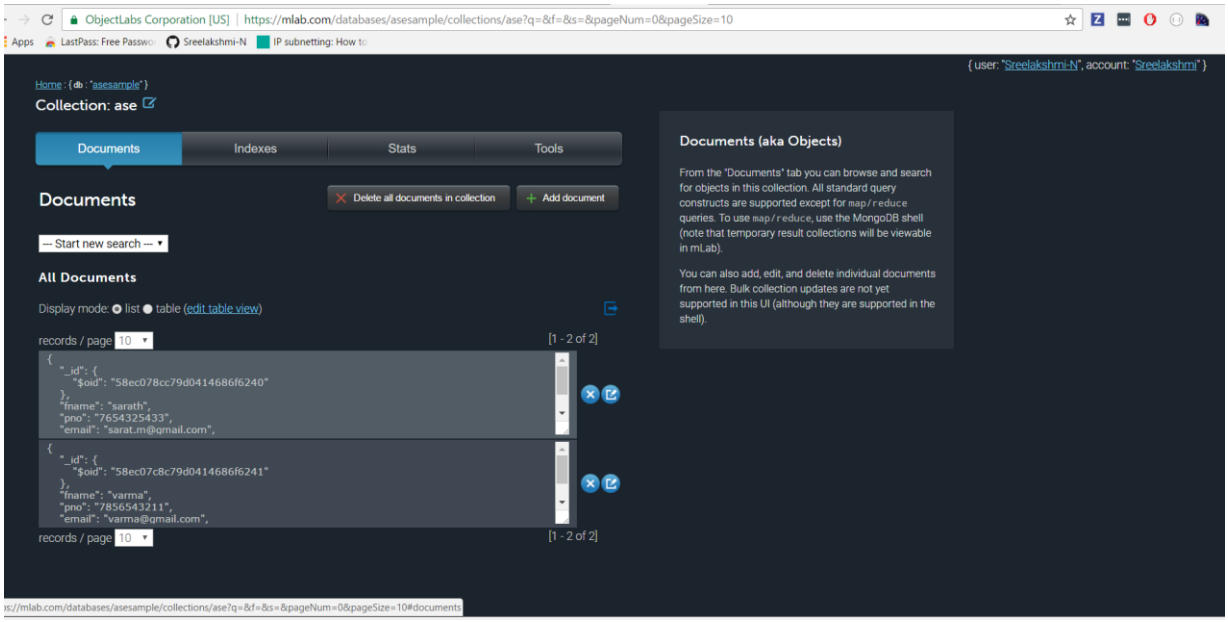
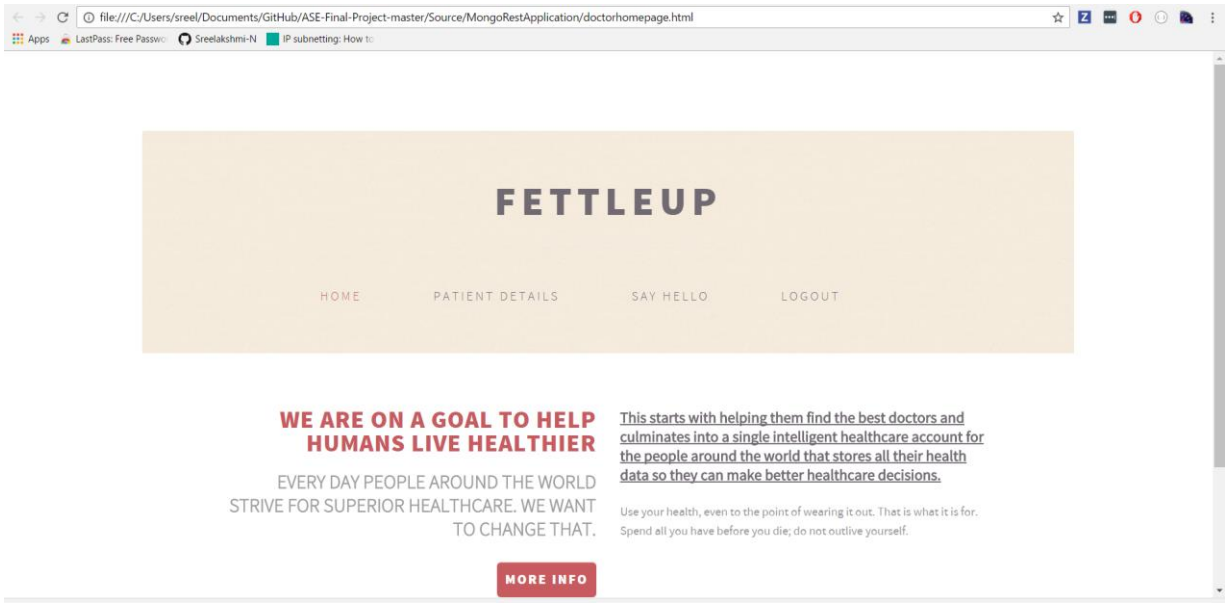
When the user clicks on the upload button the details are stored in the mongodb.



The below screenshot shows the home page for the doctor where he there are tabs like patient details, say hello.



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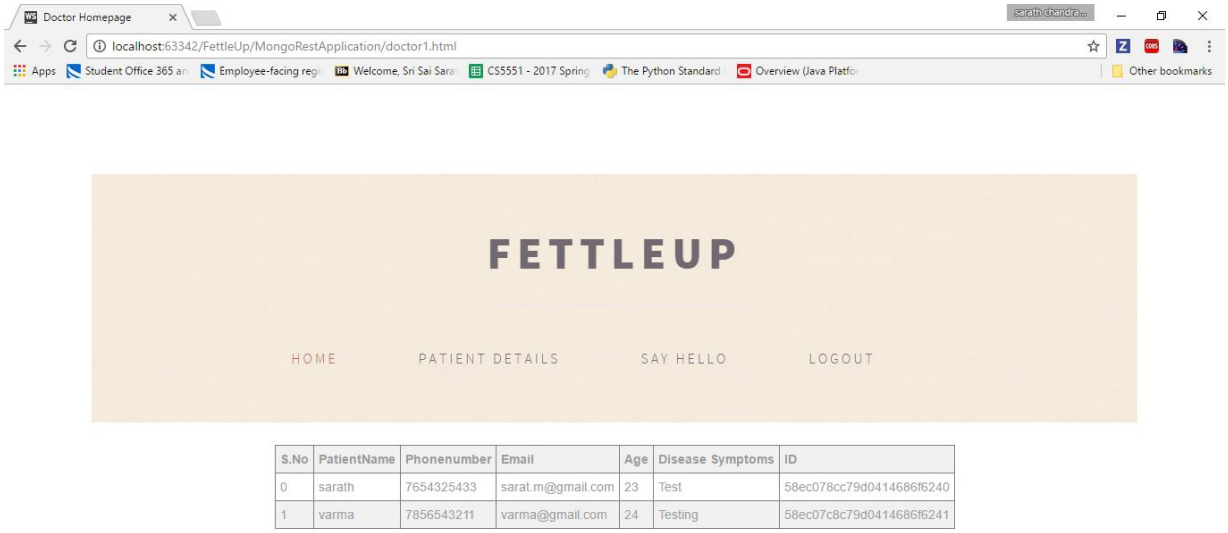
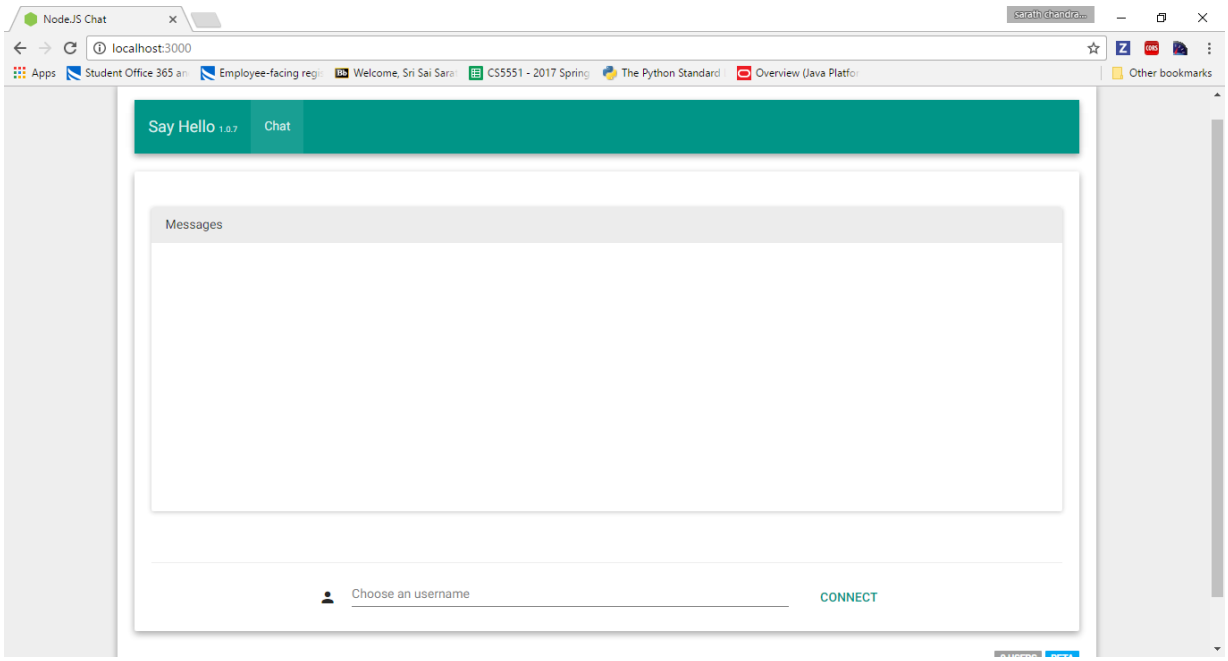
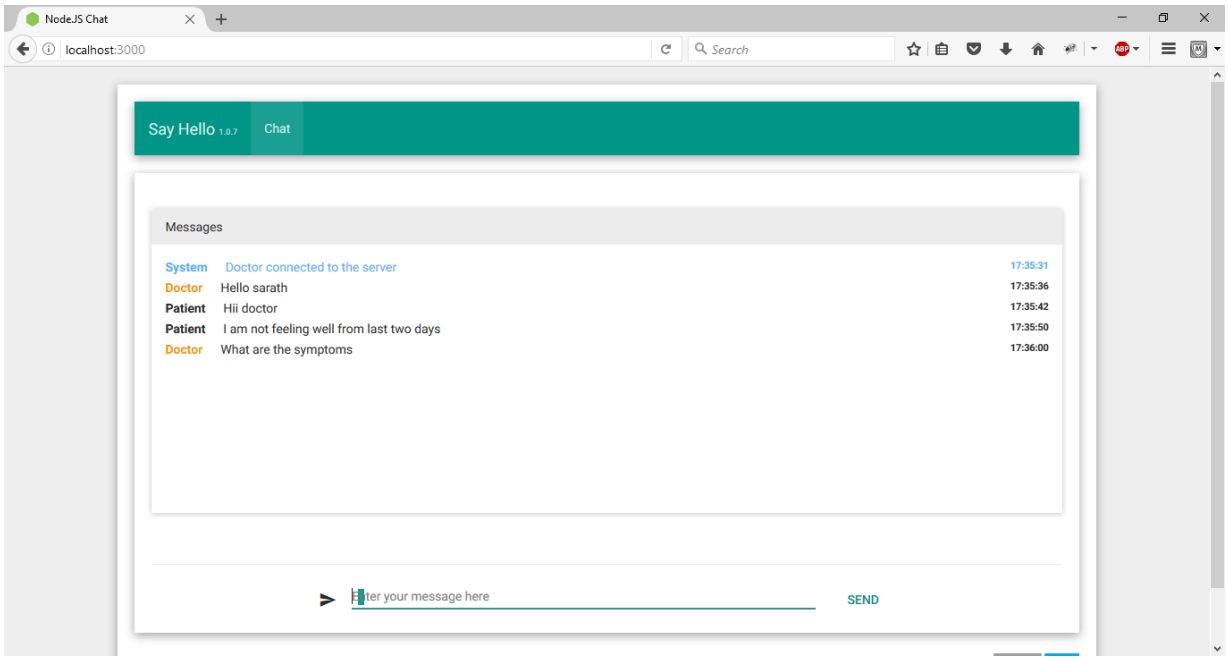
When the user clicks on the patient details tab he can retrieve the patient health condition.

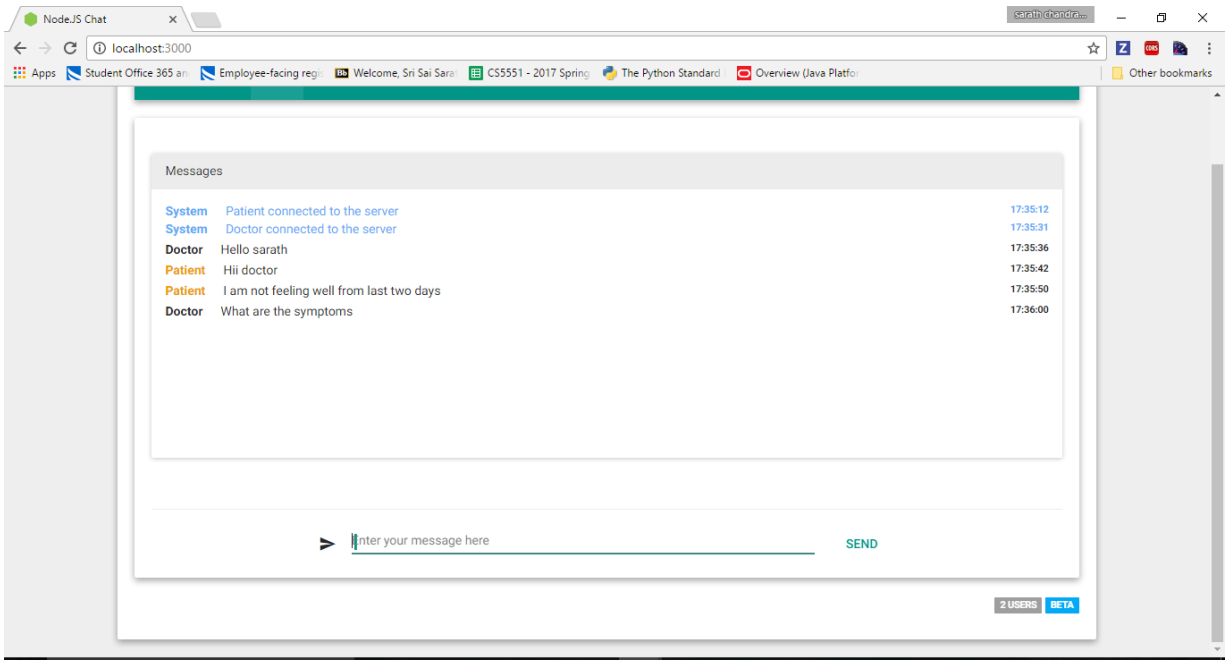


S.No	PatientName	Phonenumber	Email	Age	Disease Symptoms	ID
0	sarath	7654325433	sarat.m@gmail.com	23	Test	58ec078cc79d0414686f6240
1	varma	7856543211	varma@gmail.com	24	Testing	58ec07c8c79d0414686f6241

When the doctor and patient clicks on the say hello tab in their respective homepage tabs they can able to chat. This can be done by running the node.js server.



- 



Github Wiki Page

The github wiki page URL for the screenshots and the process flow is updated in the following link

- https://github.com/SaratM34/ASE-Final-Project/wiki/Project-Increment-3

6. Project Management

Implementation Status Report

Technologies Used

We have collaborated various technologies in the development of the project and in building the application. Some of them are,

- HTML5
- CSS3
- Angular JS
- JavaScript
- MongoDB
- Node.js

Work Completed

The completed tasks in this increment are,

- Design and base layout of the tabs in the Home Page,
- Implemented MongoDB to store and retrieve details of the patient,
- Integrated chat application between patient and doctor,
- Architecture and flow of the application is defined,
- API's are successfully integrated in the application.

Responsibility and Time Taken for Increment 3

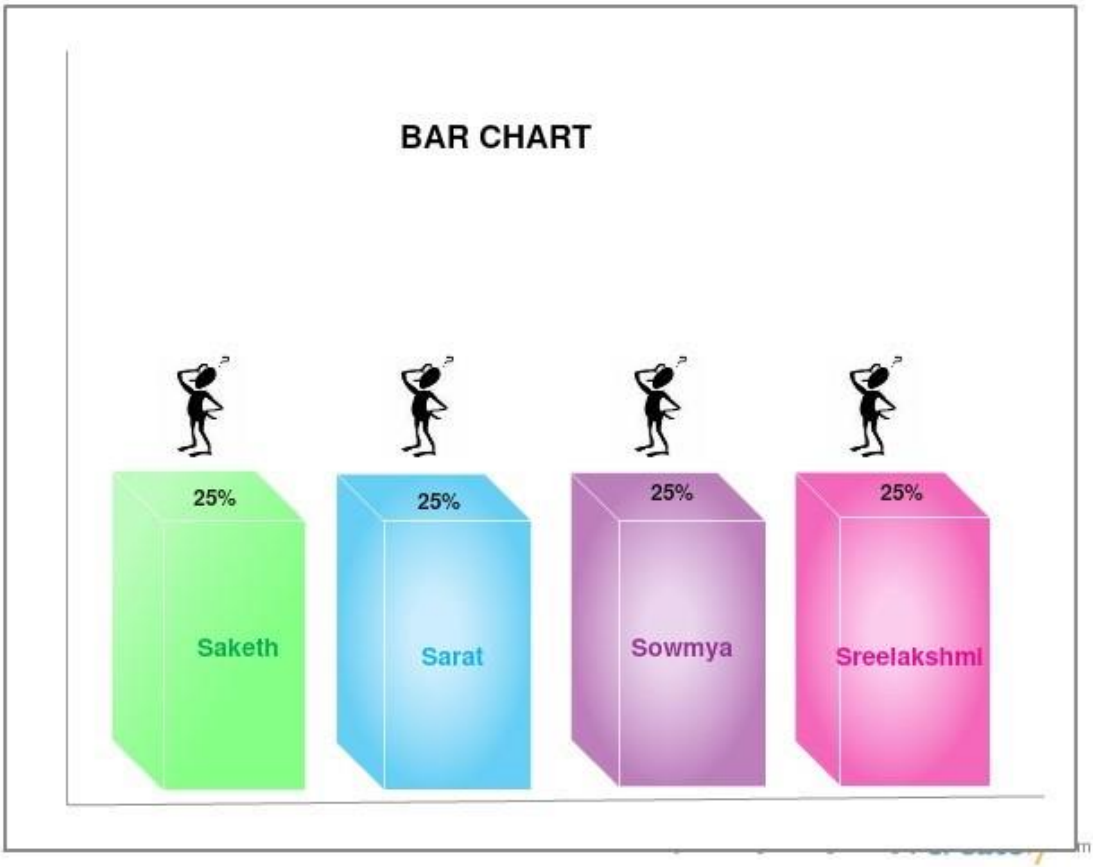
- Home Page for Doctor: Sarat 1/2 hr, Saketh 1/2 hr.
- My Health Page: Sowmya 1/2 hr, Sreelakshmi 1/2 hr.
- Design Elements: Sarat 1/2 hr, Saketh 1/2 hr.
- Implemented MongoDB: Sowmya 1 hr, Sree Lakshmi 1 hr.
- Implemented chat Application: Sarat 1/2 hr, Saketh 1/2 hr.
- Wireframes: Saketh 1/2 hr, Sarat 1/2 hr.
- Integrating Pages: Saketh 1/2 hr, Sarat 1/2 hr.

- User Stories: Sree Lakshmi 1 hr.
- Unit Test cases: Sowmya 1hr.
- Project Increment Report: Sowmya 1/2 hr, Sreelakshmi 1/2 hr, Sarat 1/2 hr, Saketh 1/2 hr.

Contributors

- Saketh Garuda- **25%**
- Mudunuri Sri Sai Sarat Chandra Varma- **25%**
- Yalamanchili Sowmya- **25%**
- Nandanamudi Sreelakshmi- **25%**

Below is the bar graph that represents contribution of each person in the team towards project,



Work in progress:

Description:

For the next project report we are planning to implement speech to text feature for chat application and also we will integrate all pages for doctor and patient.

SNO	Team Member Name	Task to be done	Status
1	Saketh	Need to implement text to speech for the chat application and to integrate all individual parts of the application	Yet to be start
2	Sarat	Need to implement text to speech for the chat application and to integrate all individual parts of the application	Yet to be start
3	Sowmya	Need to implement text to speech for the chat application and to integrate all individual parts of the application	Yet to be start
4	Sreelakshmi	Need to implement text to speech for the chat application and to integrate all individual parts of the application	Yet to be start

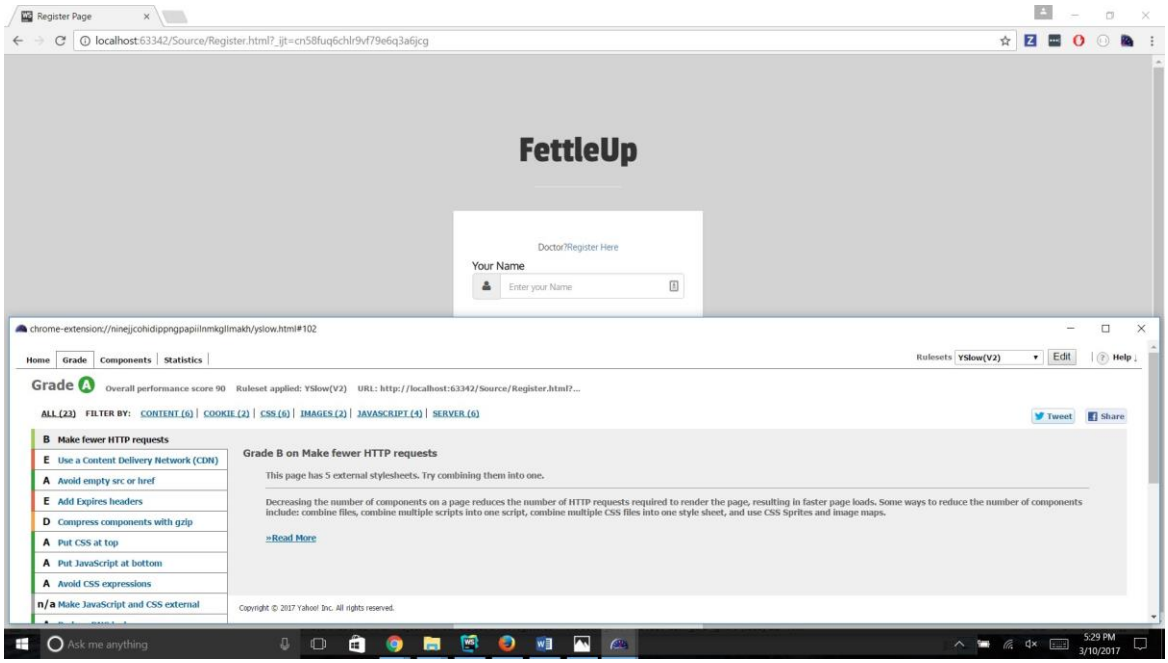
Unit Testing

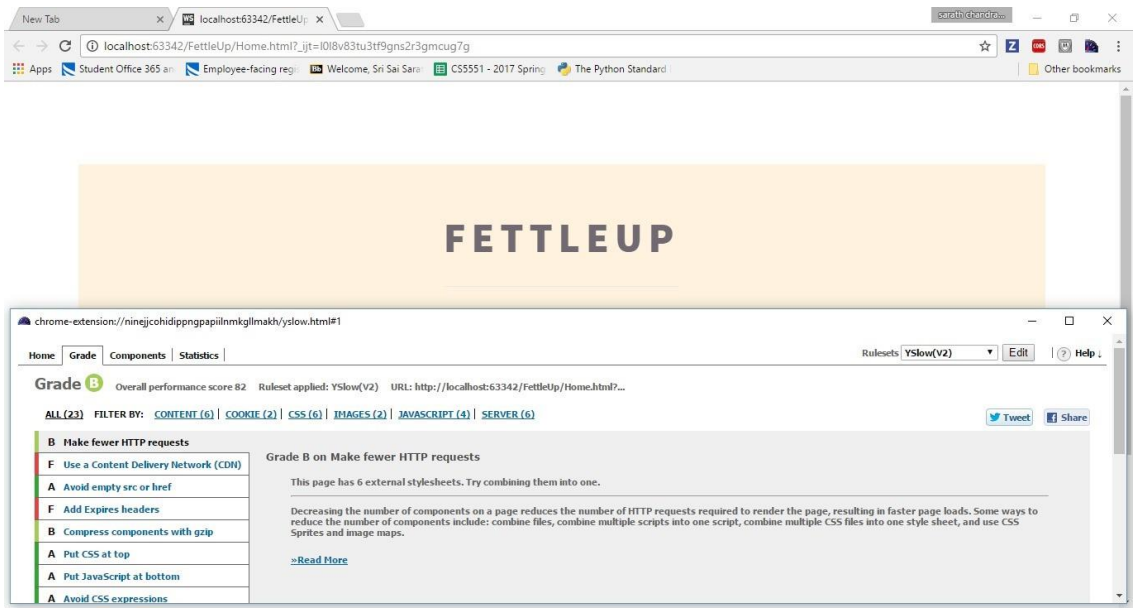
Test cases for Login and Sign Up Pages

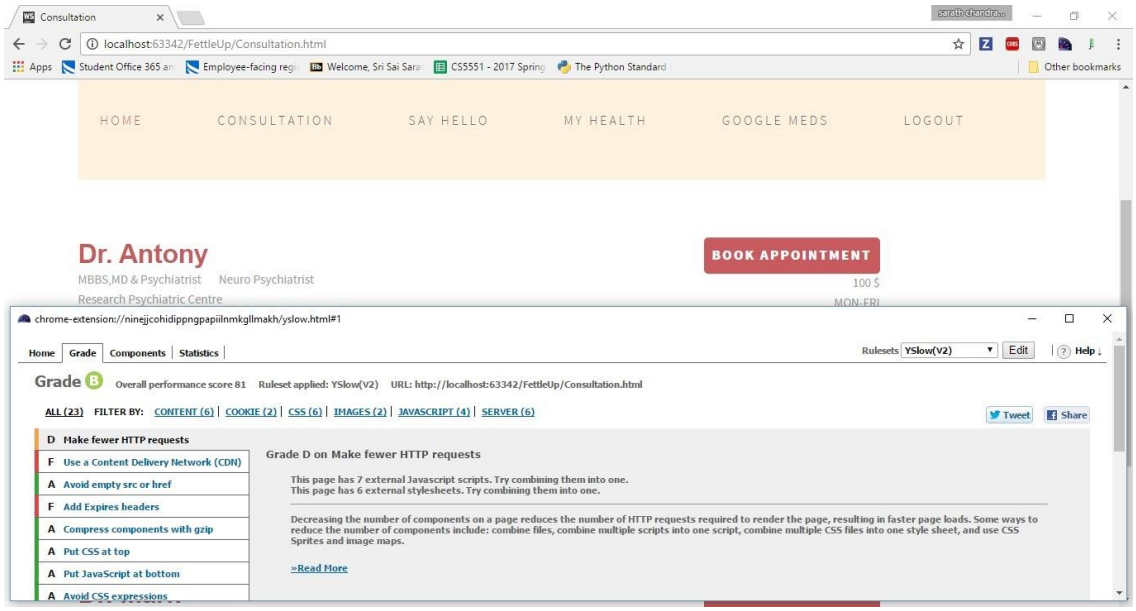
Case	Test Case Description	Expected Result	Actual Result	Result
Login	Invalid Username and Invalid Password	Error Message should pop up, stating that invalid credentials and Re-enter valid credentials.	Error Message should pop up, stating that invalid credentials and Re-enter valid credentials.	Pass
Login	Invalid Username and Valid Password	Error Message should pop up, stating that	Error Message should pop up, stating that	Pass
		invalid credentials and Re-enter valid credentials.	invalid credentials and Re-enter valid credentials.	
Login	Valid Username and Invalid Password	Error Message should pop up, stating that invalid credentials and Re-enter valid credentials.	Error Message should pop up, stating that invalid credentials and Re-enter valid credentials.	Pass
Login	Valid Username and Valid Password	Re-direct to Home Page.	Re-direct to Home Page.	Pass
Signup	Must satisfy email ID format	Error Message is please enter a valid email ID.	Error Message is please enter a valid email ID.	Pass

Signup	Satisfy password length to be greater than 8	Error Message is please enter a valid password.	Error Message is please enter a valid password.	Pass
Signup	Password and confirm password fields must match	Error Message is passwords are not same.	Error Message is passwords are not same.	Pass
Consultation tab in Home Page	Should navigate to doctor's information page	Page should redirect successfully	Page should redirect successfully	Pass
Booking Appointment in Consultation tab	Can book an appointment with a doctor	User can book an appointment successfully	User can book an appointment successfully	Pass
Say Hello in Home Page	Navigate to chat application page where user or doctor can chat	The speech input will successfully converts to text	The speech input will successfully converts to text	Pass
GoogleMeds in Home Page	Navigate to google maps where we can see the nearby pharmacies	Must show the location of nearby pharmacies accurately	Must show the location of nearby pharmacies accurately	Pass
Myhealth page	Must satisfy email ID format	Error Message is please enter a valid email ID.	Error Message is please enter a valid email ID.	Pass
Myhealth page	Must satisfy phonenumber ID format	Error Message is please enter a valid phone number.	Error Message is please enter a valid phone number.	Pass
Myhealth page	Satisfy age length to be limited to 2	Error Message is please enter a valid age.	Error Message is please enter a valid age.	Pass

Our entire application got a grading of ‘A’ when we tested using YSlow extension. Here are some screenshots of our application,






Consultation
localhost:63342/FettleUp/Consultation.html
HOME
CONSULTATION
SAY HELLO
MY HEALTH
GOOGLE MEDS
LOGOUT
Dr. Antony
MBBS,MD & Psychiatrist Neuro Psychiatrist
Research Psychiatric Centre
BOOK APPOINTMENT
100 $
MON-FRI
chrome-extension://ninejjcohidippngpapiilnmkgllmakh/yslow.html#1
Home Grade Components Statistics
Rulesets YSlow(V2) Edit Help
Grade B Overall performance score 81 Ruleset applied: YSlow(V2) URL: http://localhost:63342/FettleUp/Consultation.html
ALL (23) FILTER BY: CONTENT (6) | COOKIE (2) | CSS (6) | IMAGES (2) | JAVASCRIPT (4) | SERVER (6)
Tweet Share
D Make fewer HTTP requests
F Use a Content Delivery Network (CDN)
A Avoid empty src or href
F Add Expires headers
A Compress components with gzip
A Put CSS at top
A Put JavaScript at bottom
A Avoid CSS expressions
Grade D on Make fewer HTTP requests
This page has 7 external Javascript scripts. Try combining them into one.
This page has 6 external stylesheets. Try combining them into one.
Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce the number of components include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.
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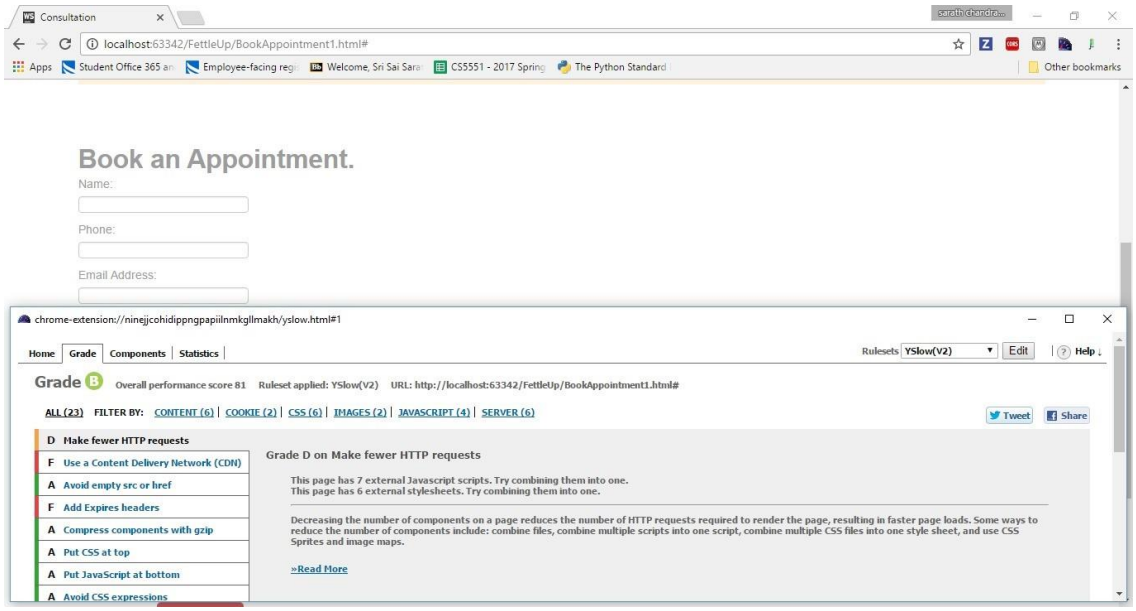
Consultation
localhost:63342/FettleUp/BookAppointment1.html#
Book an Appointment.
Name:
Phone:
Email Address:
chrome-extension://ninejjcohidippngpapiilnmkgllmakh/yslow.html#1
Home Grade Components Statistics
Rulesets YSlow(V2) Edit Help
Grade B Overall performance score 81 Ruleset applied: YSlow(V2) URL: http://localhost:63342/FettleUp/BookAppointment1.html#
ALL (23) FILTER BY: CONTENT (6) | COOKIE (2) | CSS (6) | IMAGES (2) | JAVASCRIPT (4) | SERVER (6)
Tweet Share
D Make fewer HTTP requests
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A Put JavaScript at bottom
A Avoid CSS expressions
Grade D on Make fewer HTTP requests
This page has 7 external Javascript scripts. Try combining them into one.
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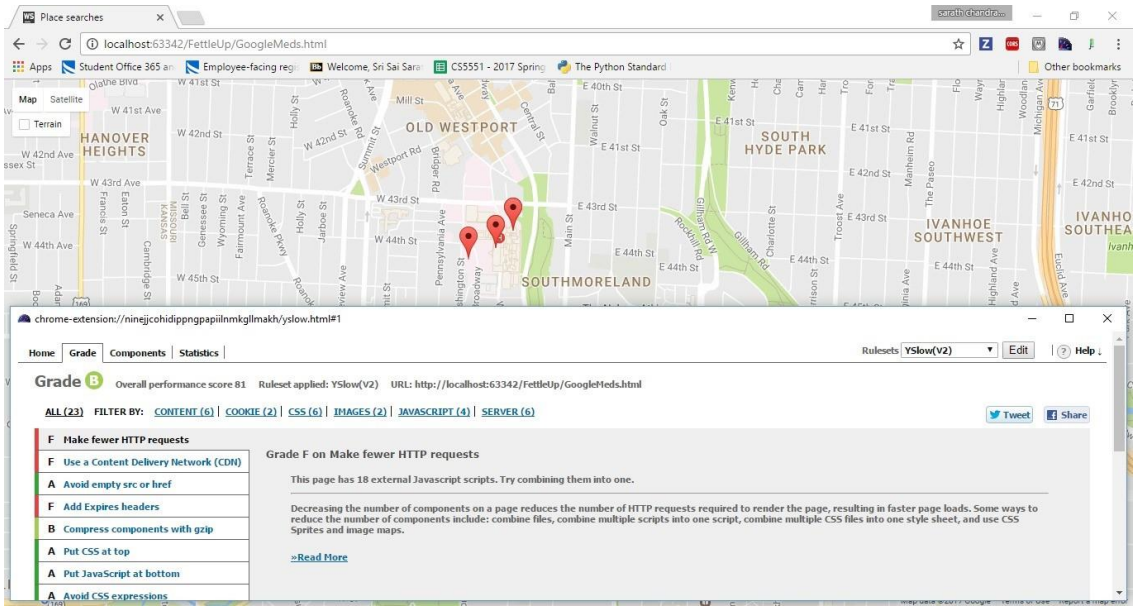
Place searches
localhost:63342/FettleUp/GoogleMeds.html
Map
Satellite
Terrain
HANOVER HEIGHTS
OLD WESTPORT
SOUTH HYDE PARK
IVANHOE SOUTHWEST
SOUTHMORELAND
chrome-extension://ninejjcohidippngpapiilnmkgllmakh/yslow.html#1
Home
Grade
Components
Statistics
Rulesets
YSlow(V2)
Edit
Help
Grade B
Overall performance score 81
Ruleset applied: YSlow(V2)
URL: http://localhost:63342/FettleUp/GoogleMeds.html
ALL (23)
FILTER BY:
CONTENT (6)
COOKIE (2)
CSS (6)
IMAGES (2)
JAVASCRIPT (4)
SERVER (6)
Tweet
Share
F Make fewer HTTP requests
F Use a Content Delivery Network (CDN)
A Avoid empty src or href
F Add Expires headers
B Compress components with gzip
A Put CSS at top
A Put JavaScript at bottom
A Avoid CSS expressions
Grade F on Make fewer HTTP requests
This page has 18 external Javascript scripts. Try combining them into one.
Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce the number of components include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.
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FETTLEUP
HOME
CONSULTATION
SAY HELLO
MY HEALTH
GOOGLE MEDS
LOGOUT
chrome-extension://ninejjcohidippngpapiilnmkgllmakh/yslow.html#1
Home
Grade
Components
Statistics
Grade C
Overall performance score 70
Ruleset applied: YSlow(V2)
URL: https://umkc-csm.symplicity.com/students/index.php?...
ALL (23)
FILTER BY:
CONTENT (6)
COOKIE (2)
CSS (6)
IMAGES (2)
JAVASCRIPT (4)
SERVER (6)
F Make fewer HTTP requests
F Use a Content Delivery Network (CDN)
A Avoid empty src or href
F Add Expires headers
B Compress components with gzip
A Put CSS at top
F Put JavaScript at bottom
A Avoid CSS expressions
n/a Make JavaScript and CSS external
Grade F on Make fewer HTTP requests
This page has 75 external Javascript scripts. Try combining them into one.
This page has 18 external stylesheets. Try combining them into one.
Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.
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7. Bibliography

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2. www.bootstrap.com
3. www.bootsnipp.com
4. www.angularjs.org
5. www.developers.facebook.com
6. www.console.developers.google.com
7. https://developers.google.com/maps/
8. www.developers.facebook.com
9. www.mlab.com
10. https://cloud.google.com/speech/