

NUZE

COMP9900 - Information Technology Project

Accommodation Web Portal

Team - Do Not Reply

Hao Fu	z5102511
--------	----------

Junkai Huang	z5148077
--------------	----------

Xiaoran Zhang	z5166697
---------------	----------

Huixian Zhou	z5172461
--------------	----------

Background

New South Wales has become unprecedentedly popular among visitors in Australia and around the world, at the same time a bunch of hosts would like to get paid for sharing their properties for the guests to stay. A simple but practical way to fulfill the need of both guests and hosts, which should be easy to use, simply outlined, and with instant communication is raised as a significance.

Visitors and hosts are bounded by the property, host needs to specify the location, amenities, sleeping arrangements of the property, and photos for visitors to estimate the property. For both hosts and visitors, there are only functions that are critical.

Owing to the need of incrementing visitors to NSW as well as hosts to advertise their properties, we aim to implement a web accommodation portal **NUZE** for both of their sake to more concentrate on the experience and easement in using the website.

Aim

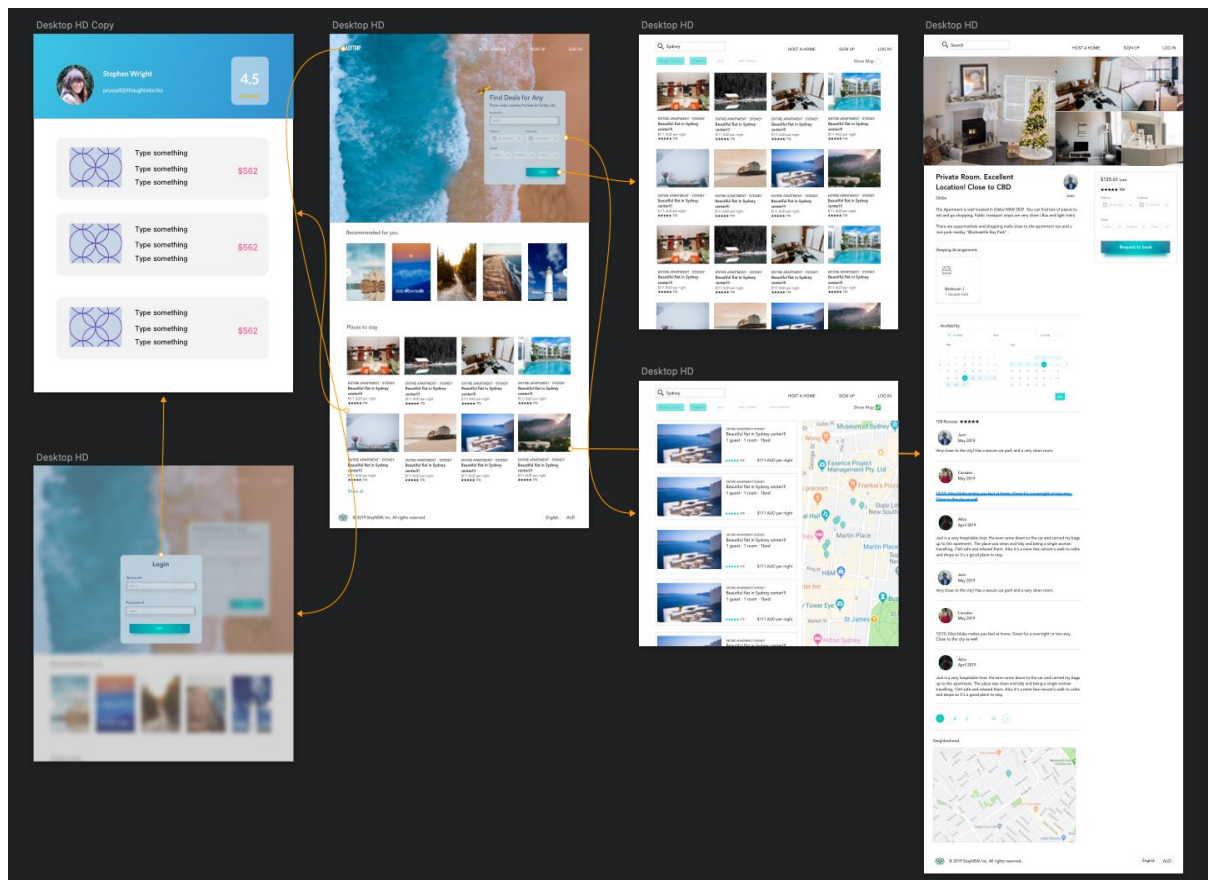
Our aim is to build an accommodation searching and hosting website exclusively for properties and visitors in the area of New South Wales, which providing accurate information and simple feedback for users' convenience.

Many web portals have been on the market, several websites provide abundant while overwhelmed information on each page, which is a waste of time and energy for the users. In order to provide a website exclusively aiming on properties in NSW, we address the following predominant issues:

1. Simple and straightforward search
 - The website will be only aimed on properties in NSW, and the search bar only includes significant information about the visitor to the property. The result can be altered basing on a set of filters to rank the properties in different ways.
2. Property maintaining
 - Host is able to edit the information of the property with easement, which can be finished in one page.
3. Review
 - Users can review and rate the property in ranges, and the reviews in return come up with a part of the property detail.

Design

In NUZE, we do believe good user experience and interface can bring huge benefit for our website. We would like to create a comfortable and smooth website experience to our customer. In this way, we are not only trying to implement full features in the system but also good design elements such as transition and animation.

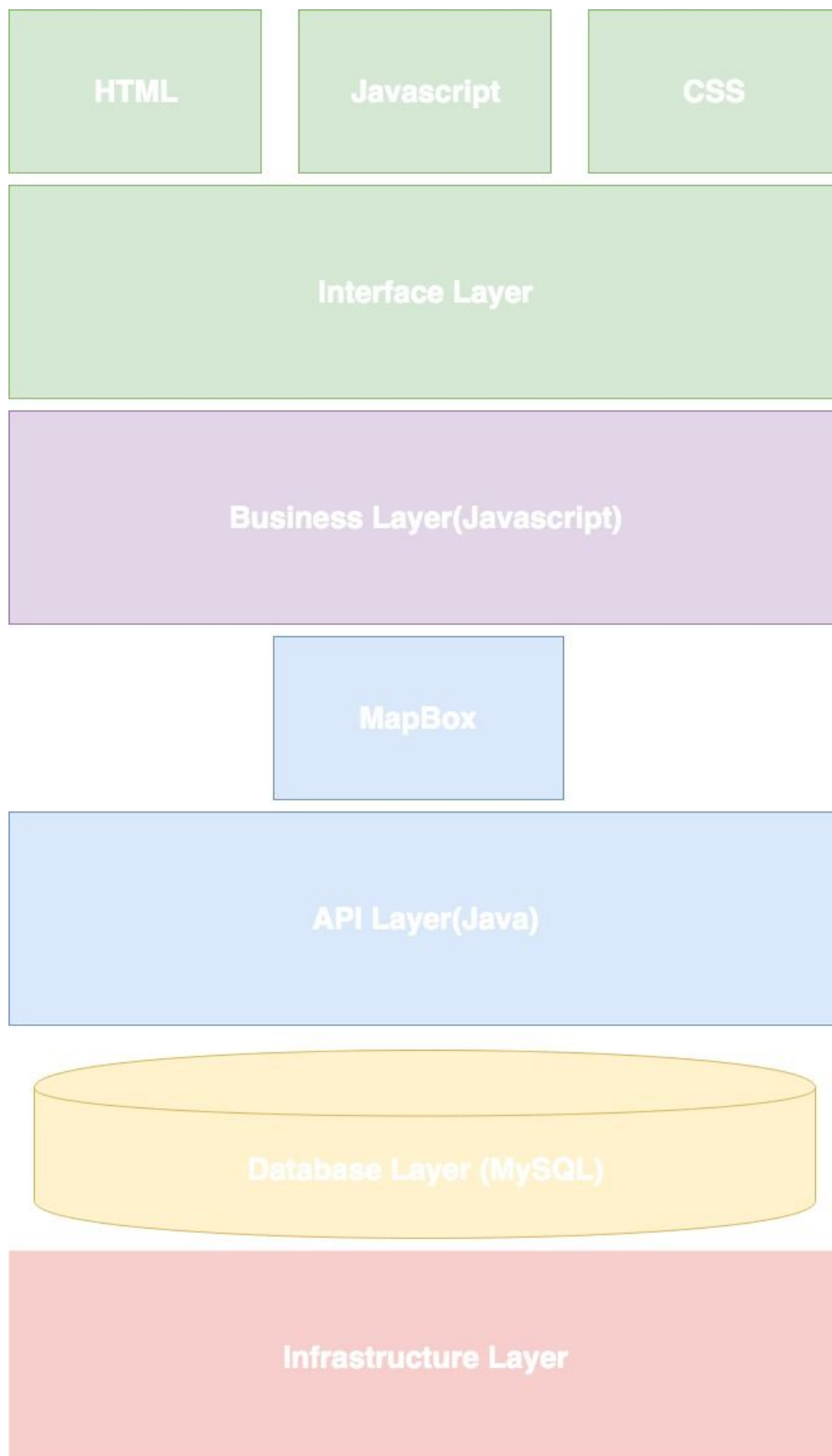


Software Architecture

To achieve our goal, a suitable and robust software architecture should be well designed. Mainly, there will be two sides of our system, which are server side and client side, in other way a less coupled system. RESTful API will be our major communication way working between two side.

Server side will be divided by two parts, respectively as web crawler and API. As for the web crawler part, Python will be used to grab data from other website such as Airbnb. However, the API will be implemented with JAVA language as it is more mature and has higher capacity. One of the huge advantages of building our own API, instead of using other public API, is that there will be no call limits, and it is controllable and scalable. Otherwise, once the public API changes, it could lead to a serious crash or bug in our system.

Meanwhile, the web client side will be using React framework, the most popular framework in web development. Javascript will be the main language in client side, and it will follow the newest ES6 guideline. In addition, the map framework we will use Mapbox to provide a best data visualization experience to our customer.



Team Skill Set

Languages: JS, SQL, Python, JAVA, BASH, Swift, C++, C

Strengths: Graphic design, Web development, Server deployment, RESTful-API

Experience: iOS development, TDD, BDD

Project Choice

The choice on the project is based on the members' strengths and experiences. Since the strengths involve a wide range of skills, a project needing a variety of skills to fulfil will be an ideal choice. The web accommodation portal involves the skill in front-end and back-end developing, including data crawling, API, web design and implementation.

Epics

We have split our epics up according to the different functions of our web portal.

Profile

The profile page will display an overview of the users' preference and basic settings on the web accommodation portal. The page will be showing the following information:

- Basic information
- Avatar
- Saved properties – Users' preferred property for further actions.
- Trips – The property the visitor has stayed
- Messages – Messages from the host as the user being visitor or the guest as the user being the host.
- Property – The property listed by the host can be modified the availability and details of the property for management.

In the profile page users can update their information, such as avatars and personal descriptions, recording their preferred properties and the properties that they have stayed before.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Search

The search result will contain a set of properties listed in the given area, time period and availability for the number of guests the property can hold. The search bar on the main page includes the following information that needs to be specified:

- Place – where the guest interested to settle
- Check-in and check-out date
- Guests – number of adults, children and rooms

After clicking on the search button, a search result page will be displaying all the properties that fulfill the need of the users.

On the search result page, the header also includes a list of filters specifying the properties to a greater extent. The filters include:

- Map – the map can be switched on or off for the visitor to intuitively see the correlation of price and the location of the properties.
- Distance – users can set the properties to be in the range of a specific length, the properties can be ranked according to the distance to the ideal location
- Date – The check-in and check-out date can be modified on the top of the page.
- Rooms and beds – the number of rooms and beds needed by the guests can also be modified on the top of the page.
- Price – the price range accepted by the guest can be modified given a lowest price and the highest price
- Popularity – the properties can be ranked on the basis of times of guests have been stayed in the property.
- Rate – the properties can be ranked on the basis of the rate from top rated to the low rated.

Critical to the whole web portal, search is one of the most important features owing that search is a fundamental step for the users to start the selecting and booking process. The search result page enables users to select properties in a more detailed way.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Suggestions

Suggestions part is implemented as well on the main page, predominantly displaying two types of suggestions as followed:

Suggested cities – The most popular cities will be shown for the users to reach a collection of properties in the given city.

Suggested properties – properties with highest rate and popularity will be in the list for the users to select.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Property Maintaining

In the property maintaining page, the following features of the property can be adjusted by the host to conveniently arrange the ideal staying of guests:

- Rooms and beds – arrangements for sleeping
- Amenities – facilities for visitors' convenience
- Available dates
- Photos
- Location of the property

Besides search, property maintaining is a critical epic for the sake of host side. Property maintaining allows host to advertise their properties and attract ideal visitors. The result of property maintaining is the property detail page shown to visitors.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Accommodation Request

After the user confirming the information and the accessible date of a property, a request can be sent to the host to book the property for a certain period of time. The user will be sent a confirmation for the request.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Trips

In the Trips page, a list of property the user has stayed is shown. The property detail can be checked or reviewed in a further step.

Being a relatively simple page, its estimated difficult score is $x/10$, with a time estimate of x units.

Saved Property

In the saved property page, the properties that have been saved for further use by the users are displayed, by clicking in to each property list, the detail page of the property is shown. The saved property feature is basically a collection of properties preferred by each single user.

Being a relatively simple page, its estimated difficult score is $x/10$, with a time estimate of x units.

Accommodation Review

In the accommodation review page, users can rate the property from a range of perspectives from 1 to 5, leave a short review and upload relative photos. The page can only be accessed from Trips page, which includes the properties users have stayed.

The epic has an estimated difficulty score of $x/10$, with a time estimate of x units.

Final Epic Selection

Fully implemented: Search, Profile, Suggestions, Property Maintaining, Accommodation request

Partially implemented: Saved property, Trips, Accommodation review, Property Maintaining

Stand-up/Sprint Schedule

Stand-up:

- Monday (In person)
- Wednesday (In person)
- Friday (In person)

Sprints:

- Week 1 / 2
- Week 3 / 4
- Week 5 / 6
- Week 7 / 8
- Week 9 / 10

Weekly Meeting Times

Monday, Law Library LG, 17:00-18:00

Wednesday, Lyre Lab K17, 9:00 – 11:00

Friday, Law Library LG, 17:00-18:00