

**COMP3900**

**Computer Science / Information Technology  
Project**

Project Name: **Event Management System**

**Team Name: 3900-T14A-[name]**

Due Date: Monday 7<sup>th</sup> March 2022

Members:

- Ricky Huang, [z5164646@ad.unsw.edu.au](mailto:z5164646@ad.unsw.edu.au), z5164646
- Alex Li: [z5260120@ad.unsw.edu.au](mailto:z5260120@ad.unsw.edu.au), z5260120
- Arzaan Mirza [z5311529@ad.unsw.edu.au](mailto:z5311529@ad.unsw.edu.au), z5311529
- Alex Huang [z5169765@ad.unsw.edu.au](mailto:z5169765@ad.unsw.edu.au), z5169765

## **Table of Contents:**

|  |           |
|--|-----------|
| <b>Computer Science / Information Technology Project</b> | <b>1</b>  |
| Team Name: 3900-T14A-[name]                              | 1         |
| <b>Background</b>  | <b>3</b>  |
| <b>User Stories and Sprints</b>                          | <b>4</b>  |
| <b>Novelty Functionality 1 - Google Maps API</b>         | <b>12</b> |
| <b>Novelty Functionality 2 - Favorites List</b>          | <b>13</b> |
| <b>System Architecture</b>                               | <b>14</b> |
| <b>In-Depth Information of Technologies:</b>             | <b>17</b> |
| Flask  | 17        |
| DynamoDB   | 18        |
| Lambda   | 19        |
| SQS (Simple Queue Service)                               | 20        |
| API Gateway  | 21        |
| S3   | 22        |
| <b>Functional Requirements</b>                           | <b>24</b> |
| <b>Basic System Interface</b>                            | <b>25</b> |

## Background

In the past, it had often been difficult to organize an event with a large number of people, especially if they are unrelated. Difficulties with broadcasting information to everyone, problems with tracking event performance and centralizing event information into one place meant that event organization was an arduous task in the past. However, in the current day, event management applications have managed to bring people together closer through live experiences. Many of the applications in the market have solved issues with connecting the organization to the masses, with the average person nowadays able to register for an event within under 30 seconds.

Many of the systems in the current day are more targeted towards connecting people to large public events, such as expos, parties, concerts etc... In particular, we will be looking at two event management applications; Eventbrite and Ticketek.

### **Ticketek**

One of the largest applications in the market is Ticketek, which is good for people who are looking for large major events, such as concerts or sport matches. However, with Ticketek, it is difficult for an individual or smaller organizations to set up events, having to pay large fees to have your event advertised on the website. Another issue is that you're unable to search events which are closest to your location. You have to either know what you're specifically looking for or you have to look for events by their event type, however a person may live in Western Sydney and these events maybe happening in Eastern Sydney, which may be too long of a distance for a particular individual to want to travel to.

### **Eventbrite**

Another event system on the market is EventBrite, which allows organizers to set up an event through signing up for an account. Advantages of EventBrite include the ease for organizers and event goers to sign up for events, the variety of events that are advertised, a feature to recommend an event based on what your preferences are, and also its event analytics feature that it has, letting organizers see certain statistics about

the performance of the event. However, EventBrite requires users to pay for various features, charging high fees for event organizers.

Hence, our aim is to provide a management system that is more intimate in nature, and allows organizers and users the ability to set up and join events without high fees, and for event organizers to have total freedom in how they would want to set up their events.

## User Stories and Sprints

### **Sprint Schedule:**

***Sprint 1:*** Week 3 - Week 5

Start Date: 2nd March

End Date: 15th March

***Sprint 2:*** Week 5 - Week 7

Start Date: 16th March

End Date: 29th March

***Sprint 3:*** Week 7 - Week 9

Start Date: 30th March

End Date: 12th April

## Jira Backlog Overview

- JO3900-2 As a Developer, I need to set up the Databases so that the team can use it
- JO3900-12 As an User, I want to be able to register so I can book/host tickets to an event.
- JO3900-20 As an User, I want to be able to login to an account that I have previously registered with
- JO3900-5 As a Customer, I want to be able to search for events so I can look for events that I am interested in.
- JO3900-6 As a Customer, I want to be able to post/reply/read reviews so I can tell others about a particular event.
- JO3900-4 As a Customer, I want event recommendations so I know of new events that are coming up.
- JO3900-10 As a Developer, I want to broadcast messages to all customers who have booked to an event so they have evidence of their booking.
- JO3900-11 As a Customer, I want to be able to book tickets for an event so that I have a seat available when Im there.
- JO3900-21 As a Customer, I want to be able to select the seat that Im booking so I can sit at a place of my preference.
- JO3900-14 As a Host, I want to be able to advertise a new event so I can let others know of the event that I have planned.
- JO3900-15 As a Customer, I want to be able to view a list of all events that are coming up so I can attend one if I would like to.
- JO3900-17 As a Developer, I need to improve the frontend so that our application has a nice user-interface.

## User Stories

[Add epic](#) / [JO3900-6](#)

① 1 ...

As a Customer, I want to be able to post/reply/read reviews so I can tell others about a particular event.

Attach Add a child issue Link issue

### Description

This ticket has sub-tasks (child issues) that have more information.

### Child issues

Order by ... +

0% Done

- |          |                             |    |       |
|----------|-----------------------------|----|-------|
| JO3900-7 | Leave a review for an event | AH | TO DO |
| JO3900-8 | Reply to Reviews            | AH | TO DO |
| JO3900-9 | Able to Read Reviews        | AH | TO DO |

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press to comment

To Do

### Details

Assignee AH ALEX HUANG

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 21 February 2022, 04:09

Configure

Updated 3 days ago

[Add epic](#) / [JO3900-5](#)

① 1 ...

As a Customer, I want to be able to search for events so I can look for events that I am interested in.

Attach Add a child issue Link issue

### Description

Customers to search for events by event title, description, and/or type.

### Acceptance Criteria:

- Be able to filter through type of event (for example sporting event or entertainment).

### Child issues

Order by ... +

0% Done

- |           |   |    |       |
|-----------|---|----|-------|
| JO3900-18 | Create a search bar                             | AL | TO DO |
| JO3900-19 | Be able to filter through a list of event types | AL | TO DO |

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press to comment

To Do

### Details

Assignee AL Alex Li

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 21 February 2022, 04:07

Configure

Updated 3 days ago

 Add epic /  JO3900-4

 1   ... 

## As a Customer, I want event recommendations so I know of new events that are coming up.

 Attach  Add a child issue  Link issue 

### Description

the system must be able to provide event recommendations to customers based on the event types and hosts booked in the past. It must also be able to provide recommendations to events that have a description, which seems "similar" to descriptions for events that have been booked in the past.

### Acceptance Criteria:

- Able to provide appropriate recommendations based on the customers past bookings.

### Activity

Show: All  Comments 

Newest first 



Add a comment...

Pro tip: press  to comment

To Do 

### Details

|                      |   |
|----------------------|---|
| Assignee             | Alex Li   |
| Labels               | None  |
| Sprint               | JO3900 Sprint 1   |
| Story point estimate | None  |
| Development          | Create Branch  |
| Reporter             | Arzaan Mirza  |

Created 21 February 2022, 04:07

 Configure

Updated 3 days ago

 Add epic /  JO3900-10

 1   ... 

## As a Developer, I want to broadcast messages to all customers who have booked to an event so they have evidence of their booking.

 Attach  Add a child issue  Link issue 

### Description

Hosts to broadcast a message to all customers that have booked tickets to a given event (e.g., via email).

### Acceptance Criteria:

- Once a customer books an event, a confirmation email is successfully sent to that customer.

### Activity

Show: All  Comments 

Newest first 



Add a comment...

Pro tip: press  to comment

To Do 

### Details

|                      |   |
|----------------------|---|
| Assignee             | Wei Hou Ricky Huang   |
| Labels               | None  |
| Sprint               | JO3900 Sprint 1   |
| Story point estimate | None  |
| Development          | Create Branch  |
| Reporter             | Arzaan Mirza  |

Created 21 February 2022, 04:14

 Configure

Updated 3 days ago

## As a Customer, I want to be able to book tickets for an event so that I have a seat available when I'm there.

Attach Add a child issue Link issue

### Description

Customers, once registered, to book (purchase) a ticket for a listed event when tickets are available.

### Acceptance Criteria:

- Customers are successfully able to complete the booking form to book a seat.

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press M to comment

To Do

### Details

Assignee WH Wei Hou Ricky Huang

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 21 February 2022, 04:16

Configure

Updated 3 days ago

## As a Customer, I want to be able to select the seat that I'm booking so I can sit at a place of my preference.

Attach Add a child issue Link issue

### Description

During the booking process, customers must be able to select an available seat for the event they are booking.

### Acceptance Criteria:

- Able to successfully select a seat to book during the booking process.
- Visually show other customers afterwards, that the seat that has just been booked can't be selected.

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press M to comment

To Do

### Details

Assignee WH Wei Hou Ricky Huang

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 4 days ago

Configure

Updated 3 days ago

Add epic / JO3900-14

As a Host, I want to be able to advertise a new event so I can let others know of the event that I have planned.

[Add epic](#) / [JO3900-14](#)

[Attach](#) [Add a child issue](#) [Link issue](#)

Description

- Hosts, once registered, to advertise a new event with details on the event title, description, type (e.g., concert, theatre, etc.), venue (name and address), event start/end date/time, number of tickets available, ticket price, etc.

Acceptance Criteria:

- A form where you have to type out the details for the event that you would like to create with a submit button.
- Once the submit button is clicked on, the data is send to the backend database (DynamoDB)

Activity

Show: All [Comments](#) History

Newest first ⓘ

Add a comment...

Pro tip: press **M** to comment

To Do

| Details              |                               |
|----------------------|-------------------------------|
| Assignee             | AM Arzaan Mirza               |
| Labels               | None                          |
| Sprint               | JO3900 Sprint 1               |
| Story point estimate | None                          |
| Development          | <a href="#">Create Branch</a> |
| Reporter             | AM Arzaan Mirza               |

Created 21 February 2022, 04:21

Updated 3 days ago

Configure

Add epic / JO3900-15

As a Customer, I want to be able to view a list of all events that are coming up so I can attend one if I would like to.

[Add epic](#) / [JO3900-15](#)

[Attach](#) [Add a child issue](#) [Link issue](#)

Description

Prospective customers (anyone in the public) to view a list of events coming up in the next month that have not sold out.

Acceptance Criteria:

- Able to show all the events that are coming up.
- Must be automatically filtered by the start dates, in which events with closest start\_dates must show up first on the list of events.

Activity

Show: All [Comments](#) History

Newest first ⓘ

Add a comment...

Pro tip: press **M** to comment

To Do

| Details              |                               |
|----------------------|-------------------------------|
| Assignee             | AM Arzaan Mirza               |
| Labels               | None                          |
| Sprint               | JO3900 Sprint 1               |
| Story point estimate | None                          |
| Development          | <a href="#">Create Branch</a> |
| Reporter             | AM Arzaan Mirza               |

Created 21 February 2022, 04:22

Updated 3 days ago

Configure

[Add epic](#) / [JO3900-2](#)

① 1 ...

## As a Developer, I need to set up the Databases so that the team can use it

Attach Add a child issue Link issue

### Description

- Create the DynamoDB tables and the access for it.
- Set up the DynamoDB Database code for Python
- Create the functions which makes it easy for the group to POST & GET the database objects.

### Databases to set up:

- Account Details
- Event Details

### Acceptance Criteria:

- Able to use the POST method to successfully upload data to the DynamoDB tables.
- Able to use the GET method to successfully retrieve data from the DynamoDB tables.

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press M to comment

Done ✓ Done

### Details

Assignee AM Arzaan Mirza

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 19 February 2022, 23:59

Updated 16 hours ago

Resolved 16 hours ago

Configure

[Add epic](#) / [JO3900-12](#)

① 1 ...

## As an User, I want to be able to register so I can book/host tickets to an event.

Attach Add a child issue Link issue

### Description

- Hosts to register using username and password credentials.
- Prospective customers to register their details, including payment details, to become customers and be able to login.

### Acceptance Criteria:

- User is able to login using his correct username and password.
- User must have an unique username and must be denied access to register successfully if he uses an existing username already on the system.

### Activity

Show: All **Comments** History

Newest first



Add a comment...

Pro tip: press M to comment

In Progress ✓

### Details

Assignee AM Arzaan Mirza

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development Create Branch

Reporter AM Arzaan Mirza

Created 21 February 2022, 04:19

Updated 3 days ago

Configure

[Add epic](#) / [JO3900-20](#)

② 1 ⌂ ⌂ ... X

## As an User, I want to be able to login to an account that I have previously registered with

[Attach](#) [Add a child issue](#) [Link issue](#) ▾

### Description

- User is able to login using the details he registered with.
- Acceptance Criteria:**
- User is able to login using his correct username and password.
  - If he provides the wrong details of the username and/or password, then the system must deny him access.

### Activity

Show: [All](#) **Comments** [History](#)

Newest first ↗



Add a comment...

Pro tip: press **M** to comment

In Progress ▾

### Details

Assignee Arzaan Mirza

Labels None

Sprint JO3900 Sprint 1

Story point estimate None

Development [Create Branch](#) ▾

Reporter Arzaan Mirza

Created 4 days ago

Updated 3 days ago

Configure

These are the novelty functions user stories; they will be included in Sprint 2 of the project:

## Novelty Functionality 1 - Google Maps API

If one looks at EventBrite or Ticketek, it lists all the events and you're able to search them by location. However, this does not make it easy as there will be events in suburbs which you may miss out on if you don't search for that particular suburb. What makes our functionality unique, is that you can visually see where the events are within a particular radius. This makes it easy for a person to get an idea of where they would have to go and how they will get there (bus, train, walking, etc). Ticketek/Eventbrite limits the ability for hosts to advertise events in localities which don't have a CBD as customers won't be able to find out about them through their location search. Our unique functionality fixes this issue and makes it easier for customers to find events in areas apart from main CBDs like Sydney and Parramatta.

Projects / 3900-T14A-[name] / Add epic / JO3900-22

1 ⌂ ⌂ ...

**As a Customer, I want to see all the events that are in my city on a map, so I can visually make out how close these events are to me**

Attach Add a child issue Link issue

Description

- Using Google Maps API, collate all the current events and show their addresses on a Map.

Acceptance Criteria:

- The map must successfully show all the events that have been advertised in the city.

Activity

Show: All Comments History Newest first ↴

Add a comment...  
Pro tip: press M to comment

To Do

| Details              |                 |
|----------------------|-----------------|
| Assignee             | Unassigned      |
| Labels               | None            |
| Sprint               | JO3900 Sprint 2 |
| Story point estimate | None            |
| Development          | Create Branch   |
| Reporter             | AM Arzaan Mirza |

Created 7 minutes ago Updated 6 minutes ago Configure

## Novelty Functionality 2 – Favorites List

One of our other novelty functions is having a favorites list where customers can pick their add events to a personalized list so they can keep track of them in the future. This allows them to not lose track of events that they potentially want to attend. This functionality also notifies them of their upcoming event by sending them emails that an event they have favorited is upcoming. This will make it easy for customers to track their events and will encourage them to attend.

The favorites list will also be used along with past bookings to provide recommendations. The favorites list functionality will be helpful in giving more accurate recommendations to a customer.

The screenshot shows a Jira issue page for a feature request titled '3900-T14A-[name]'. The page includes sections for Description, Acceptance Criteria, Activity, and a detailed view of the issue.

**Description:**

- Create a favourites/love heart button on the events page which would add that certain event to a Favourites page.

**Acceptance Criteria:**

- Favourites page is created which lists all events that the customer has decided to favourite.
- Favourites page should successfully be able to list all the events that have been favourited.

**Activity:**

Show: All **Comments** History      Newest first

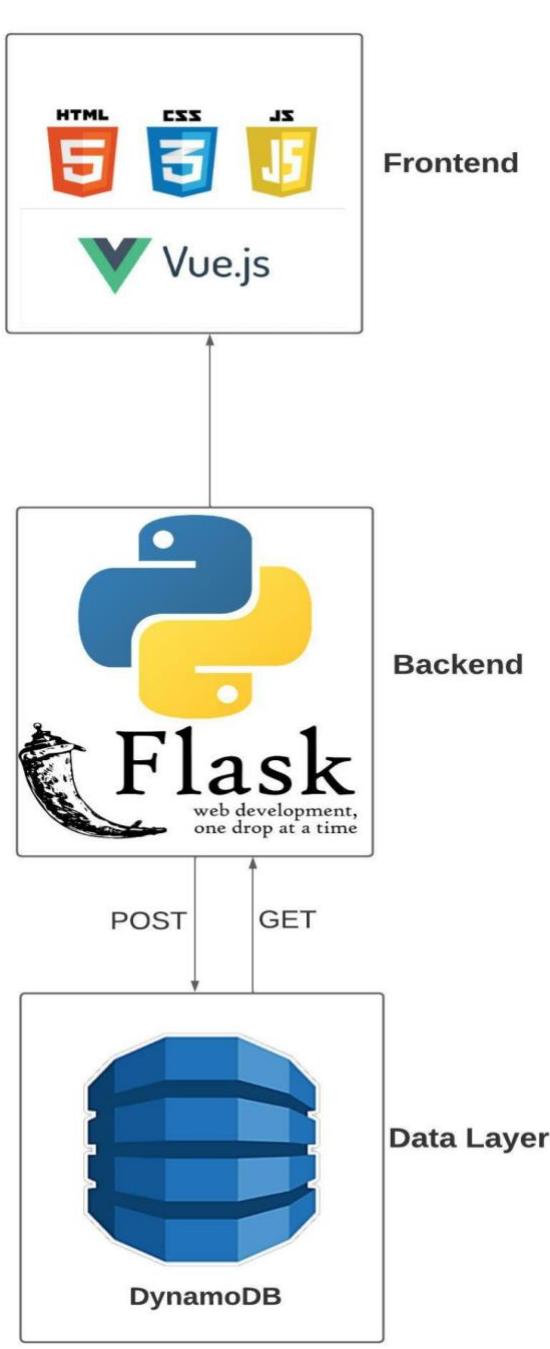
Add a comment...      Pro tip: press **M** to comment

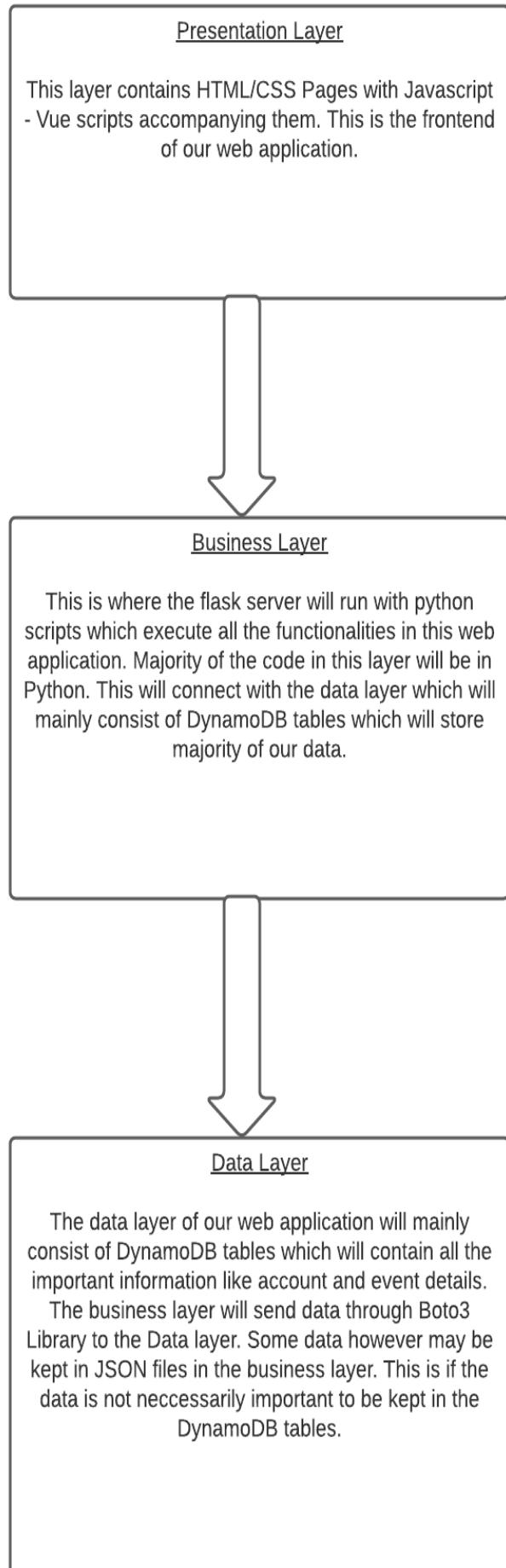
**To Do** 1      **Unassigned**      None      JO3900 Sprint 2      None      Create Branch      Arzaan Mirza

Created 3 minutes ago      Updated 14 seconds ago      Configure

# System Architecture

## Main Components:





## **Overview Of Functionalities:**

### **AWS Services:**

DynamoDB - NoSQL database service which uses key-value method to store data.

Lambda - event driven computing platform that can execute individual coding scripts.

SQS - messaging queue service that can be used to transfer data across different AWS platforms.

API Gateway - We can use API Gateway in the frontend which can trigger Lambda functions to execute a certain functionality.

S3 - Can upload any sort of file to an S3 Bucket which can then be retrieved.

SES or Twilio - simple email service which could potentially be used to send emails to customers

### **Frameworks used in our Code:**

Vue-JS - Frontend framework that will be used in our javascript scripts.

Boto3 - Boto3 library will be used to connect to AWS Services that we use through our code.

Flask - Flask is a web application development framework for the Python programming language. It is used in the backend web server.

## **User Types**

### **Customer:**

A customer can see all the events on the homepage of the website. However, if a customer wants to book tickets to a particular event then it must register and login to this website. On the registration page, they must provide their payment information so they are able to book it.

### **Host:**

A host is someone who wants to create an event for customers to attend. In order to create events, the host must register an account and login. Once he has logged in, he should be able to create news events. He can also edit these events afterwards in order to add new information.

## **In-Depth Information of Technologies:**

### **Flask**



Flask is a lightweight web framework which is written in Python. It will play the main role for our backend in this project. The reason we chose flask is because of its simple ability to create web applications compared to other frameworks such as Django. As Flask and Django were the main frameworks in mind when we were planning this project, we had to decide upon which one would be the most suitable for our project. As members in our group had good experience with flask and the fact that we would be using API calls for our AWS resources. We thought it would be the most beneficial to use flask as then we can just focus mainly on the functionalities that we have to implement.

## DynamoDB



DynamoDB is a NoSQL key-value database service that we will be using to store our information. This AWS service will be mainly used to store information regarding the account details of users and event information. The main reason we have used this database is for its simplicity and its ability to do API calls within code which makes it easy to implement. The way our group has used DynamoDB is by managing the tables (creating, editing, deleting) through the AWS

console. Then through the use of Boto3 (AWS API which is used to manage AWS resources) on our python scripts we call the corresponding GET and POST requests. In Boto3, the POST request is PutItem() and the GET request is GetItem(). This documentation linked here shows the numerous API calls we will potentially be able to use in this project: (S3 — Boto3 Docs 1.21.13 documentation, 2022)

<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/dynamodb.html#client>

Another reason for using DynamoDB is the option of the free tier package that we can use which gives us 25 gigabytes of storage data which is more than enough for this project. Along with this we get 25 Write & Read capacity units. This means that per second, DynamoDB will be able to POST and GET up to 25 of those requests each per second. This makes this service extremely fast and also flexible.

DynamoDB tables consist of items in which each item is a row of data. Each item/row will have a primary key which would be the unique identifier in the table. It is also possible to have secondary indexes so that there is an efficient way to access records in a database.

## Lambda



Lambda is an AWS service in which you can trigger coding scripts to do a particular task. It is event-driven and is based on the serverless computing platform by Amazon Web Services. The main reason we will be using Lambda's is if there are components in our website in which it will be useful to trigger lambda independently from our flask backend. Lambda's It will be used on a case by case basis depending on the circumstances. (Lambda — Boto3 Docs 1.21.13 documentation, 2022)

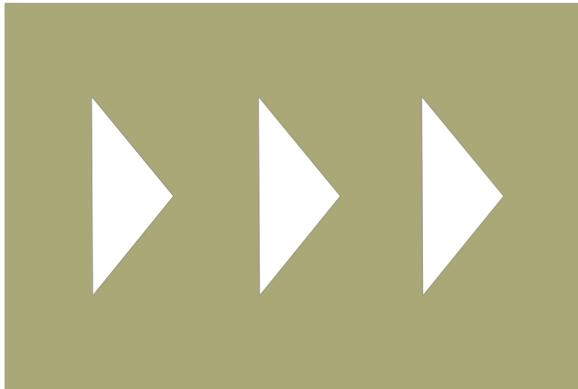
### Potential Uses Could Be:

- One of the potential uses would be to call external services like API's. One of the common reasons for slow downs on web frameworks like Flask, is when it waits for a response from an API. If we call the API within the Lambda then the Flask won't face slowdowns and will be able to operate more efficiently.
- Another potential use would be for data processing. If for some reason that we would need to process data and it can be decoupled from our backend. We can use Lambda to process the data. This would also be beneficial from the perspective of managing our resources efficiently so that we decouple our resources so that our backend is not responsible for analyzing/processing large amounts of data and lessens the probability of our Flask app crashing.

We will be managing our Lambda's fully through the AWS console as that has a very simple user interface and is easy and quick to implement through there.

Like DynamoDB, Amazon Web Services provides a free tier option for AWS Lambda. We would get 1 million requests free per month on this free tier option which makes it very useful for us to use in this project.

## SQS (Simple Queue Service)



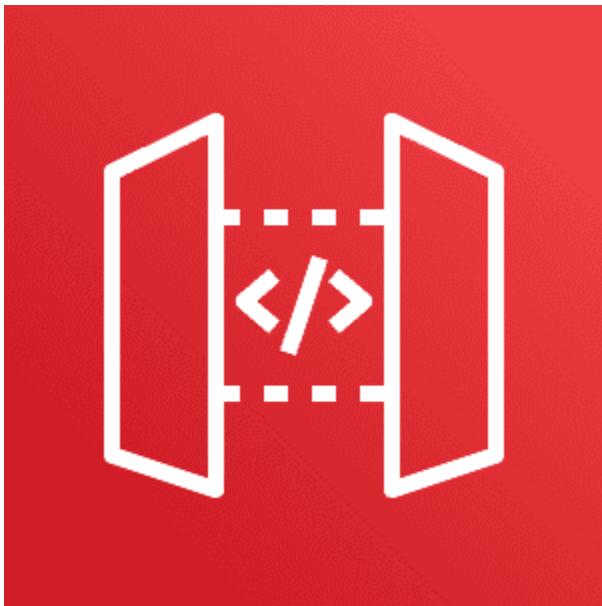
SQS, which is known as Simple Queue Service, is an AWS service that provides the ability for AWS resources to talk to each other. It acts as a middle man which allows one AWS service to send data to another AWS service. This is very useful as there could be cases where for example, we have two Lambda's which implement different things. The first Lambda may first gather the data and process it. Then it may use SQS to send it to another Lambda which may send this data to our DynamoDB for storage.

### Potential Use Cases:

- Data transferring between multiple Lambda services.
- Triggering AWS services by sending data through Boto3 on the flask backend, which will send it to another Lambda for processing/analyzing.

The SQS service will be set up using the AWS console due to its flexible and easy user interface. However, it is possible to send data through our Flask backend to the SQS service using Boto3, which is the AWS API that we discussed earlier in the DynamoDB section. It allows us to make API calls to AWS resources that we have created. We will be using the `send_message()` method API call to potentially send messages from the Flask backend to the SQS (SQS — Boto3 Docs 1.21.13 documentation, 2022). Like other services in AWS, there is a free tier option available in which we get 1 million SQS requests free. This allows us to do plentiful requests to SQS for this project.

## API Gateway



API Gateway is a service which allows creating an API which can trigger other AWS services to get a desired result. While this service has numerous uses, we will be mainly using this in conjunction with Lambda. The most common use would be if a user clicks on a link on the website. The frontend would have JS scripts which would trigger the API link that will be set. This will then trigger a lambda and will send back the latest data which would be stored in a DynamoDB table. This would be very useful in cases where the latest information is very important for the website functions.

Like checking during the booking if a seat has already been booked or not. This will allow synchronous bookings and will also alert users of booking seats that have just been booked.

Potential Use Cases:

- Posting the latest data for components which require real-time synchronization.
- Getting the latest data for components which require real-time synchronization.

The API gateway service will be set up using the AWS console, it will have GET and POST requests and will be used for seating bookings. When you create an API gateway, a link is created which you have to use to call that API which in turn uses the backend data services to POST/GET the data (API Gateway — Boto3 Docs 1.21.13 documentation, 2022). This is an example code of how to use it:

Url = API Endpoint

```
<script>
// ...

fetch(url)
.then((response) => {
    return response.json();
})
</script>
```

## S3



S3 is a storage service provided by AWS in which you can upload either through console or code objects which can then be later retrieved. The free tier allows 5 gigabytes of data free which makes it useful in this project where we need to use images/documents that a user publishes/uploads to our website. For example, when the user creates an account, we may have an option where he can upload a profile picture. Now this profile picture will be uploaded to a S3 bucket which will be the storage space for it. Now, if we have to retrieve this picture in our backend, we can just call the `download_file()` method in the Boto3 for S3 which would allow us to

download the file and send it to the frontend for publishing on the website. The ability to easily save and retrieve files which may be in large files makes the S3 bucket a very useful mechanism. (S3 — Boto3 Docs 1.21.13 documentation, 2022)

### Potential Uses Cases:

- Uploading and retrieving pictures to use on the website.
- Ability to upload documents to the website for some scenarios.

The S3 Boto3 Documentation has several API calls which are useful:

<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html#client>

This service will easily allow us to manage our data objects like images/documents rather than storing it through our Flask backend which could potentially cause slowdowns.

## Google Maps API

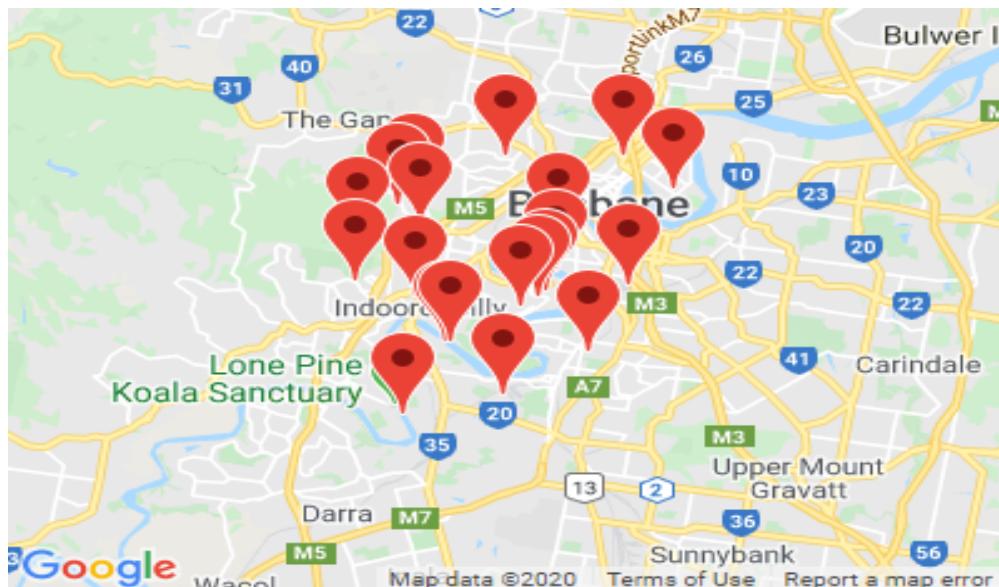


# Google Maps Platform

The Google Maps API will be used to complete one of the novel functionalities. In this a customer will be able to view all the events near him. This will be another way where customers are able to view events rather than viewing them as a list. They can use Maps for a more visually superior experience. (A lightweight Google Maps plugin for Vue, 2022)

The aim is to collate all the addresses where events have been advertised and give markers on maps of all events within a certain radius.

An example of what we are aiming for is this:



We will be using Vue framework for our JavaScript framework and are planning to use a lightweight Vue.js plugin that we found online. More information on this plug is on this website: <https://vuejsexamples.com/a-lightweight-google-maps-plugin-for-vue/>

## **Functional Requirements**

- 1. Register and be able to login to an account with the username and password.**

Users will be able to register a user account. A username and password will be required to register a user account. Usernames must be unique, and passwords must meet a certain strength requirement.

- 2. Host can advertise a new event so others can see the event.**

Event hosts will be able to advertise new events. New events will be visible to other users.

- 3. View all the events that are coming up.**

Users will be able to view all upcoming events.

- 4. Be able to book tickets for an event.**

Users will be able to book tickets for upcoming events.

- 5. Broadcast events to all the customers who have booked an event.**

Users will receive broadcasts for all events that they have a ticket booked for.

- 6. Recommendations for events based on the customer's past event history.**

Similar events will show up first when the user is browsing through the general event list

- 7. Show all the events in a city through a map. / Display nearby events?**

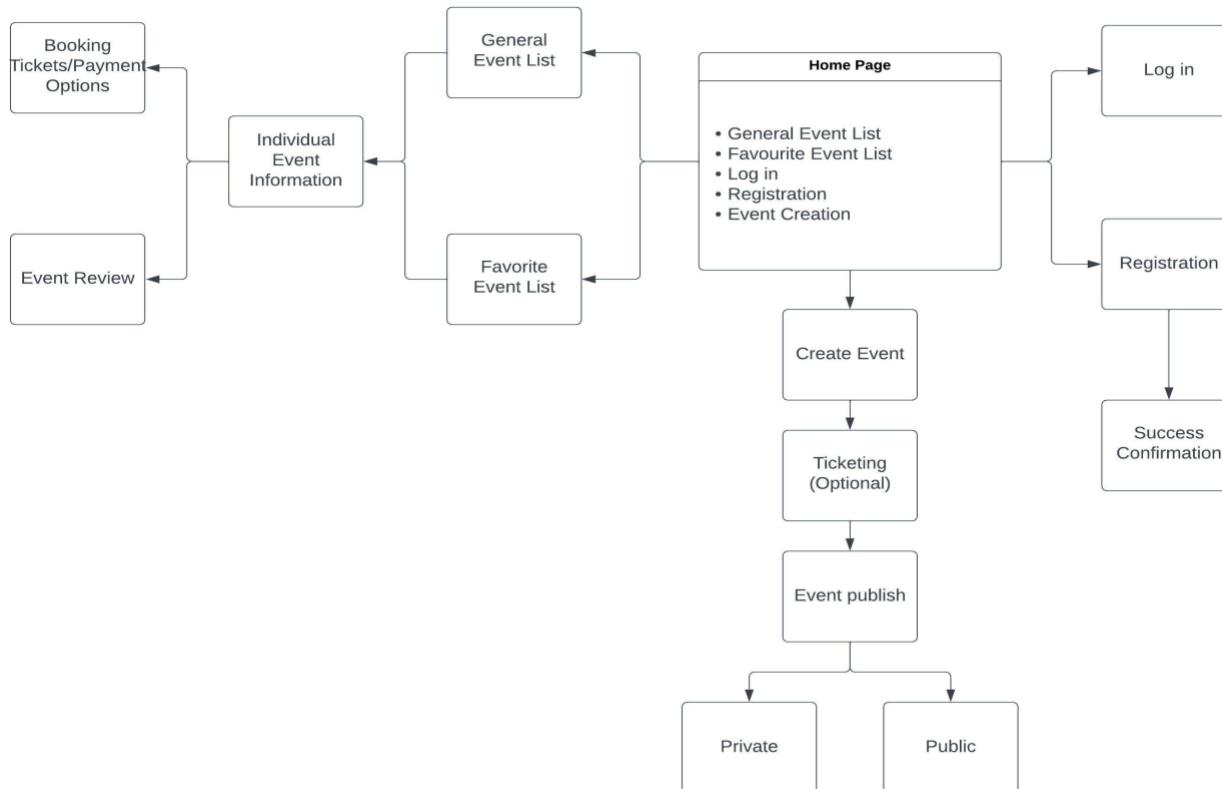
The user can see all the events happening in the suburb the user is located in.

- 8. Have a favorites list where customers can save their events for future use.**

Other than the general event list, each user will have a unique event list to store their favorite events for future use.

## Basic System Interface

The system will not take the same form as the images shown below, but its functionality will be designed based on the concept of the following images.

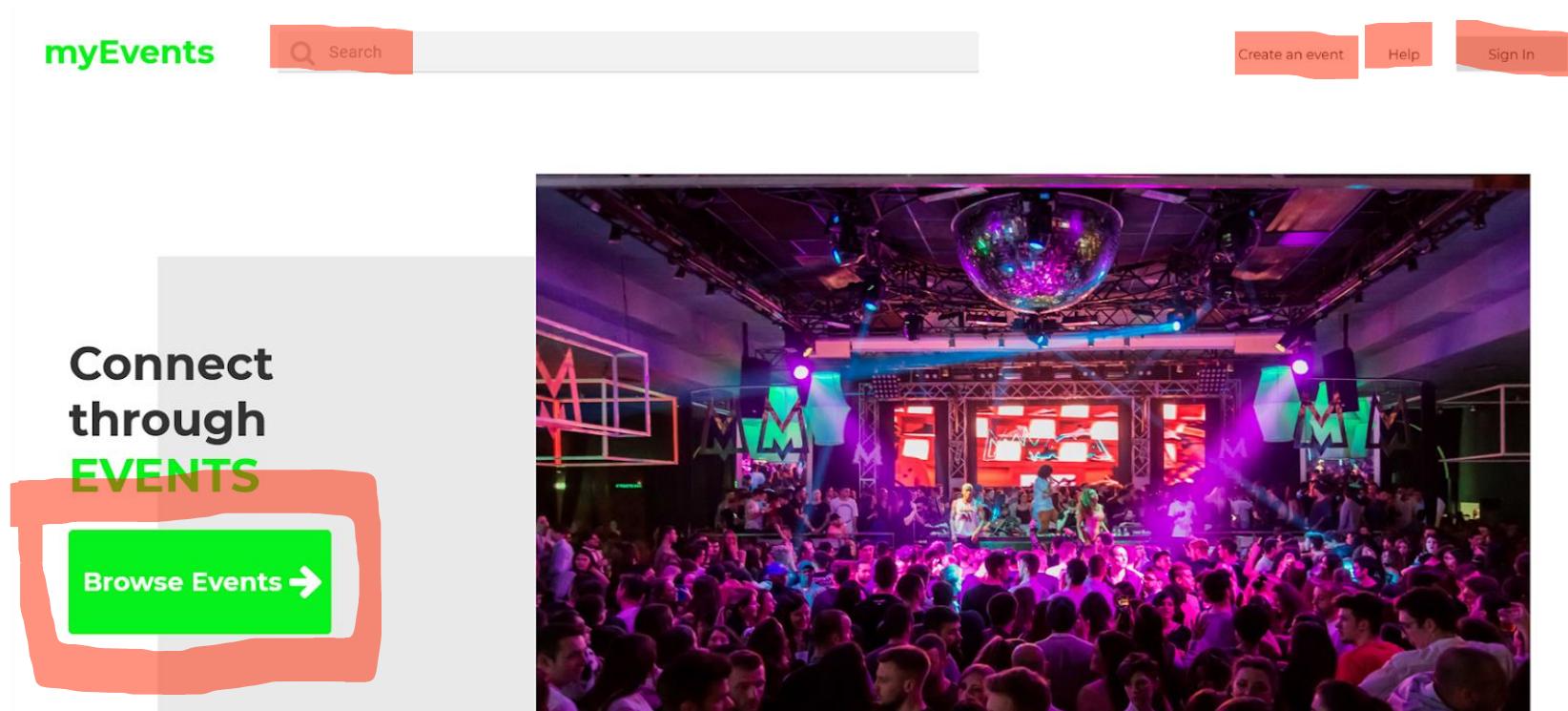


---

(Relation Diagram)

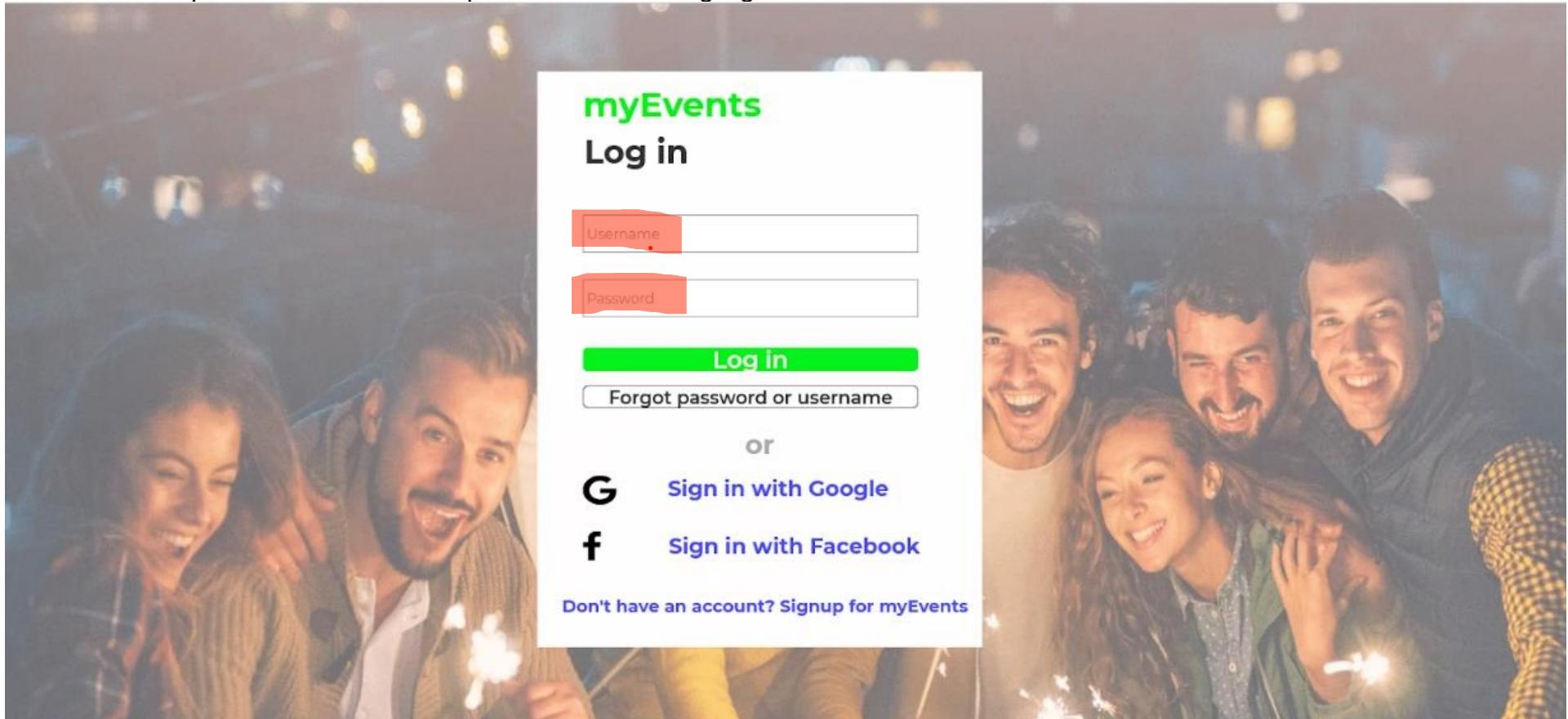
- ***Home Page***

This is the first page all registered and unregistered users will see when they enter the website. It will lead to all the rest of pages on the website



- ***Sign in page***

This is the page for registered users to log in and to access more information and tools on the website. This page requires user to input their username and password into the highlighted area



- **Registration Page**

This page is for the unregistered guest to become a registered member of the website. Guests need to put in their personal details such as first name, last name, email, date of birth and password.

**myEvents**

**Sign Up**

**First name**

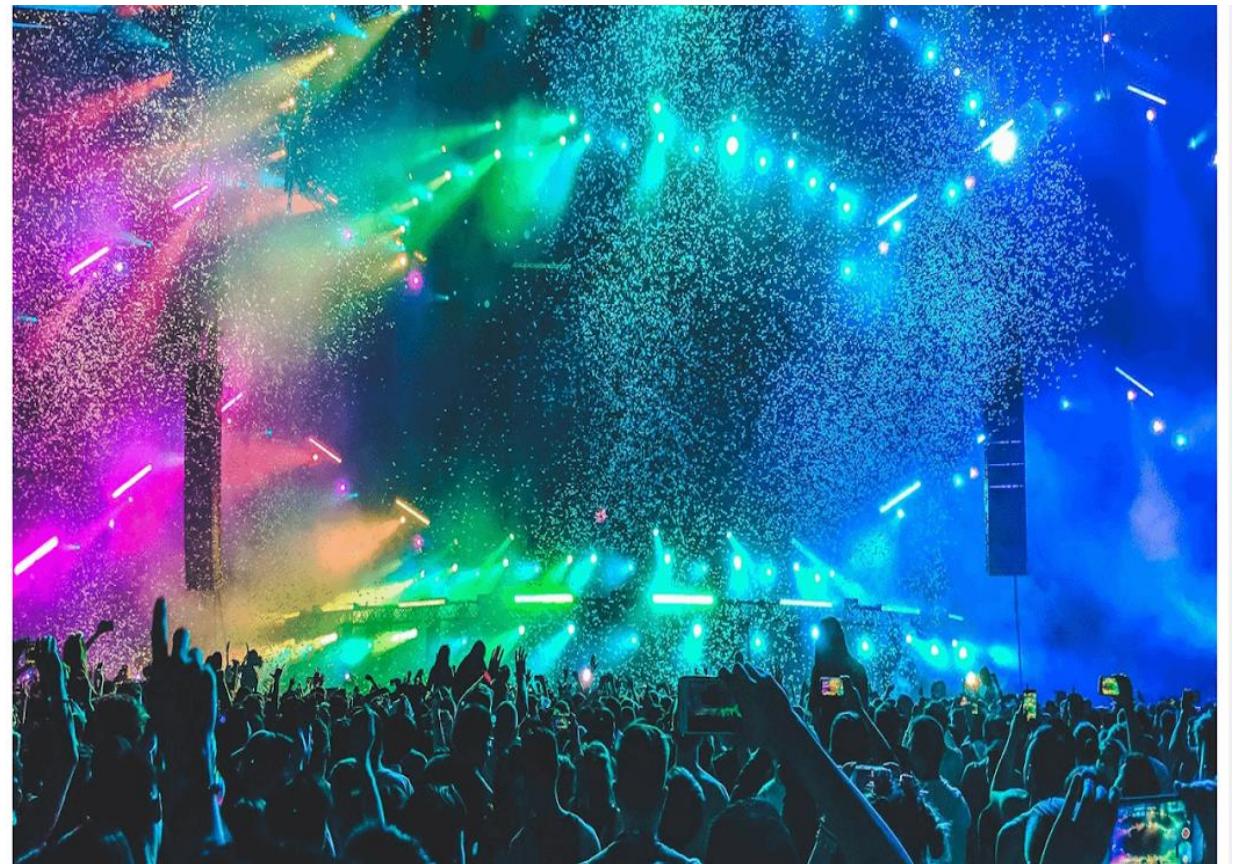
**Last name**

**Email**

**Password**

**Date of birth**  
Day  Month  Year

**Next →**



- **Account made**

This page requires no interaction from the user, it is simply telling the guests they have successfully becoming the member of this website.

**myEvents**  
**Sign Up**

## Sign up confirmation



Please check your email  
to activate your account

[Back to Home Page ➔](#)



- **Creating and Publishing an Event**

This page is only accessible to registered users of the website. It is a quick and simple way to create the event by uploading a picture of the event(must be relevant), then adding description of the event and necessary information such as date, time and locations. Finally, publish the event as a public event or a private event.

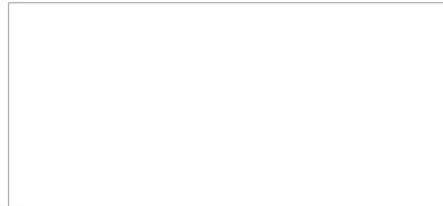
**myEvents**

**Event Image**

Drag & drop or click to add main event image  
JPEG or PNG, no larger than 10MB

**Description**  
Add more details to events like your schedule, sponsors or featured guests

**← Back**    **Next →**



(Event image and description)

## myEvents

### Basic Information

Name your event and tell people why they should come

Tell people who is organising the event

Type  Category

Tags to improve discoverability

**Next →**



(Basic event information)

## myEvents

### Location

Let people know where the event is

Venue location

### Date and time

Single

Recurring

Event starts

Start time



Event ends

End time



← Back

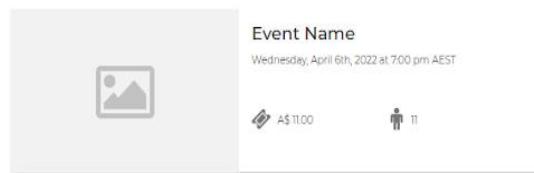
Next →



(Event date, time and location)

## myEvents

### Publish your event

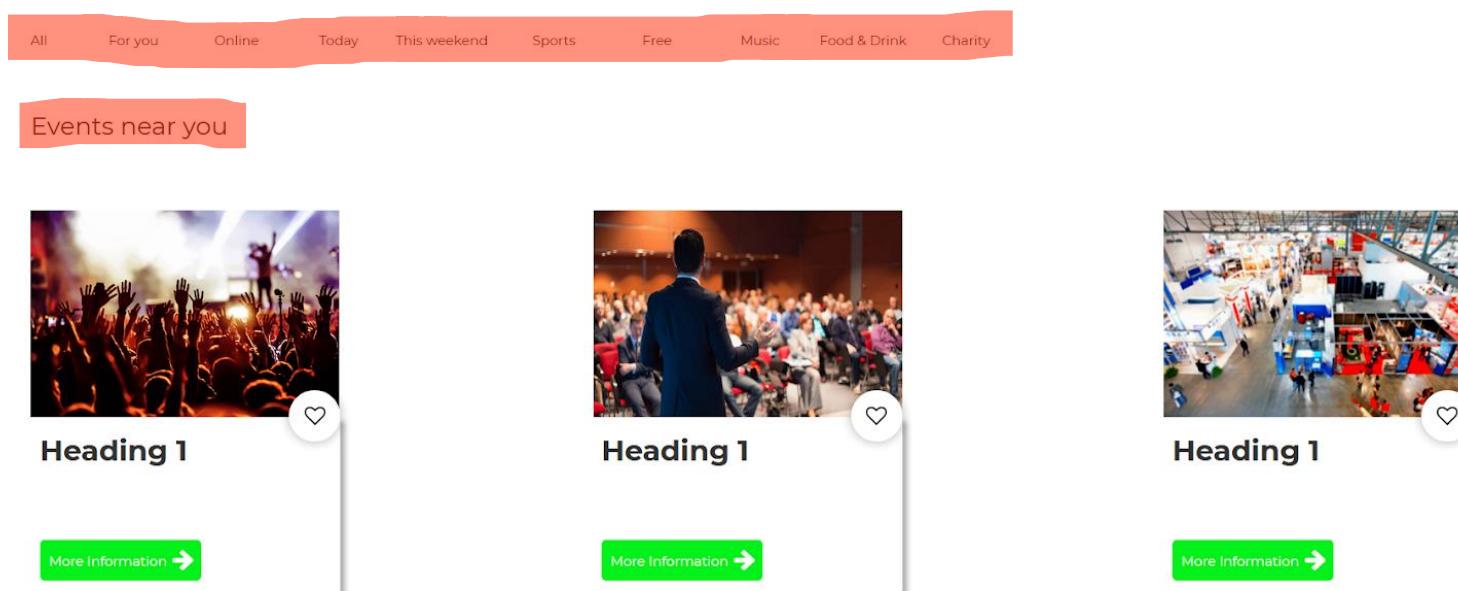


(Event status, public or private)

- **General Event**

Registered users can browse through all public events by clicking “Browse Events”. There will also be a search bar to allow users to find specific public events. Private events will require invitations to be viewed and will not show up on the public event list. Depending on user preference, events near the user's current suburb will be displayed first, or similar type of events that the user attends to before.

### Popular events right now



- **Event Information**

This page is for the non-event host users. It will display all information that is provided by the event host, including the location of the event, the name of the event, the start and end time of the event and the type of event. (e.g public or private, age restriction or no age restriction etc).

The screenshot shows a web page for a concert event. At the top left is a large image of a concert stage with performers and a cheering crowd. To the right of the image is a summary box containing event details. Below the summary is a ticket purchase section. Further down are sections for event description, performers, date and time, location, and tags.

**Event Summary:**

- Date: Mar. 25
- Event Name: Sample Concert Event
- More event information: [More event information](#)
- Price: A\$40 - A\$50

**Tickets:** [Buy Tickets](#)

**Description:**

**Performers:**

**Date and time:**  
Fri., 25/03/2022, 10:00pm -  
Sat., 26/03/2022, 5:00am AEDT

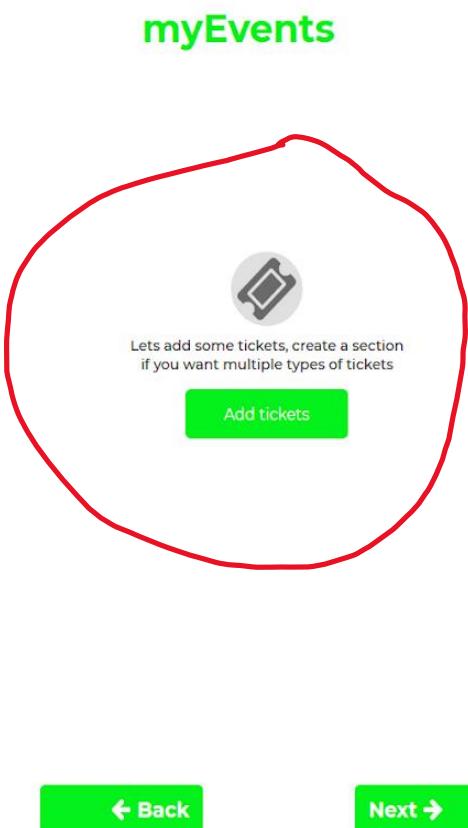
**Location:** [View Map](#)

**Tags:**

- Random Tag 1
- Random Tag 2
- Random Tag 3
- Random Tag 4

- **Ticketing**

If the event hosts choose, they can sell tickets for their event; this feature should be used after an event is already created. This page requires hosts to put in the number of tickets they are selling, expiry date of the ticket and the price of the tickets.



**myEvents**

Paid      Free      Donation

Name

Available Quantity

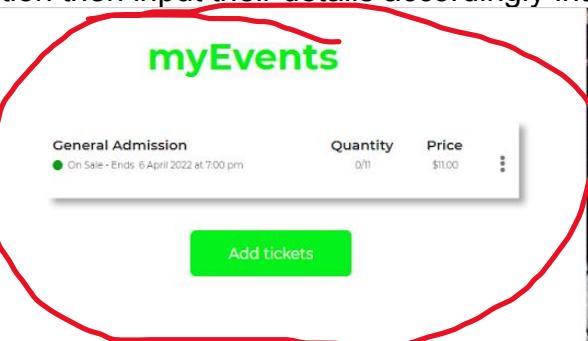
Price  
 \$ 0.00



(Ticket numbers & Price)

- **Booking Tickets / Payment Options**

This page is for all non-event hosts to book for an event that requires a ticket to enter. It will require users to choose payment option then input their details accordingly into the highlighted area.



The screenshot shows a user interface for booking tickets. At the top, the text "myEvents" is displayed in green. Below it, there is a section for "General Admission" with a status message: "On Sale - Ends: 6 April 2022 at 7:00 pm". To the right of this are fields for "Quantity" (set to 0/1) and "Price" (\$10.00). A red oval highlights this entire "General Admission" section. Below these fields is a green button labeled "Add tickets". At the bottom of the screen are two buttons: a green "Back" button with a left arrow icon and a green "Next →" button with a right arrow icon.



(Adding ticket to the chart)

myEvents

Search

Create an event

Help

Sign in

## Event Name

Fri, 25 Mar 2022, 10:00 PM - Sat, 25 Mar 2022 5:00 AM AEDT

**Ticket**

A\$40.00 -\$A50.00

Quantity ▾

Checkout

Performers

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet. Proin gravida dolor sit amet lacus accumsan et viverra justo commodo.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet. Proin gravida dolor sit amet lacus accumsan et viverra justo commodo.

(Choose the ticket from chart to pay)

myEvents

Search

Create an event

Help

Sign in

## Event Name

Fri, 25 Mar 2022, 10:00 PM - Sat, 25 Mar 2022 5:00 AM AEDT

### Contact Information

First Name

Surname

Email Address

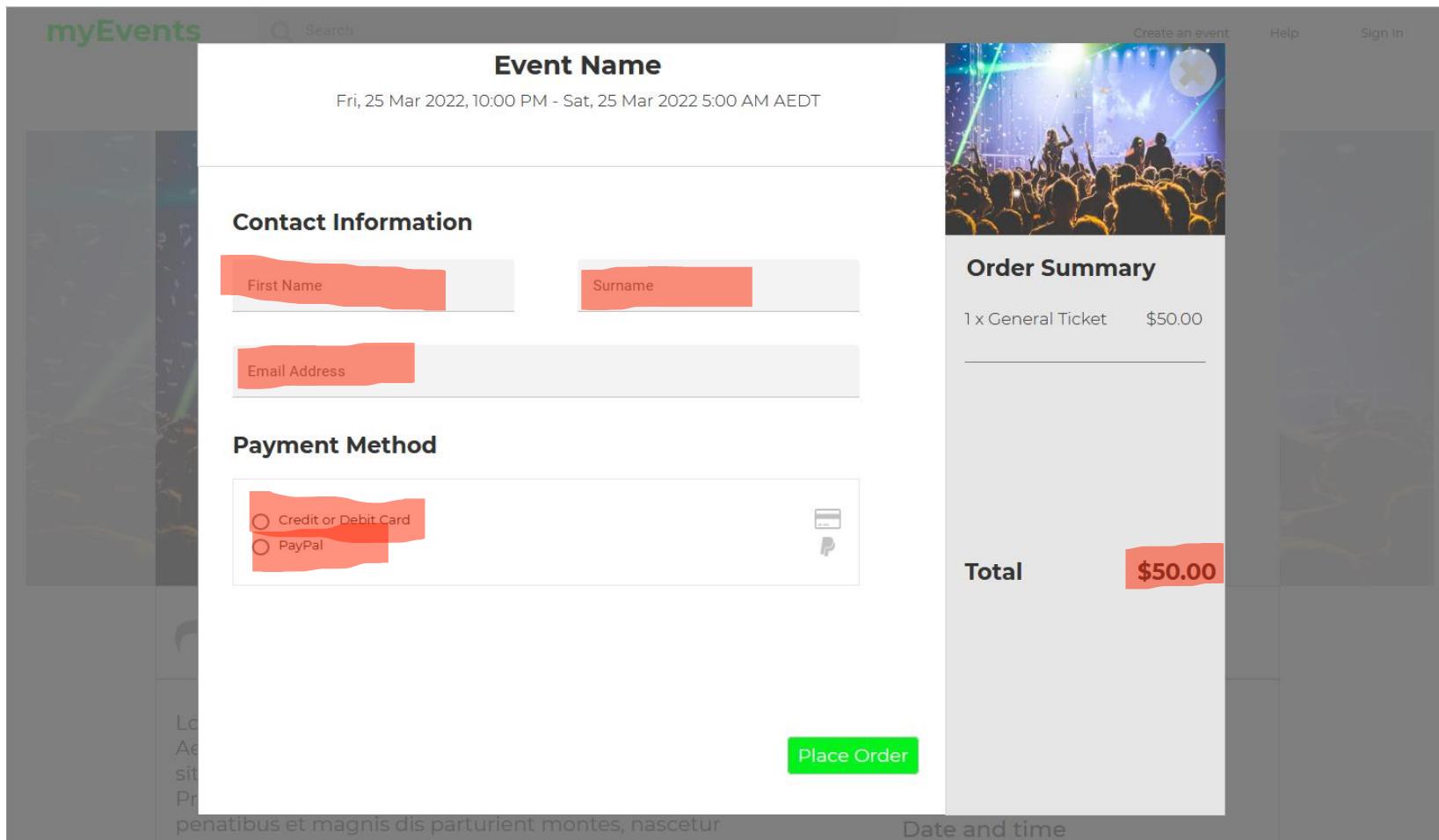
### Payment Method

Credit or Debit Card

PayPal

Place Order

Total \$50.00



Loc  
Ae  
sit  
Pr  
penatibus et magnis dis parturient montes, nascetur  
Date and time

(Payment options)

- **Checking Reviews**

This function is open to all registered users of the website, simply type in the review of an event under event pages' text box and press publish. The user review will be seen by everyone who entered this event page.



**Username**  
Lorem ipsum dolor sit amet,

★★★★★

**Random Review**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet. Proin gravida dolor sit amet lacus accumsan et viverra justo commodo. Proin sodales pulvinar sic tempor. Sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam fermentum, nulla luctus pharetra vulputate, felis tellus mollis orci, sed rhoncus pronin sapien nunc accuan eget.

 Helpful    Add comment    Share



**Username**  
Lorem ipsum dolor sit amet,

★★★★★

**Random Review**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet. Proin gravida dolor sit amet lacus accumsan et viverra justo commodo. Proin sodales pulvinar sic tempor. Sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam fermentum, nulla luctus pharetra vulputate, felis tellus mollis orci, sed rhoncus pronin sapien nunc accuan eget.

 Helpful    Add comment    Share

[See more](#)

## **References:**

1. S3 Boto3.amazonaws.com. 2022. *S3 — Boto3 Docs 1.21.13 documentation*. [online] Available at:<<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html>>
2. SQS Boto3.amazonaws.com. 2022. *SQS — Boto3 Docs 1.21.13 documentation*. [online] Available at:<<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/sqs.html>>
3. Lambda Boto3.amazonaws.com. 2022. *Lambda — Boto3 Docs 1.21.13 documentation*. [online] Available at:<<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/lambda.html>>
4. DynamoDB Boto3.amazonaws.com. 2022. *DynamoDB — Boto3 Docs 1.21.13 documentation*. [online] Available at:<<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/dynamodb.html>>
5. API Gateway Boto3.amazonaws.com. 2022. *DynamoDB — Boto3 Docs 1.21.13 documentation*. [online] Available at:<<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/apigateway.html>>
6. Vue.js Examples. 2022. *A lightweight Google Maps plugin for Vue*. [online] Available at: <<https://vuejsexamples.com/a-lightweight-google-maps-plugin-for-vue/>> [Accessed 5 March 2022].