SENG2021 Deliverable 5

1. Introduction

"The Launch" is a platform to discover local music events. From festivals, concerts, to lives and fans meetings - it allows anyone to find, schedule and share music events that fuel their passions and enrich their lives. We were inspired by the BandsInTown web application; however, the original website is not well-structured, the graphical user interface is out of style, and event recommendation is not personalized or interactive.

1.1 Team Members

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2. Requirements Analysis

2.1 Problem Statements

1. Event recommendations are not personalized or interactive
2. Users cannot modify or update personal information after signing up
3. There is no music player
4. Users cannot save events onto their personal calendars and be notified before the event
5. Sold out events are not indicated
6. There is no feedback system and users have no means of communication with customer service
7. There is no direct link to purchase tickets for events
8. Users cannot discover latest news in the entertainment/music industry

2.2 User Stories

Addressing changes from the previous deliverables ...
  ● Due to the time constraint, our team had to make the decision of removing some of the previous features of our application, such as the "Comment" feature as a whole, and a lot of the *"personalization"* features, like *"following artists", "event recommendations based on preference"*.
  ● However, some new features were also added to our final prototype, such as the "Subscription" feature, which allows the users to subscribe to newsletters and receive updates on new events, and the 'Latest news' feature, where users can discover the latest entertainment news.

Below are the final list of user stories / use cases:

1. **Requirement:** Event recommendations are not personalized or interactive

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   Feature: View nearby events clearly on a map
   As a: User
   So that: I can visually and interactively see events that are nearby me
   I want to see events on an interactive map

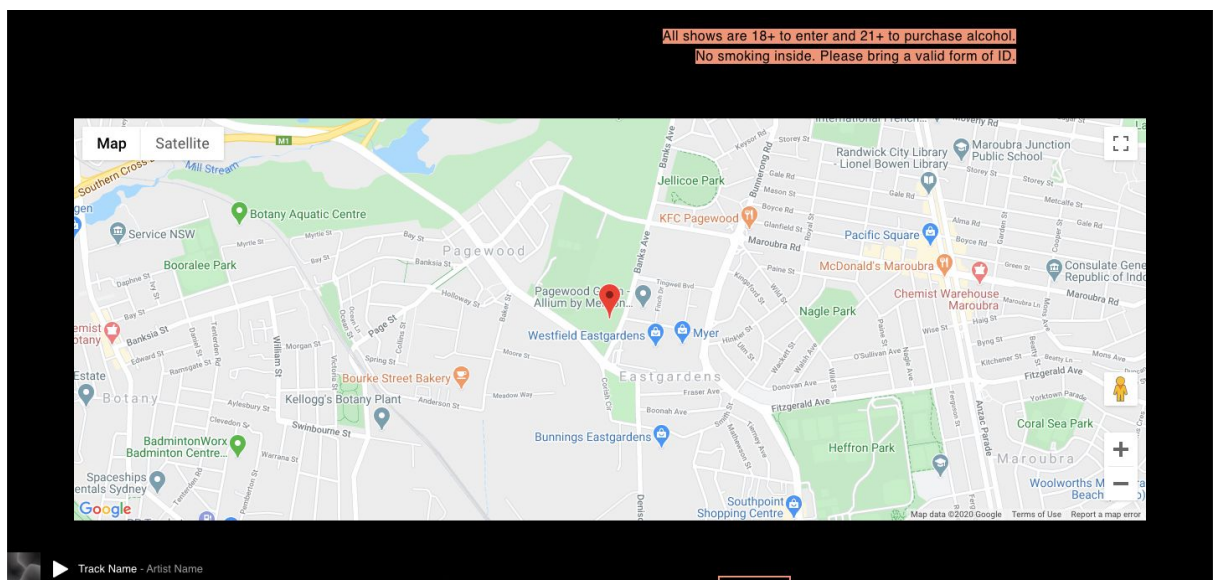   **GIVEN** that I am on the home page
   WHEN I scroll down to the bottom of the page
   THEN Then there will be a map showing all the events that are held within 50km of my current location (by default)
   WHEN I move around and readjust the map
   THEN I will see all the events that are held within the parameters of the map

   ## Final Interface Screenshots:

   Feature: Subscribe to newsletters
   As a: User
   So that: I can discover new, popular events
   I want to receive newsletters and promotional emails

   GIVEN that I am on the home page
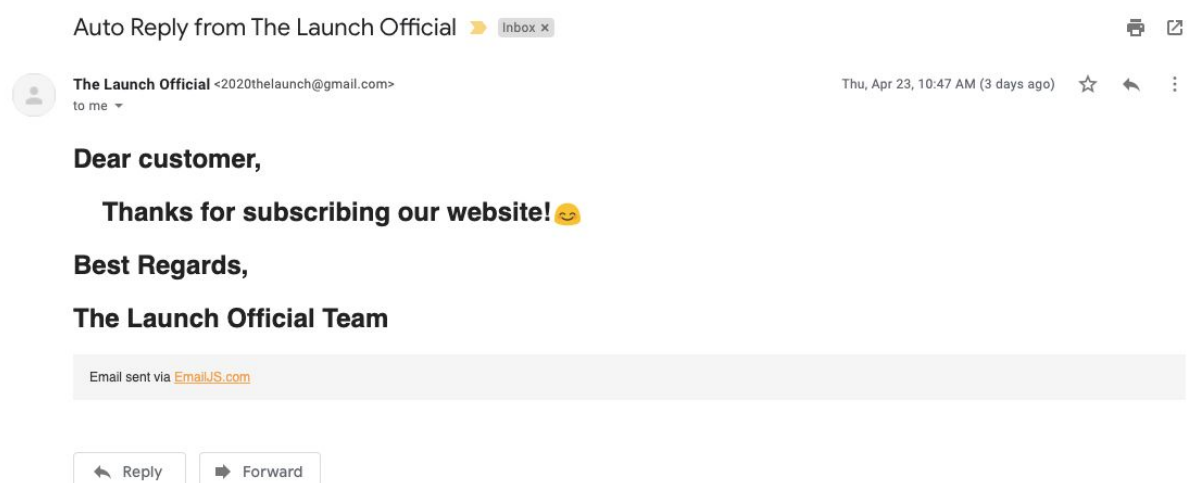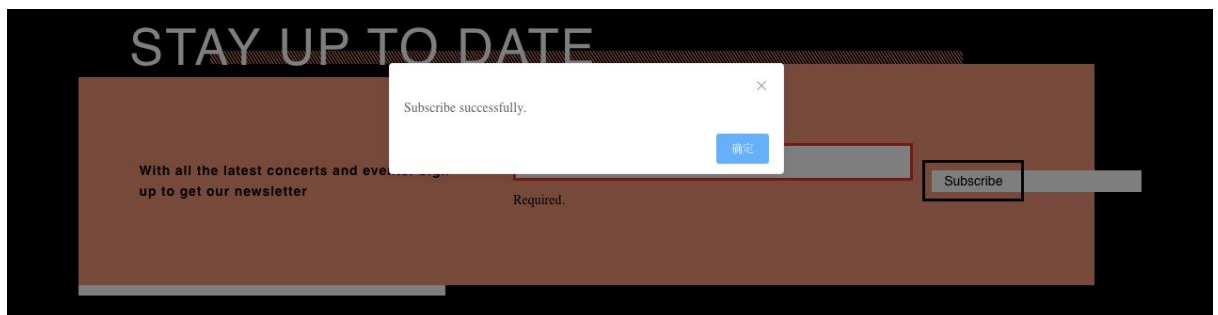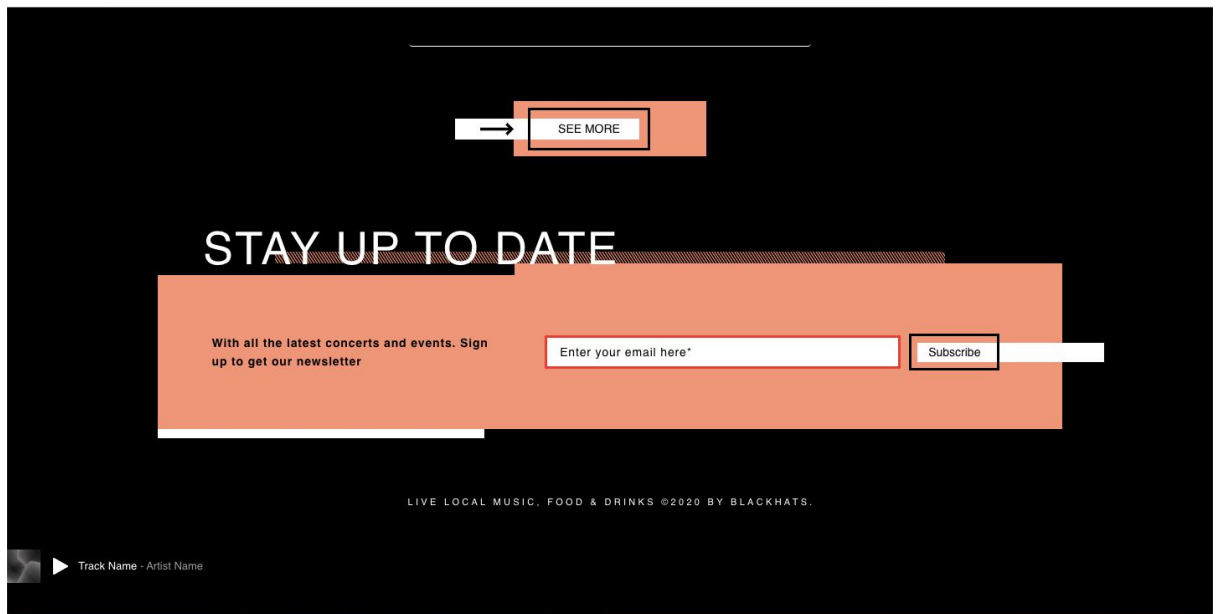   **WHEN** I scroll down to the bottom of the page
   THEN under the 'Stay up to date' section, there will be a field to enter my email
   WHEN I enter my email and click the 'Subscribe' button
   THEN a box will pop up with the message 'Subscribed Successfully'
   AND I will receive an auto reply email if I have successfully subscribed

   ## Final Interface Screenshots:

2. **Requirement:** Users cannot modify or update personal information after signing up

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   Feature: Edit user information on the profile page
   As a: User
   So that I can update information and reflect changes in my music interests

I want to edit my personal and profile information

GIVEN that I log in
WHEN I put my cursor over <my name> at the top right hand corner
AND I click on the 'My account' button
THEN I will be redirected to a page where I can edit my first name, last name, phone number and email address
WHEN I change my name and click on the 'Update Info' button
THEN my name will be updated

Final interface screenshots:

3. *Requirement:* There is no music player

   Feature: Play music on artist page
   As a: User
   So that: I can determine whether or not I will be interested in going to the artist's event/concert
   I want to be able to listen to the artists' music

   GIVEN that I am on an artist page
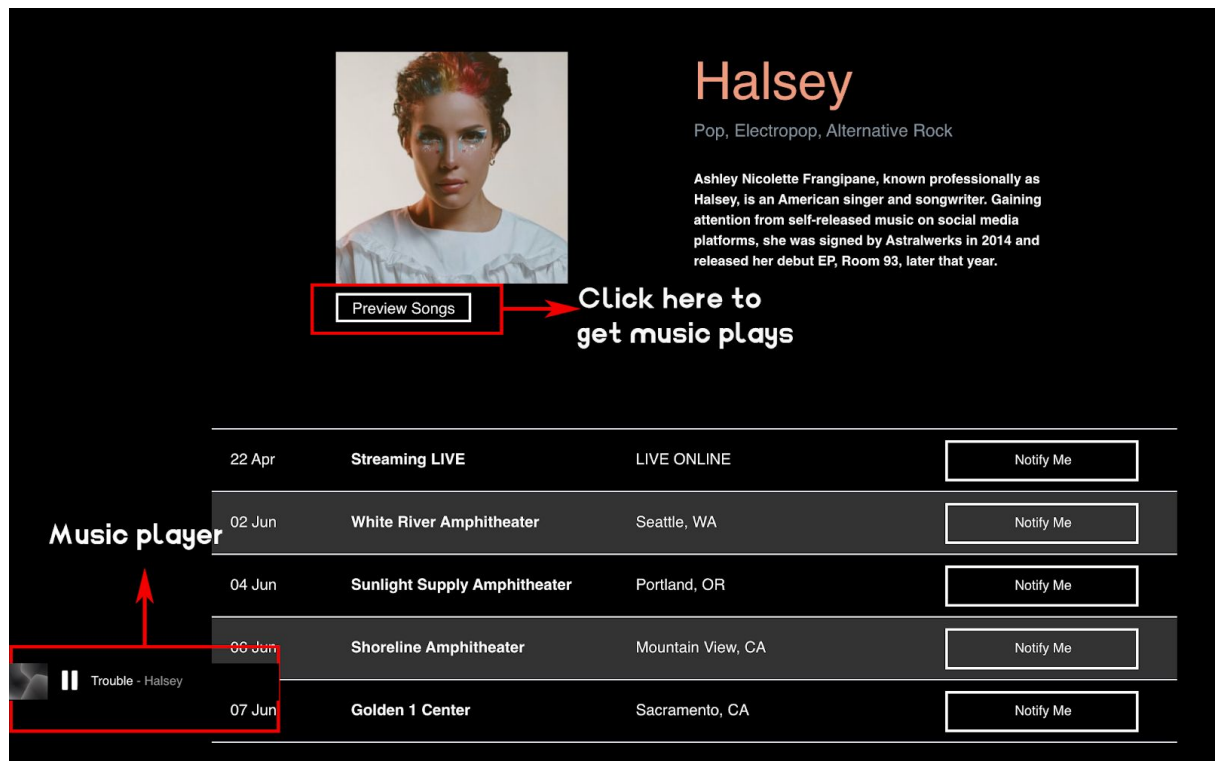   *WHEN* I click on the "Preview Songs" button under the artist's photo
   THEN the music from the artist's playlist will start playing
   AND I will see the floating music player at the left bottom corner shows the track name and artist name
   WHEN I click the pause button on the music player
   THEN the music will stop playing

Final interface screenshots:

Feature: Automatically play music throughout the website

As a: User

So that: I can have a more immersive experience when I'm on the website

I want to be able to listen to music while navigating through the website

GIVEN that I am on the home page

THEN music will start to play automatically from a random playlist

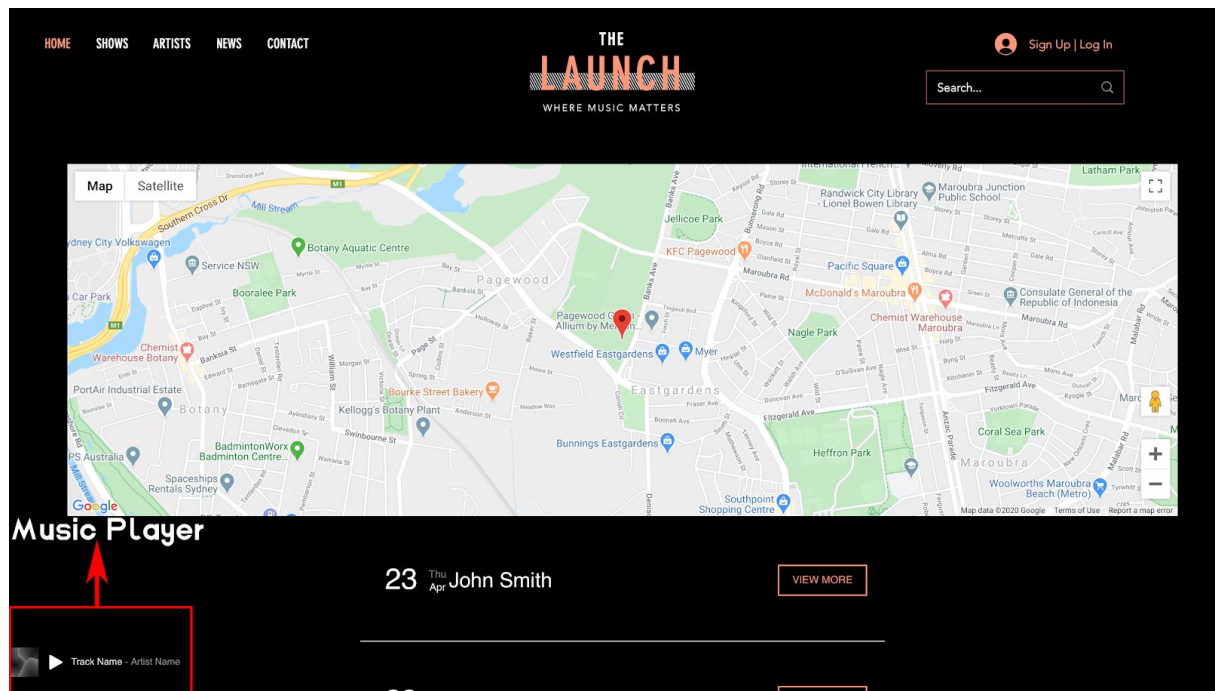*WHEN* I click on the 'Shows' button on the top bar and I am redirected to the 'Shows' page

THEN the music will continue to play

WHEN I click the pause button on the music player

THEN the music will stop playing

Final interface screenshots:

4. **Requirement:** Users cannot save events onto their personal calendars and be notified before the event

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Feature: Save events on personalized calendar
As a: User
So that: I can organize the events I am interested/attending on a calendar
I want to save events on my personal calendar

GIVEN that I am on the 'Calendar' page where I can see all the upcoming events on a calendar
WHEN I click on an event
AND click the 'Add to Google Calendar' button
THEN I will be redirected to a page where I can save the event on Google calendar (Google Calendar API)

Feature: Get notified before the event
As a: User
So that: I won't miss the event
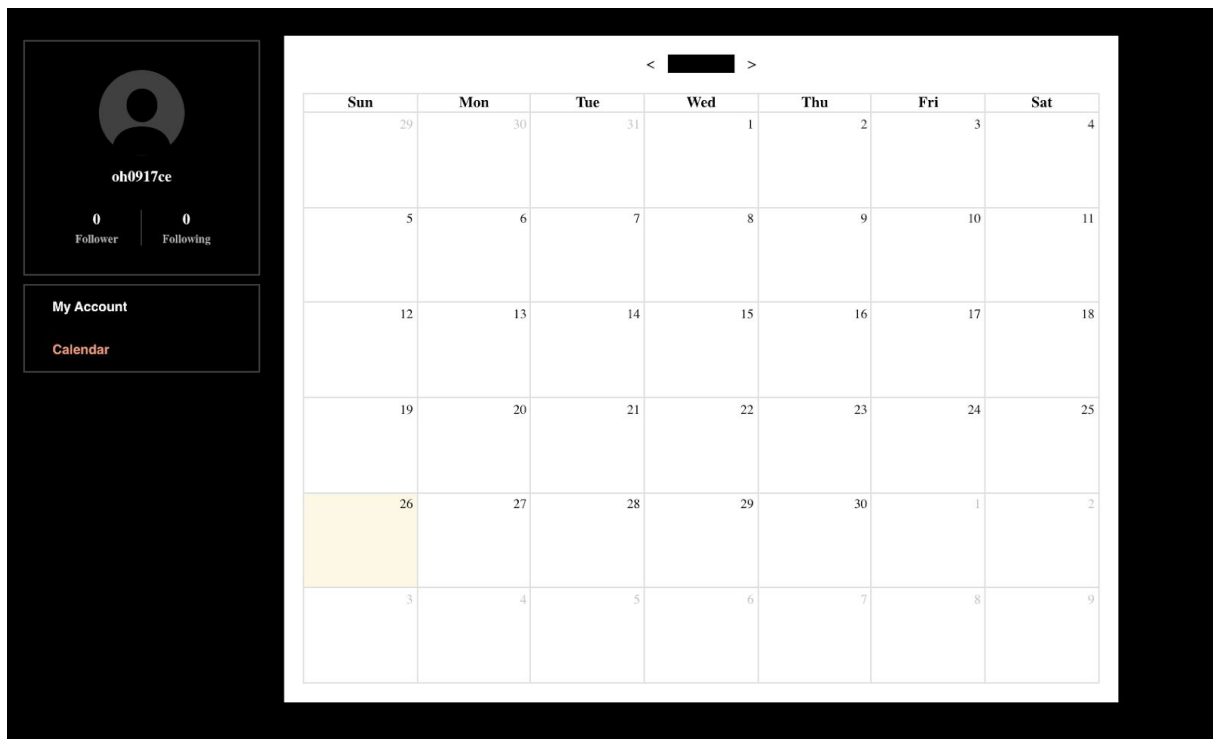**I want to** automatically set an alarm of the event time

GIVEN that I added an event to my personal calendar
THEN I will be given the option to set an alarm (a desired amount of time) before an event
WHEN I set the alarm 1 hour before the event
THEN the alarm will ring 1 hour before the event

Final interface screenshots:

5. ***Requirement:*** Sold out events are not indicated

Feature: Indicate sold-out events
As a: User
So that: I know if tickets for an event are still available
I want to see events that indicates if the tickets are not available

GIVEN that I am on an event page for an event that is sold out
THEN I will see a 'Registration is Closed' box below to the name of the event

GIVEN that I am on the 'Shows' page
WHEN I come across a sold-out event
THEN I will see a 'Sold out'' label on the thumbnail picture of the event

Final interface screenshots:

6. **Requirement:** There is no feedback system and users have no means of communication with customer service

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Feature: Submit enquiry form
As a: User
So that: I can let them know my concerns and ask them for help
I want to submit an enquiry

GIVEN that I am on the "Contact" page
THEN I will see an contact form at the bottom
WHEN I fill in the fields and click "GET IN TOUCH"

THEN my enquiry will be sent to the customer service team

Final interface screenshots:
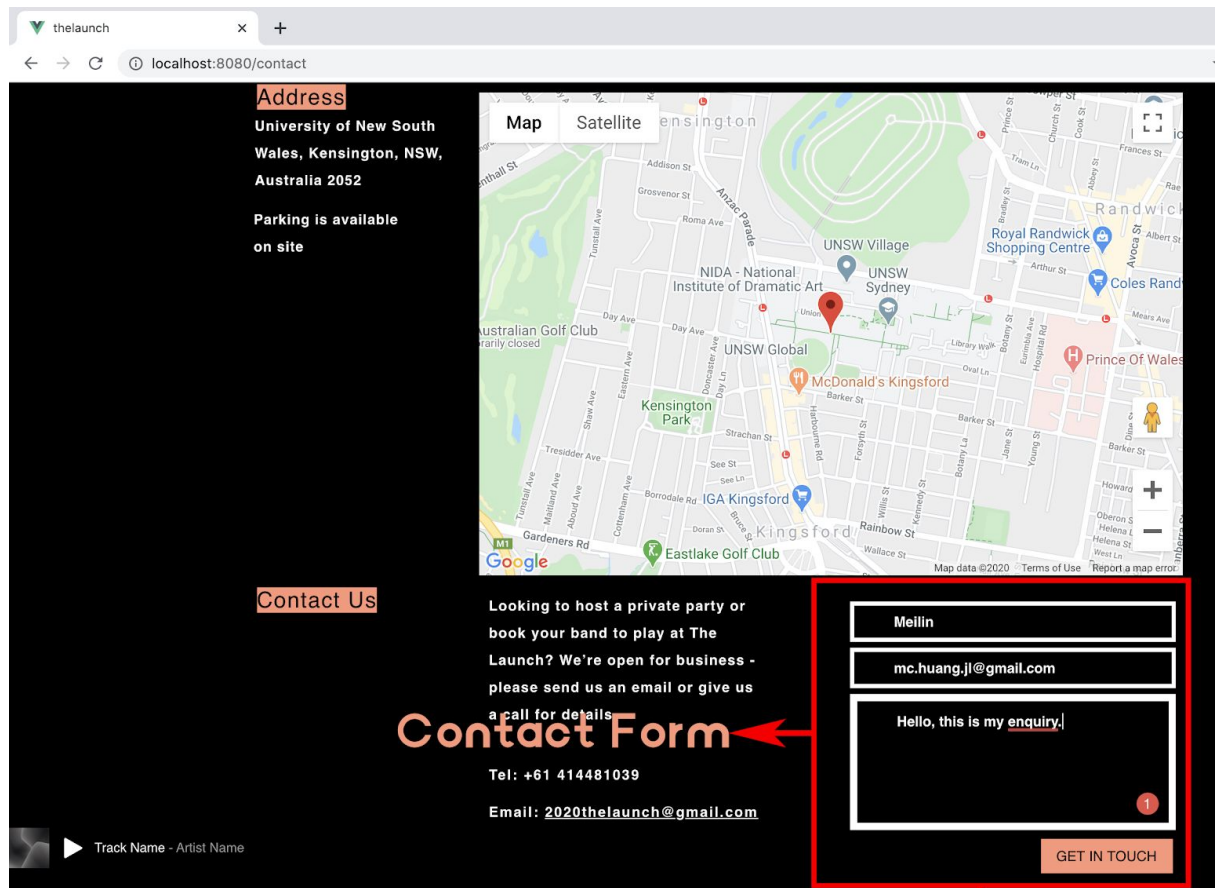
Feature: Receive email notification
As a: User
So that: I am updated and notified on my enquiry status
I want to receive email notification upon enquiry submission

GIVEN that I have submitted an enquiry form
THEN I will receive an email notification with a preview of my enquiry

Final interface screenshots:

[The Launch Official] auto reply 收件箱 ×

The Launch Official <2020thelaunch@gmail.com>
发送至 mc.huang.jl ▾

Hello, Meilin

This email was sent to you from The Launch Official Team to confirm your contact detail. if you do not send us a request, please ignore it.

Your request:

Hello, this is my enquiry.

Best Regards,

Team

7. *Requirement:* There is no direct link to purchase tickets for events
   Feature: Buy tickets
   As a: User
   So that: I can go and enjoy the events
   I want to be able to buy the event tickets

   GIVEN that I am on the "Event Information" page
   WHEN I click on the "BOOK NOW" button
   THEN I will be directed to the ticketing website
   AND be able to buy tickets for this event

   Final interface screenshots:

Thu, 23 Apr | Streaming LIVE

Enamour

As a curator of infectious grooves and wistful atmospheres, Enamour
has developed a sound that delicately walks the line between deep
introspection and pure club play. His sets are an intricate blend of deep,
progressive, tech house and techno that values musicality over anything
else.

BOOK NOW
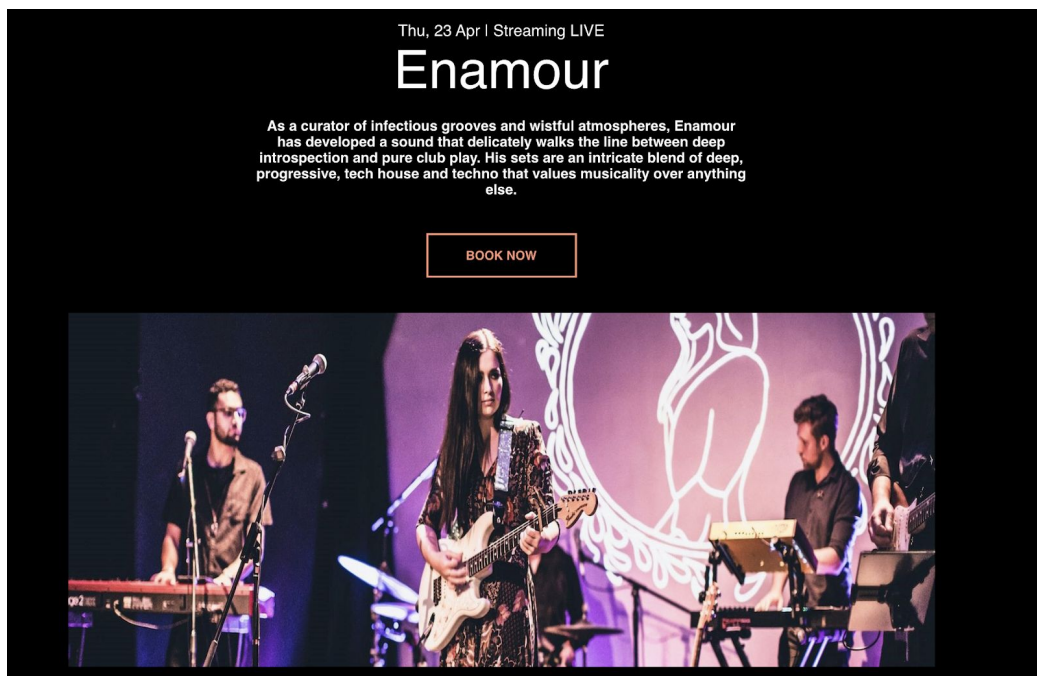
8. ***Requirement:*** Users cannot discover latest news in the entertainment/music industry
    Feature: Discover latest news
    As a: User
    So that: I can be updated on the latest information in the entertainment/music industry
    I want to see latest news

    GIVEN that I am on the Home page
    WHEN I click on the "NEWS" button on the top navigation bar
    THEN I will be directed to a page with a list of latest news
    WHEN I click on the "Read More" button on a news
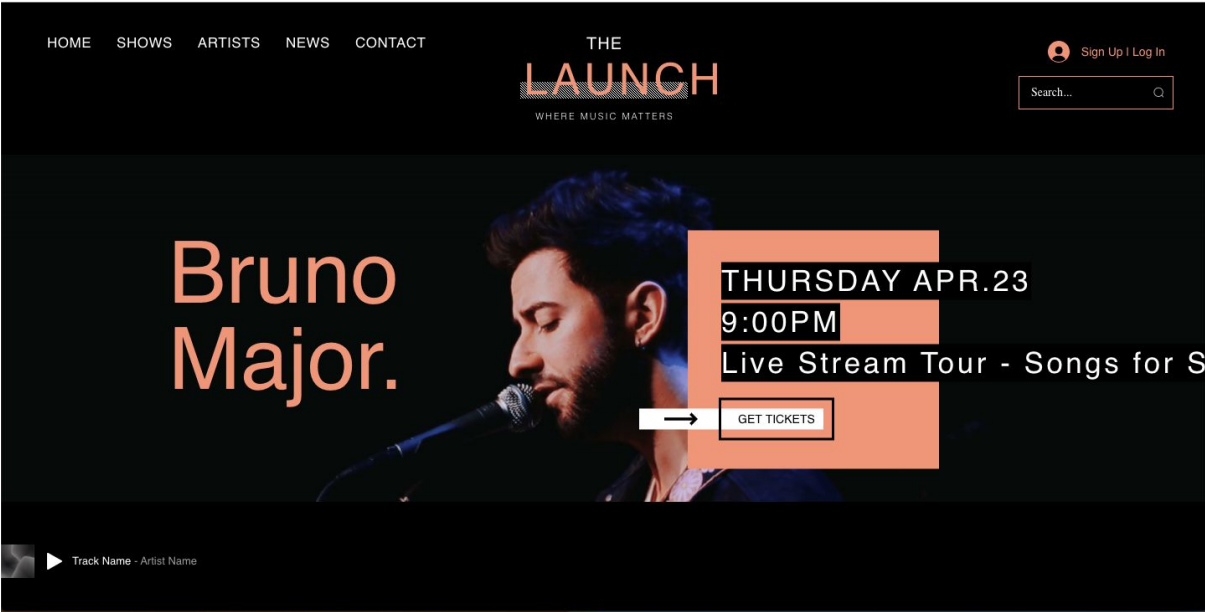   ***THEN*** I will be directed to a relevant news article page

    Final interface screenshots:

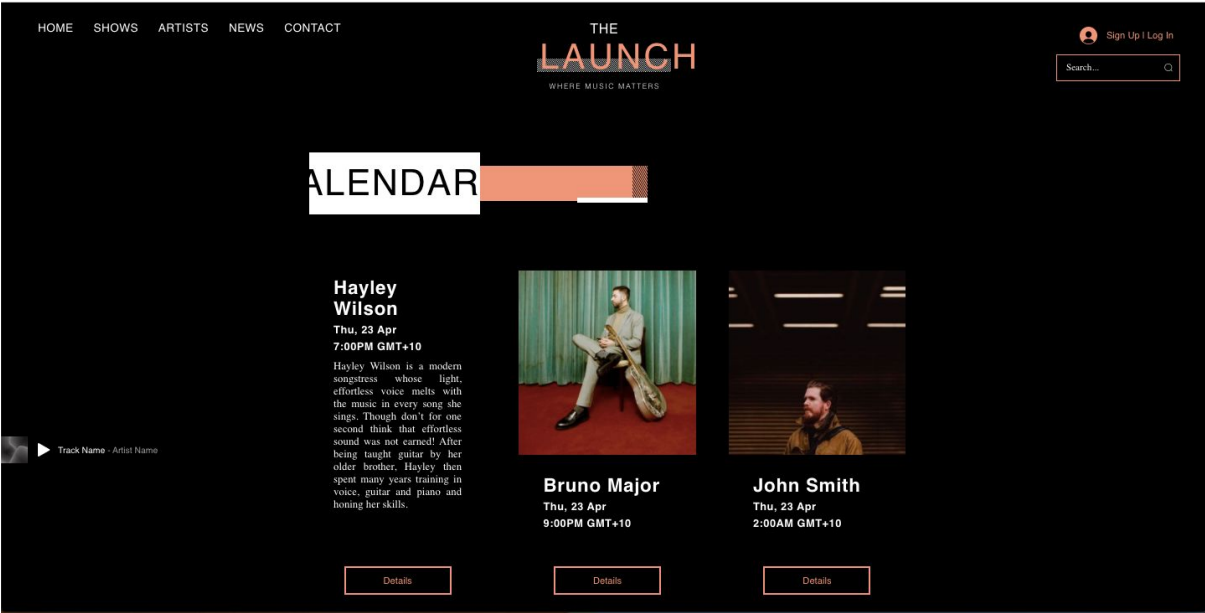   **Additional screenshots of final interface:**

    Home Page:

'Shows' Page:

'News' Page:

3. Software Design

3.1 Software Architecture

Server Side

"The Launch" will be hosted on a Linux virtual machine in Amazon AWS Lightsail. The server-side web application uses Python 3.x and Flask framework. All communication with clients has to comply with public HTTPS, TCP/IP communication protocol standards.

Client Side

Users/Clients will be able to access "The Launch" online. Being a web based application, the underlying client OS can be any PC operating system (Windows, Linux, MacOS, etc). Users/Clients are expected to use a modern ES5-compliant web browser such as Google Chrome, Mozilla Firefox, Safari or Internet Explorer 10 or newer to get full user experience.
As for the client-side programming, a combination of HTML, JavaScript and CSS will be used to create the logic of the website and generate dynamic web pages with the support of VueJS framework.

External Data Sources

Since the project highly relies on external information archives, the team has applied for access to many third-party APIs, the use of each API is listed below:

- ❏ Google Calendar API - For adding events and notifications to a user's personal Google Calendar
- ❏ Bandsintown API - For obtaining details of events, artists, and links to ticket agents
- ❏ Songkick API - For obtaining details of events and artists by a list of filters such as venue, time or metro are.
- ❏ Eventbrite API - This API has similar use as Songkick API but provides a more extensive range of data. It also has an integrated checkout system.
- ❏ News API - For obtaining top 20 of most recent entertainment news in Australia.
- ❏ Google Map API - To show event locations, contact address of The Launch.

Summary

In order to minimize the amount of time the team members have to spend on self-learning, the team decided the above web stacks as one of the team members had development experience based on these tools. AWS Lightsail offers a free trial for one month, it also has a detailed documentation and instructions to help developers put their hands on. Hence that it makes the deployment easier and cheaper.

3.2 UML Sequence Diagram

User Sign Up

User Log In

Event Recommendations

User	:Client Browser	:Web Server	:Database	:Google Map

View map on Website →

getCurrentLocation()

getCurrentLocation()

Return current location(): string

DisplayCurrentLocation()

getEventLocationsNearBy()

SQL Command:
GetEventLocationsNearBy

Return EventNearBy()
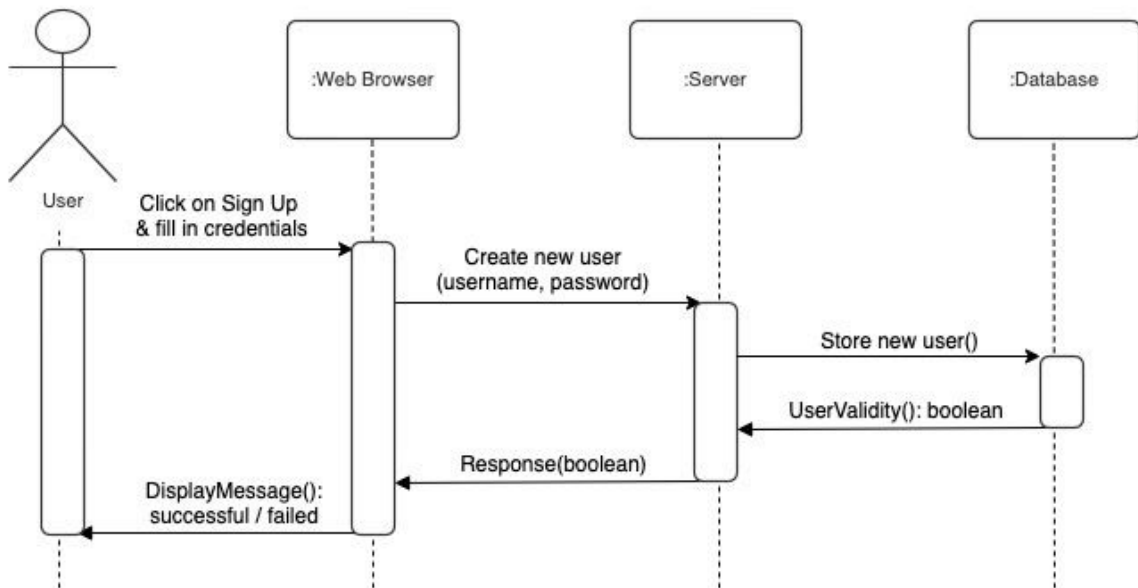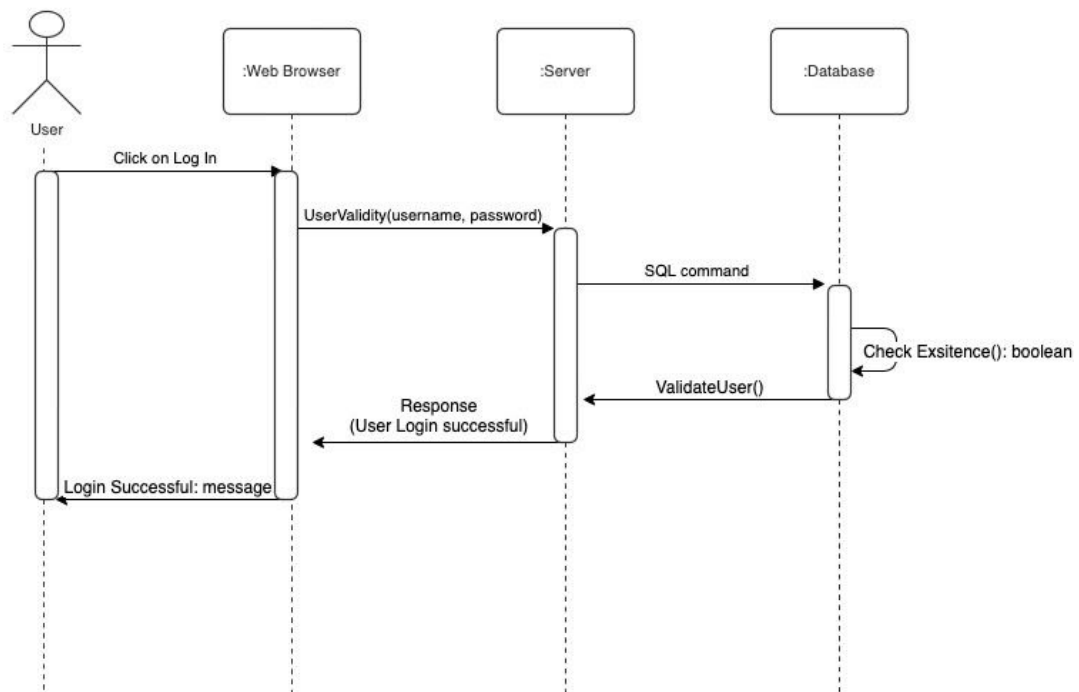
DisplayNearByLocations()
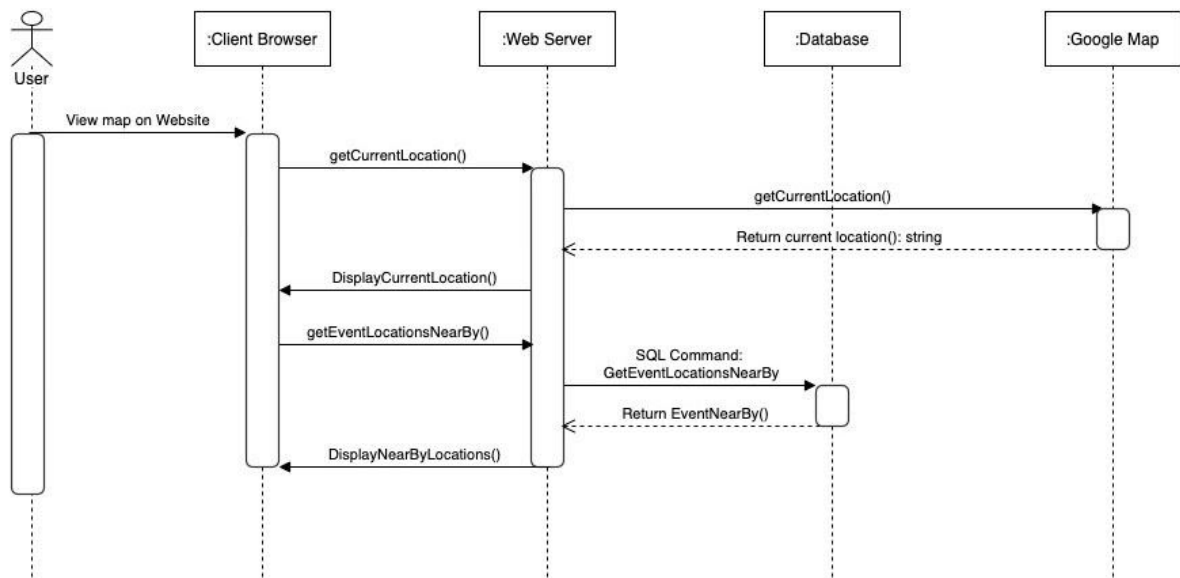
Update Personal Details

User	:Web Browser	:Server	:Database

Click "Edit Details" →

requestDoEditUserDetails()

DoEditUserDetailOK()

Edit password, email,
phone number, name →

requestEditUserDetails
(password, email, phone_no,
name, username)

alt

invalidInput()

[some fields
are invalid]

SQL Command:
updateUserDetails
(password, email, phone_no,
name, username)

[all of the
fields
are valid]

updateUserDetailsOK()

displayUpdatedProfile()

Music Player

Calendar & Event Notification
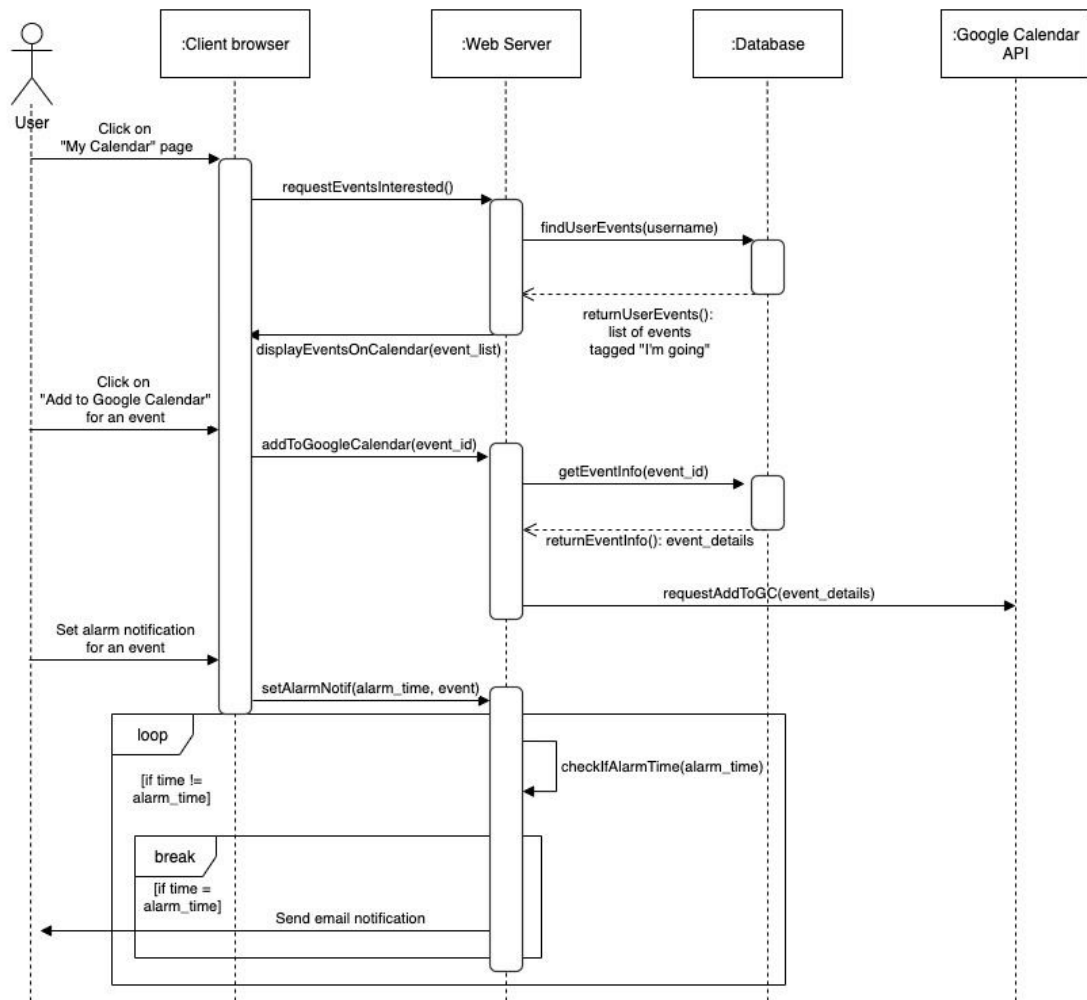
Check Ticket Availability
- Display 'Sold Out' if Ticket is Unavailable

User — :Client browser — :Web Server — :BandsInTown API

- User → :Client browser: Click on Event page
- :Client browser → :Web Server: requestEventInfo(event_id)
- :Web Server → :BandsInTown API: SQL Command: getEventInfo(event_id)
- :BandsInTown API → :Web Server: returnEventInfo(): event_details (containing ticket_avail)

alt

[ticket_avail = true]
- :Web Server → :Client browser: displayAvail()

[else]
- :Web Server → :Client browser: displayUnavail()

Customer Enquiry

User — :Client browser — :Web Server — :Database — Customer Service Team

- User → :Client browser: Submit enquiry form
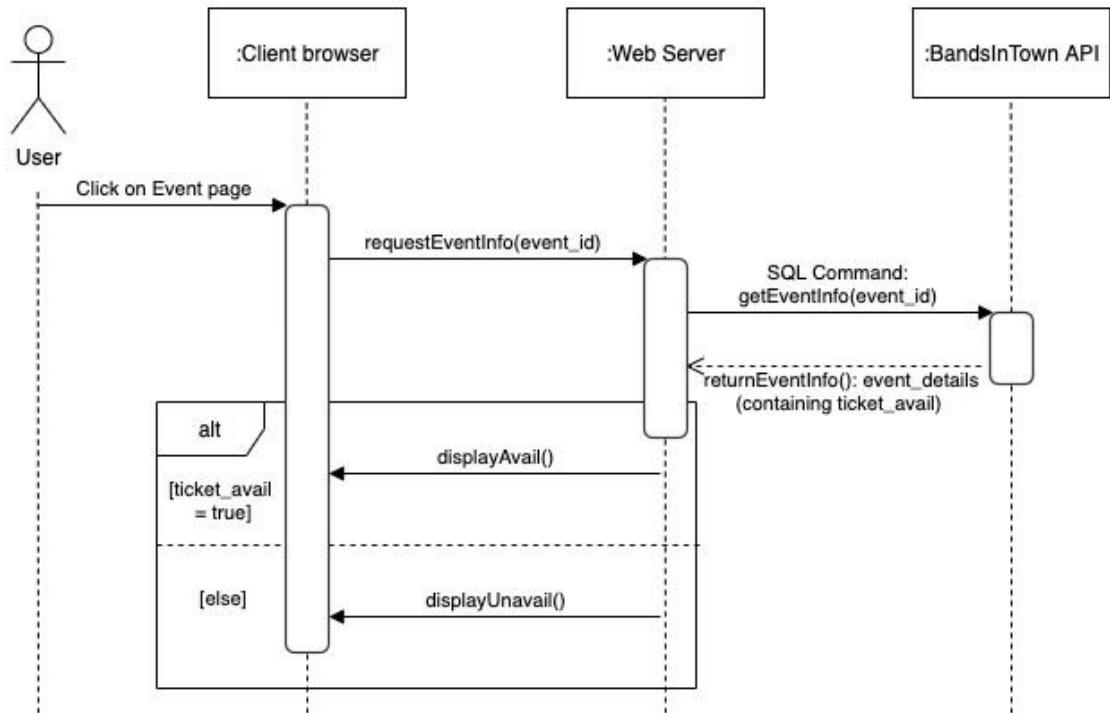- :Client browser → :Web Server: generateEnquiry (message, username): enq_id
- :Web Server → :Database: storeEnquiry (enq_id, message, username)
- :Web Server → Customer Service Team: Send email notification
- Customer Service Team → :Database: requestEnquiryInfo(enq_id)
- :Database → Customer Service Team: returnEnquiryInfo(): message, username
- Customer Service Team → :Web Server: replyEnquiry(enq_id, message)
- :Web Server → :Database: storeReply (enq_id, message)
- :Web Server → :Client browser: sendEnquiryReply(message)
- :Web Server → User: Send email notification
- User → :Client browser: Click "Resolved"
- :Client browser → :Web Server: resolveEnquiry(enq_id)
- :Web Server → :Database: removeEnquiry(enq_id)

Buy Event Tickets

4. Team Organization and Conclusion

4.1 Responsibilities and Organization

Our team was divided into two subgroups - Echo and Meilin were responsible for the front end, while Francis and So Jin were responsible for the back end.

4.2 Reflection and Final Comments

Overall, we feel that many things could have been done better in our project. Since most of the team members were inexperienced with software development and unfamiliar with its process, we as a team struggled to understand what was required of us, and learn all of the technicalities from scratch. Subsequently, our back end implementation was insufficient as we failed to employ a working database system, and therefore had to resort to plan B, which meant that some of our original features could not be fully implemented in the prototype. On the other hand, the front end turned out to be a big success. After putting in a great amount of effort into the front end, we achieved a professional, chic GUI design, which we are proud of.
This project provided a good opportunity to learn new skills, such as using Vue to create a frontend. We also learned how to self-study and how to deal with the stresses that we'll encounter in the social environment.

4.3 Issues / Problems Encountered

● With the unprecedented global situation, followed by the shift to online learning, our team faced unforeseen communication difficulties as face-to-face meetings were no longer an option. Our team made an effort to combat this issue by updating on our

progress and communicating any issues through Facebook Messenger, as well as scheduling an online meeting once a week.

- Most of the team members had very little to no prior experience and knowledge on software construction, and with the limited time frame and added stress of the current situation, we realized that some of the requirements we set in the beginning were too challenging and unrealistic. We therefore had to modify bits of our design, remove some parts entirely, and simplify it into what was achievable. A major challenge was with the backend implementation. Initially, our team planned to use a SQL database for our application, however, we faced difficulties developing a working database for our project, and consequently failed to integrate this to the front end.

4.4 Improvements for the Future

- Despite our efforts, there is still a big room for improvement communication wise. Scheduling more frequent meetings, reporting on our progress and/or difficulties everyday, and being more responsive to chat messages would be ideal.
- In retrospect, our project was poorly planned and managed - in the future we should set milestones to create a clear and attainable project plan, and also monitor our progress. A more active use of GitHub would also help us track our progress better.
- Some of our original features could not be implemented in our prototype due to the time constraint and lack of technical skills. However, if we were given more time, we would like to learn the relevant skills, and have all of our original features implemented.