

# AirLoft website report

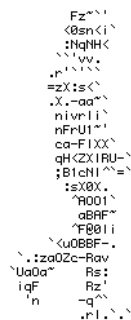
## Part a: Design(user manual and high-level summery)

### About the main page and how to get started

Input <https://frozen-ocean-17990.herokuapp.com/> in the address bar in the browser, by doing this, the browser will show the main page of our website. The website will first require user's location, after confirm the request, the browser will start loading the information of the main page. A walking man animation will show up while the browser is loading the main page information. If the user chose to decline the location request from the browser, the animation of walking man will be play until user refresh the page.

The website is mainly written in Angular.js 1.4 as a **single page application**, thus the first loading takes time, since it needs to download all the front-end template to user's browser and the first time data fetching. This architecture has pros and cons, yes, the first time loading may be longer than usual web, but the upcoming clicks or redirection will be amazingly fast, since all view templates have been cached at the user's browser, and it only sends the request to get the data under some specific pages. And since it is written in Angular, I also adopt the **MVVM** idea to implement this website.

Searching for nearby missions...



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The center of main page will display the the map show users current location and events that are recommend to the users base on the location of the event; only the event that is close to the user will be recommend to user. The rating and poster of the event will showed up under each event's title. Also beside the title of the event, the distance between your current location and the the location of the event.

On the top of the main page, There is a navigation bar. The navigation bar will have three clickable items; AirLoft logo, About and sign in. The

navigation bar will always following user's view of the page.

Under the title of the main page, there is a search bar for user to search to filter out the events.

User can go back to the main page at any page of the website by click on the Logo "AirLoft" on the navigation bar.



### To view detail about a event post

AirLoft Share your insights with the world!

AirLoft Share your insights with the world!

Filter results

Mongodb Pro ★★★★★

Shunzhe Yu

3.8km

Badminton Pro ★★★★★

Prince Yu

3.8km

Super Bowl ★★★★★

Hancock

16.2km

You are here!



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To view the detail of a event post, user should be at the main page of the website first. By click on the title of the event, the browser will lead user to a new page call mission that display all the information of the event. The top of the page will display the title of the event with the name of the event initiator. The rating of the event will be display under the title, in terms of the stars. There are there blocks of information; timetable, goals and reviews. The timetable section is titled with "Timetable", display the date, starting time and the ending time of the event. The goals section is titled with "Our Goals". This section is for displaying the information about what this event will accomplish, and a little description of the event. The review section is titled with "Reviews". This section will display the commands and the

AirLoft

About

Hongjian Huang

## Badminton Pro Prince Yu

★★★★☆

Prince Yu

Timetable

Tue 8:00 pm - 10:00 pm

Fri 8:00 pm - 10:00 pm

Our Goals

✓ running

Fire up your body

✓ badminton

Learn how to serve and slash

Badminton Pro is on AirLoft because someone wants to share their habits and interesting things with you.

If you've been and you like it - or even if you don't - please leave a review to help other people just like you.

Location Map

Customer reviews

Add review

★★★★☆

Allen Vander Woodsen

29 March 2016

It was extremely noisy in there. It's a trendy place I guess, so there were lots of people there, and plenty more sitting at the bar waiting to be seated (likely including the people who's table we stole by not having reservations...) so I know what type of place it is, so I'd likely try to avoid going there on a Saturday night around 7pm because it's gonna hurt my ears. But the food was really good, and the star of the night was probably that prawn appetizer I mention above.

★★★★☆

Sabo

29 March 2016

## Filter results

AirLoft

About

Hongjian Huang

## AirLoft Share your insights with the world!

Filter results

Mongodb Pro ★★★★★

Shunzhe Yu

3.6km

Badminton Pro ★★★★★

Prince Yu

3.6km

Super Bowl ★★★★★

Hancock

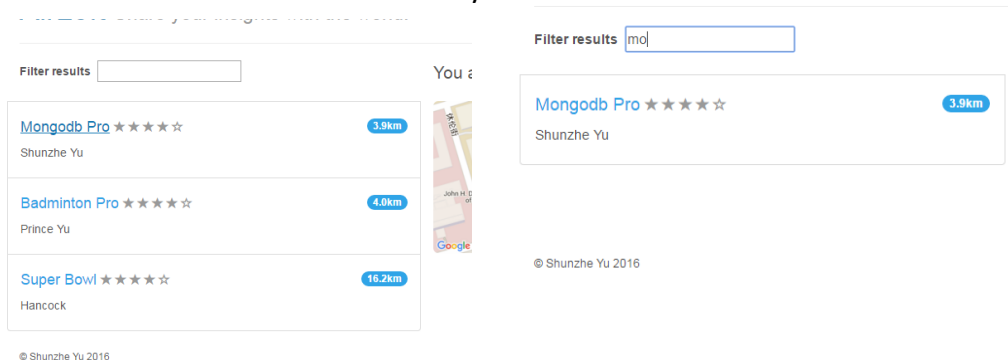
15.9km

You are here!

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In order to use this function, user have to be at the main page of the website. At the main page, there will be a search bar with the label “Filter results”.

The blank space beside the label is for user to input the key words. In order to start typing, user have to click on the blank space first, when the cursor start to flash, user can start input the key word. By type in the key words, the website will filter out the events that dose not contain the key word.



(Before)

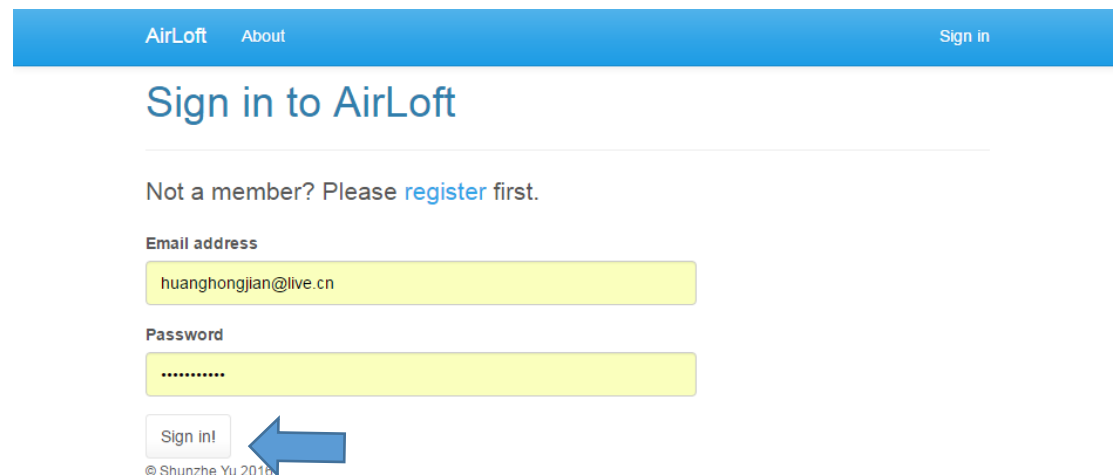
(After)

## Log in, register and log out

Click on the “Sign in” button, the website will lead user to a new page call login page.

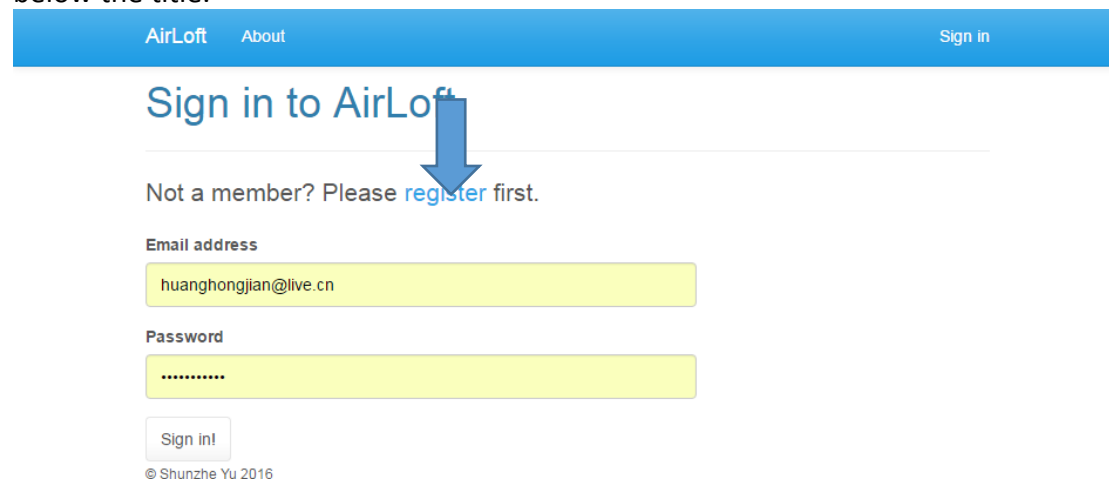


On this page, users can log in as a member or register to become a member. If the user already have account, he/she can log in with their account and pass word. The blank space under the “Email address” label is for users to input their account, in this website, every account should be a email address. The blank that is under the label “Password” is there for users to input the password of their account. By typing the correct account and password, user can click on the “Sign In!” button to log in to the website.



If the account and passwords are match, the website will turn to the main page, with the “Sign in” button on the navigation bar change to the user’s name, this means the log in is success. If the password is not match with the email account, a warning message saying “Incorrect password”. If the email address is not in the database, a warning message saying “Incorrect username”. If the user input a user name that is not in the format of an email address, the page will show a warning message remaining user that he/she need to input an email address.

To register a new account, users can click on the blue color word “register” just below the title.



AirLoft About Sign in

## Sign in to AirLoft

Not a member? Please [register](#) first.

Email address

huanghongjian@live.cn

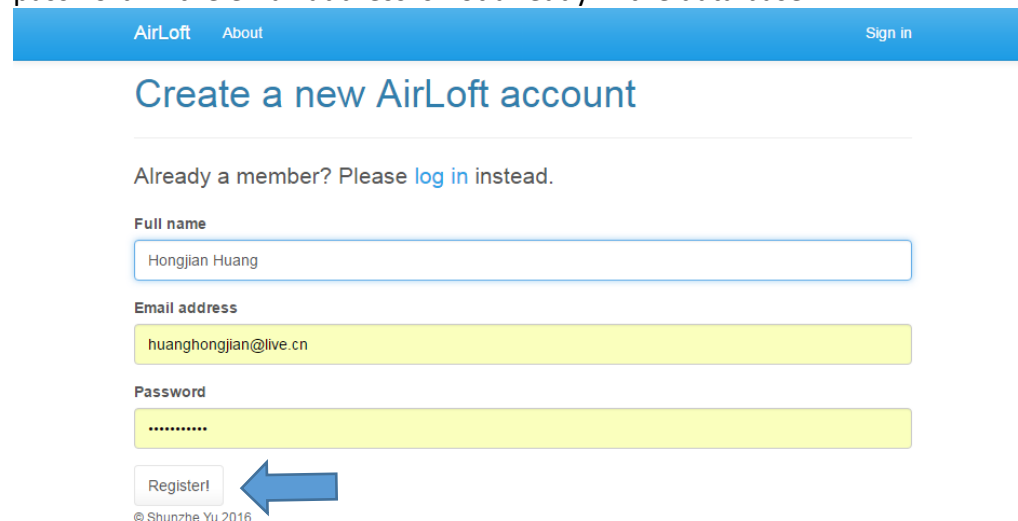
Password

\*\*\*\*\*

Sign in!

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The website will redirect to a new page call “register page” with title Create a new AirLoft account. This page is similar to the login page, with a additional input field above the “Email address” label, call “Name”. To register and become a member, user have to input their name, email address and password in the correct input field. The name should be input into the input field that label with “Full name”, the name should be more than 5 but less than 20 characters, email should be input into the input field that label with “Email address”, with correct email format, password should be input into the field that label with “Password”, password can be any combination of characters or numbers. After filling out all there of the input field, user can submit the register request by click the register button below the password. If the email address is not already in the data base.



AirLoft About Sign in

## Create a new AirLoft account

Already a member? Please [log in](#) instead.

Full name

Hongjian Huang

Email address

huanghongjian@live.cn

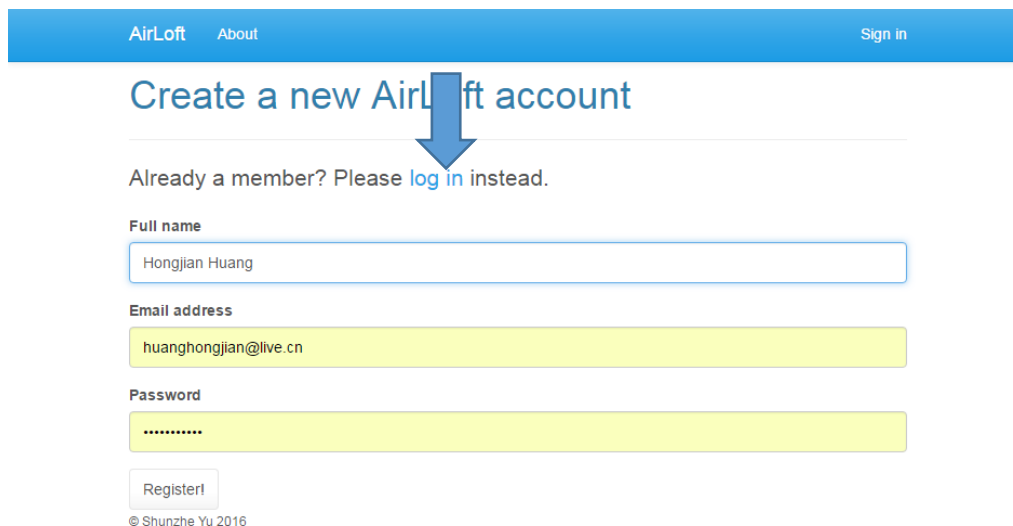
Password

\*\*\*\*\*

Register!

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If user wants to go back to log in page for any reason, just click on the high light word “log in” to accomplish.



AirLoft About Sign in

## Create a new AirLoft account

Already a member? Please [log in](#) instead.

Full name

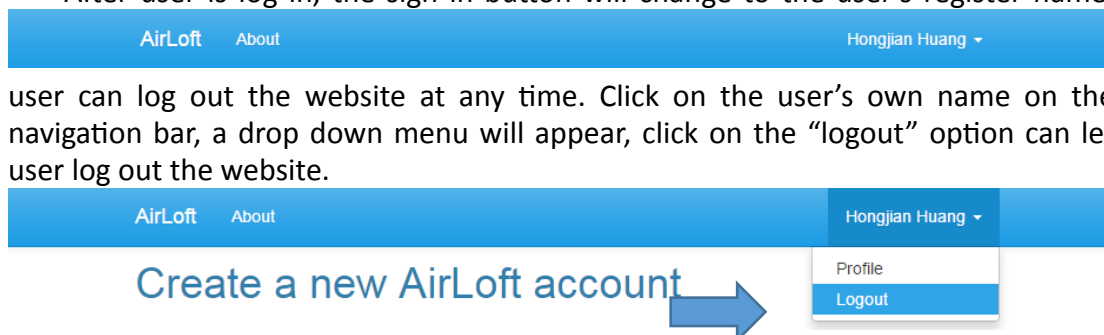
Email address

Password

[Register!](#)

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After user is log in, the sign in button will change to the user's register name.



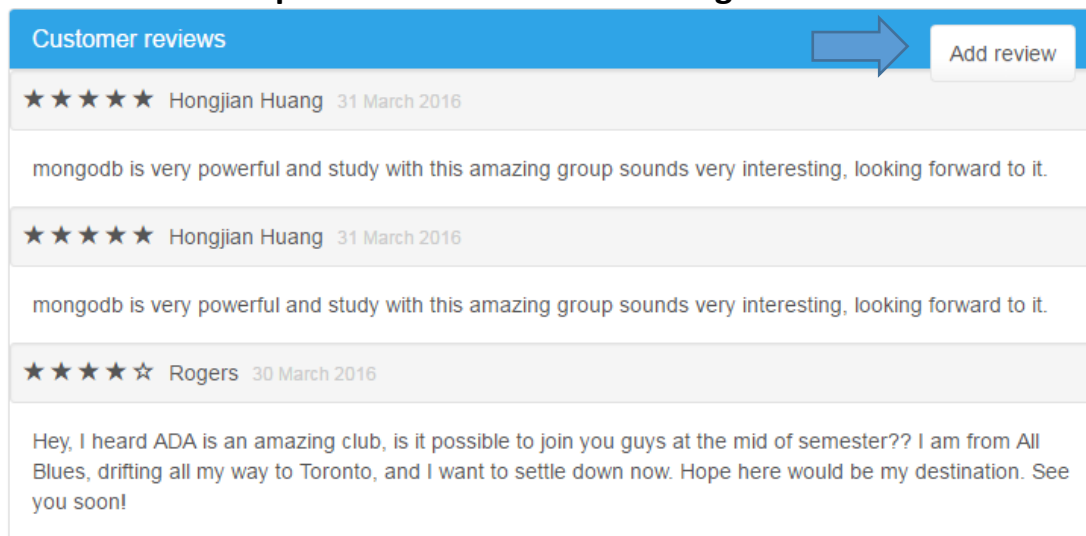
AirLoft About Hongjian Huang ▾

user can log out the website at any time. Click on the user's own name on the navigation bar, a drop down menu will appear, click on the "logout" option can let user log out the website.

## Create a new AirLoft account

Profile  
Logout

### Add review under posted event and leave rating



Customer reviews Add review

★★★★★ Hongjian Huang 31 March 2016

mongodb is very powerful and study with this amazing group sounds very interesting, looking forward to it.

★★★★★ Hongjian Huang 31 March 2016

mongodb is very powerful and study with this amazing group sounds very interesting, looking forward to it.

★★★★☆ Rogers 30 March 2016

Hey, I heard ADA is an amazing club, is it possible to join you guys at the mid of semester?? I am from All Blues, drifting all my way to Toronto, and I want to settle down now. Hope here would be my destination. See you soon!

User can only adding review to a event or mission while he or she is at a mission page of a event or mission. At the review section of the page, there is a "add review" button. When click on the review button a dialog window will pop out. In this dialog window, user can write review in the input field of this dialog window.

Add your review for “Mongodb Pro ”

Rating

5

Review

This event is perfect

Cancel

Submit review

Users can also rate the event or mission in term of the star, from 1 to 5. Click on the downward arrow beside the “Rating” label, the drag down menu will appear, user can click on the numbers in the drag down menu to set the rating.

Add your review for “Mongodb Pro ”

Rating

5

5  
4  
3  
2  
1

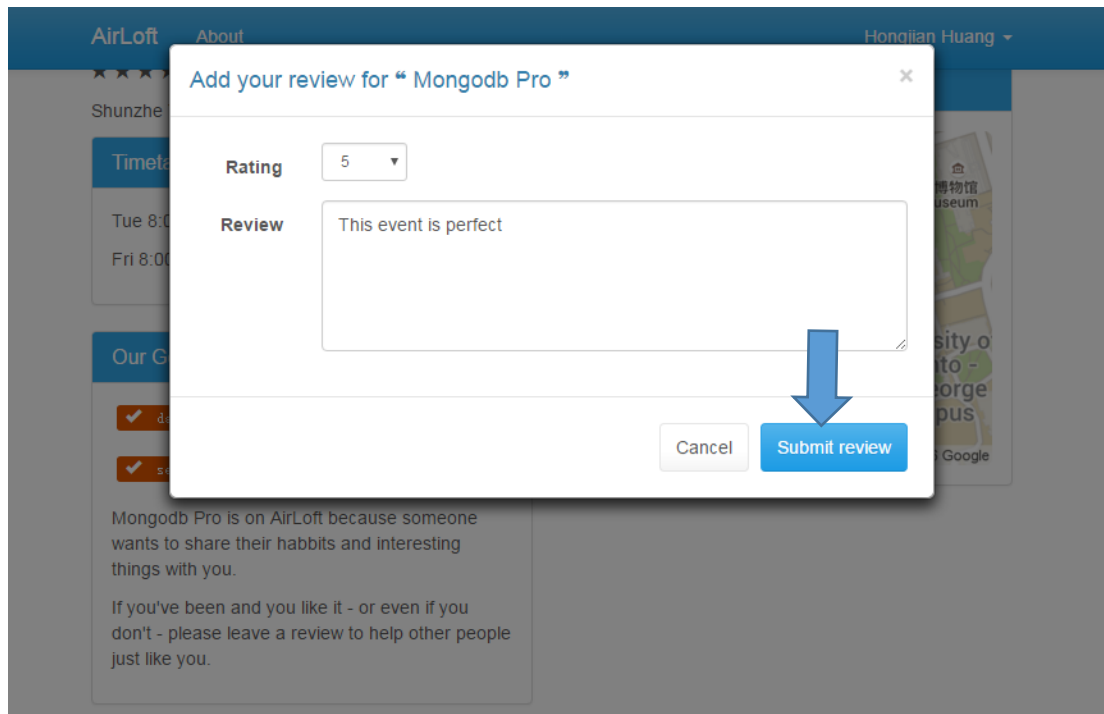
Review

nt is perfect

Cancel

Submit review

User can submit the review by click the “Submit review” button on the dialog window after he or she finish the review.

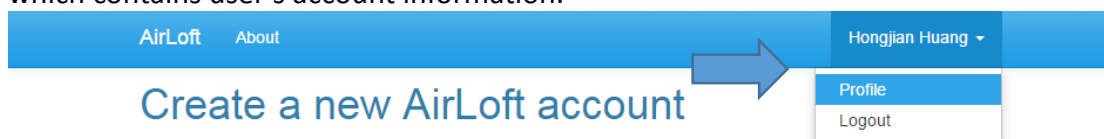


If user choose not to leave a review, they can click the “cancel” button to close the dialog.

## To post a event

## To view the profile

Users can view their own profile only if they are currently log in the website. Click on the user’s own name on the navigation bar, a drop down menu will appeal, click on the “profile ” option, the website will redirect to a new page call “profile”, which contains user’s account information.



## Part b: Security

A important place for web security is how to protect users’ private information, including their account passwords e.t.c, In order to encrypt the password in a much stronger way, we introduce some random salt adding to the password, and then encrypt the composition, and finally store the encrypted hash and random salt into database. And to achieve that, we use the **“crypto”** node module and its **“randomByte”** and **“pdkdf2Sync”** function for creating random salt and encrypted hash.

we also use JWT(Json Web Token) for the server to validate users by utilizing “jsonwebtoken” module. Thus it provides a safer way for user identification and



authentication.

In terms of the place to store the JWT, we choose local storage rather than cookie for the reasons that we are building a single page application, which relies mostly on the client side, not server side. While using cookies mean sending cookies information along with every HTTP requests, and it is not the case for our AirLoft website. Thus one easy way to validate this, is to open “**chrome developer tool**” and go to the “**Resources**” panel and open the “**Local Storage**” option, and after you login in successfully in our website, you can see a JWT being successfully stored in that place.

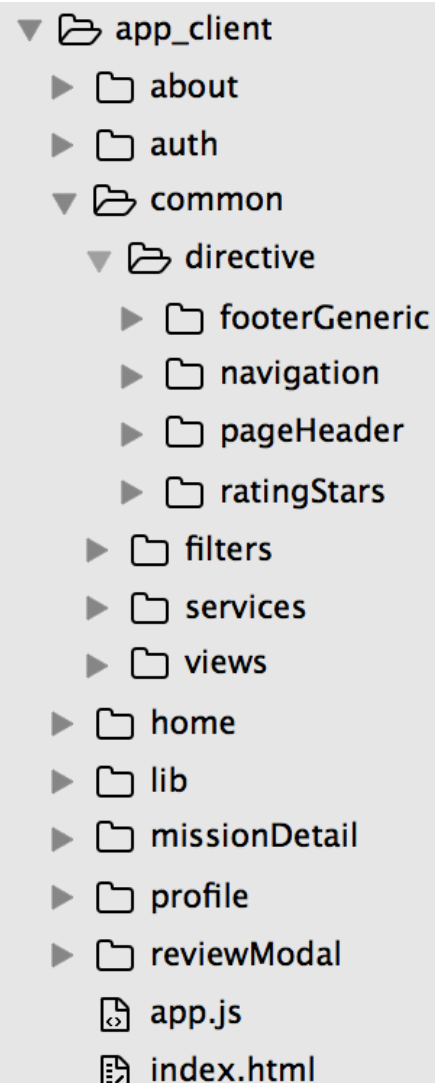
The utilization of JWT and additional encryption allows us to protect the user information in a much better way and facilitate the user authentication procedure where we create the user login function and can be reused in some niches inside front-end angular view templates, for example, we may render different parts of the view template given the status of whether users are logged in and constraint the operations that a non-login user can do inside our website, say, we only allow those logged users to add reviews, which also protects the contents of this website effectively.

## Part c: Performance improved

As stated in part a, this website is mainly written in angular 1.4 as a single page application, which means that after the first loading, the front-end view templates can mostly be cached in browser and for the upcoming page direction, the only thing we may request from the server the JSON data. Thus, by designing the website in this way, we make the website really fast in speed, as you may noticed when you enjoy the website by yourself.

Thus, in the architecture side, instead of choosing a central server side, and making every request to server for view templates or even full http pages, we prefer a client-centered way to separate the view templates and data, and speeds up the procedure for all upcoming user operation in the website.

we modularize most of the front-end components, and use a plug-and-play way to reconstruct every new page. It matters to the performance, since apart from the time spent on requesting and fetching JSON data, the rendering time also takes a huge proportion. As you can see from our project directory:



```
▼ app_client
  ► about
  ► auth
  ▼ common
    ▼ directive
      ► footerGeneric
      ► navigation
      ► pageHeader
      ► ratingStars
    ► filters
    ► services
    ► views
  ► home
  ► lib
  ► missionDetail
  ► profile
  ► reviewModal
  app.js
  index.html
```

The image shows a project directory tree for 'app\_client'. It is a single-page application (SPA) where most components are client-side. The directory structure includes folders for 'about', 'auth', 'common', 'directive', 'filters', 'services', 'views', 'home', 'lib', 'missionDetail', 'profile', and 'reviewModal'. The 'common' folder contains a 'directive' sub-folder with 'footerGeneric', 'navigation', 'pageHeader', and 'ratingStars'. At the bottom are 'app.js' and 'index.html'.

we have several directive code snippets for project reuse, such as footerGeneric, navigation, pageHeader and ratingStars parts, and we can reuse these components in other new pages file whenever we have such needs.

Apart from all this improvement, we only use part of the bootstrap css theme file and some specific library like glyphicon, and we only include them inside our "public/" folder instead of downloading the whole bootstrap css and js files from their official website, and it helps to shrink the size of js and css files we need to download from the server, which also contributes to the fast speed of our website.

## **Part d: Demo at Youtube**

[https://www.youtube.com/watch?v=mpkWh4\\_-L\\_E](https://www.youtube.com/watch?v=mpkWh4_-L_E)

## **Part e: Some interesting stuff we learned**

[i] A truly responsive website that can adapt to the mobile smoothly using bootstrap. I mean, it is not hard to use bootstrap, but the moment of seeing your website automatically adapt to the small screen amazed me.

[ii] Geolocation API from HTML5. It is one of the key features that this website has compared with others, and it is totally a fun to be able to get your geolocation and visualize it in a neat and elegant way. And next, I planned to add more animation upon the geolocation map and make it a killer feature for this web.

[iii] User experience. Users may expect different things than we programmer do, thus I tested my website hundreds of times with my friends, my sister and my team members to ensure that the website is intuitive to use and play. From the waiting animation to the small shading text to inform you that the website is trying its best to fetching data, we believe these details can impress users and make them really like this web and even introduce it to others.

[iv] I will add a real-time chatting functionality to this website during summer, and hopefully reconstruct it in a native app that can run on a phone and marketing it in app store.

**Hope you enjoy it! Thanks!**