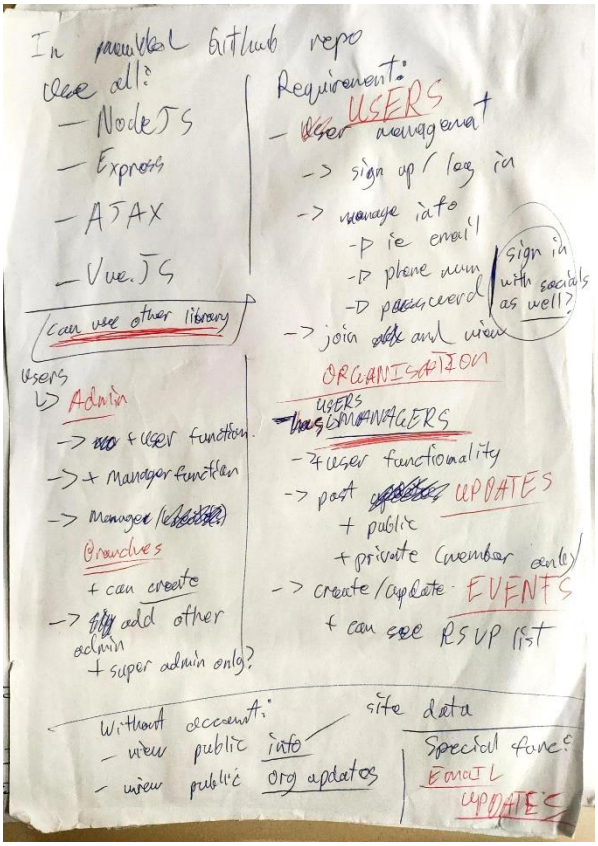
Group 75 Project – Planning Document

Features:

This section lists and explains all the user-interactable features *on the website* that will be present in the final product:



Initial sketch of design requirements and functionality from planning stages.

- User Management
  - Each user can modify their basic info
  - Can join ***many*** organisations
  - Can have a role, currently either being a server admin, or an organisation manager.
- Organisations
  - Created by server admins, not users. (for now?)
  - Is managed by ***one*** defined user.
  - Contains *updates/posts*
    - Has a title, and body
    - Toggle for public display.
    - Displayed in ‘blog’ style on a specific page of the website
    - Created by the manager
  - Contains *events*
    - Has a title, and description
    - Contains an event date
    - Displayed publically.
    - Users can RSVP to an event, and a manager can view this.
    - Created by the manager
  - Managers
    - Can create events and updates
    - Can edit events and updates
- Admins
  - Can edit events and updates.
  - *Can create new organisations on the website*.
- Users
  - Can join any number of organisations
    - Can view any non-public updates from those organisations
- Public
  - Can view any public page, and public update.

These basic requirements are likely to be extended, but as of milestone 1 they are the basic requirements we will be aiming to achieve. These requirements are what informed the basic design of the website, along with its framing.

Basic Design and Framing:

We are framing the project as a videogame addiction assistance website in order to give us some context to work with when designing the website, more specifically focused on League of Legends, since it's a popular game.

The website is designed for individual organizations who are associated with the cause to create and manage an online presence through our website, with each organization being associated with a chosen area local to them. This should help us frame a lot of our decisions around what might work best for our concept website.

Design Goals:

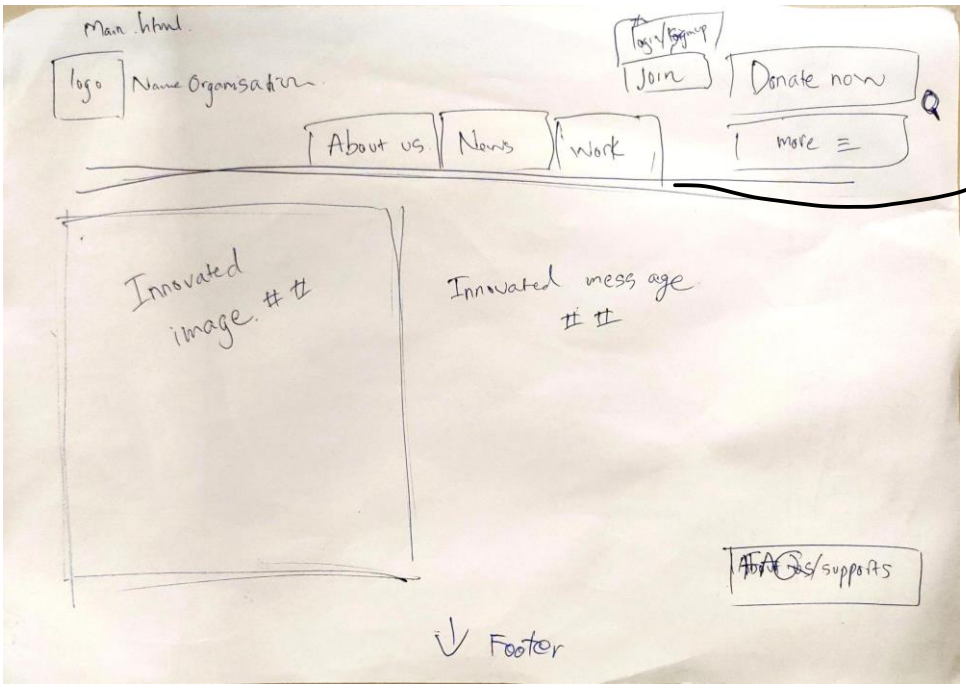
This section contains an explanation of the design goals that are to be focused on within the project:

1. Visibility of System Status
    - Current page will change colour to indicate in the header the user's current location on the website.
    - Interactable elements will be highlighted to users on mouse hover, providing strong UX responsiveness.
2. User control and freedom
    - Consistent accessibility of webpages from links in header
        - Role specific rendering for roles, ex. Rendering edit post content button only for managers. Streamlines usability.
3. Consistency and standards
    - Page styling will follow a consistent theme for visual cohesion and brand identity.
4. Error prevention
    - Update Profile page will ask for confirmation to delete profile in case of a mis-click
    - Changes to fields in Update Profile will only persist once Update profile button is clicked
5. Recognition rather than recall
    - Pages displaying all relevant information as concisely as possible to reduce cognitive load from navigation and scrolling (such as the user settings page)
    - Important functions are given prominence, with due consideration when designing UX (big buttons, proper ordering, etc.)
    - Checkboxes may be added to events.html and updates.html
        - Users can tick a checkbox to opt in to receiving emails from the org whose page they are on
        - Each checkbox corresponds to a different type of email

    - These checkboxes will be mirrored between events.html and updates.html of the same org
    - Opting in and out of emails is convenient as the checkboxes are available at related pages
6. Flexibility and efficiency of use
    - Members will have more limited features than Managers and Admins
        - Members will not have to worry about irrelevant features
        - Managers and Admins will have access to features related to their level
7. Minimalism
    - All webpages are designed to be as accessible as possible, using as few buttons and sub-menus to serve the main functions of the website.
8. Debugging and user reported errors
    - Using error codes and page redirects to assist in debugging should prove useful given the correct implementation.
9. Help and documentation
    - Link to an FAQ may be linked in the footer of the page template – ideally shouldn't need to though.

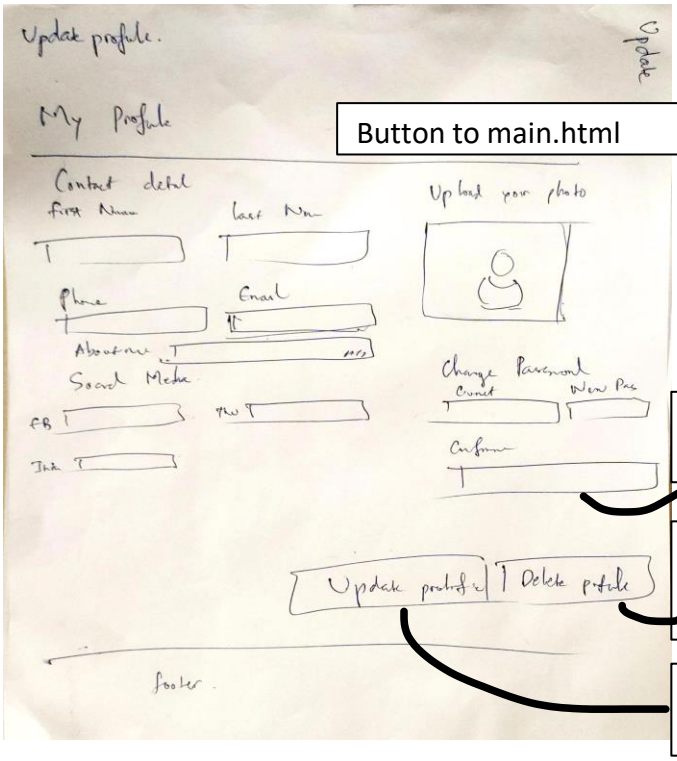
Design Sketches:

The purpose of this section is to provide a design mock-up/sketch of the final implementation just to use as a reference when designing the webpages.



Selected tab will change

Button will change colour on mouse

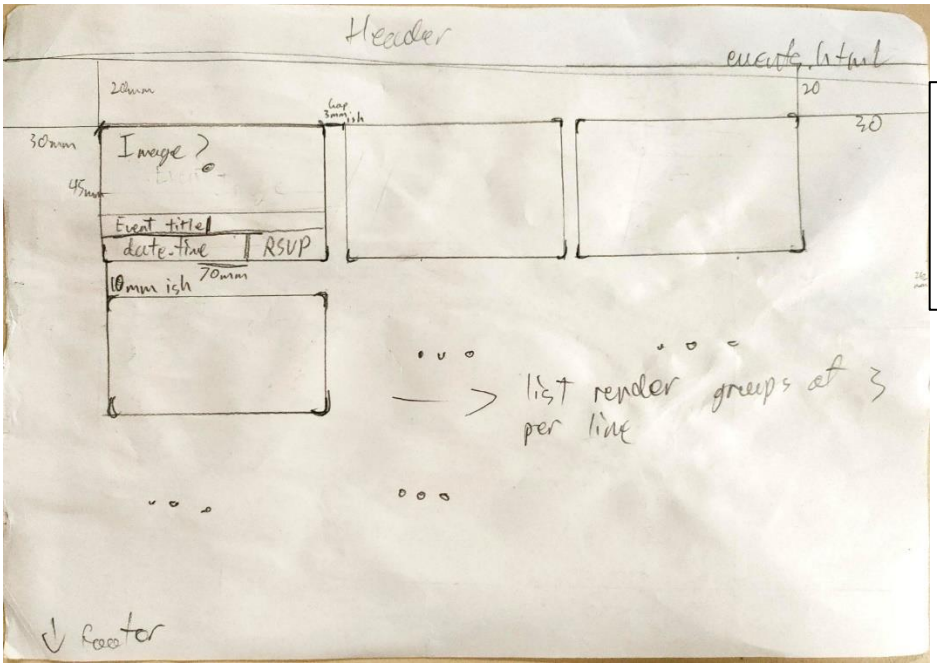


Button to main.html

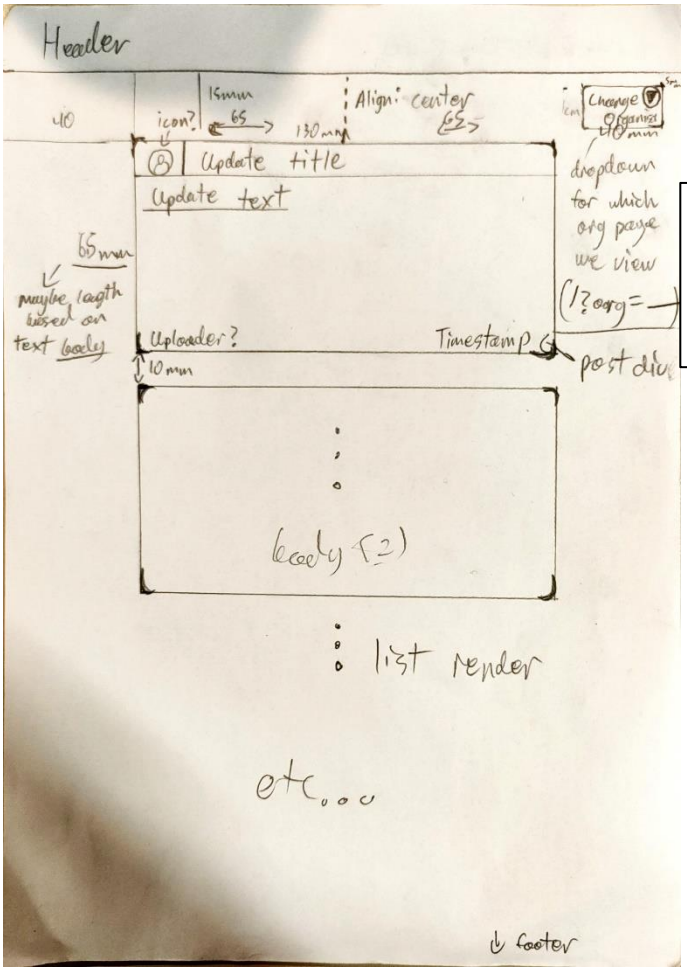
User will need to input password twice to change

Prompt will ask for confirmation

Changed details only save when button is



Checkboxes that user can click to opt in to emails. Checkboxes correspond to different types of emails the user can choose to

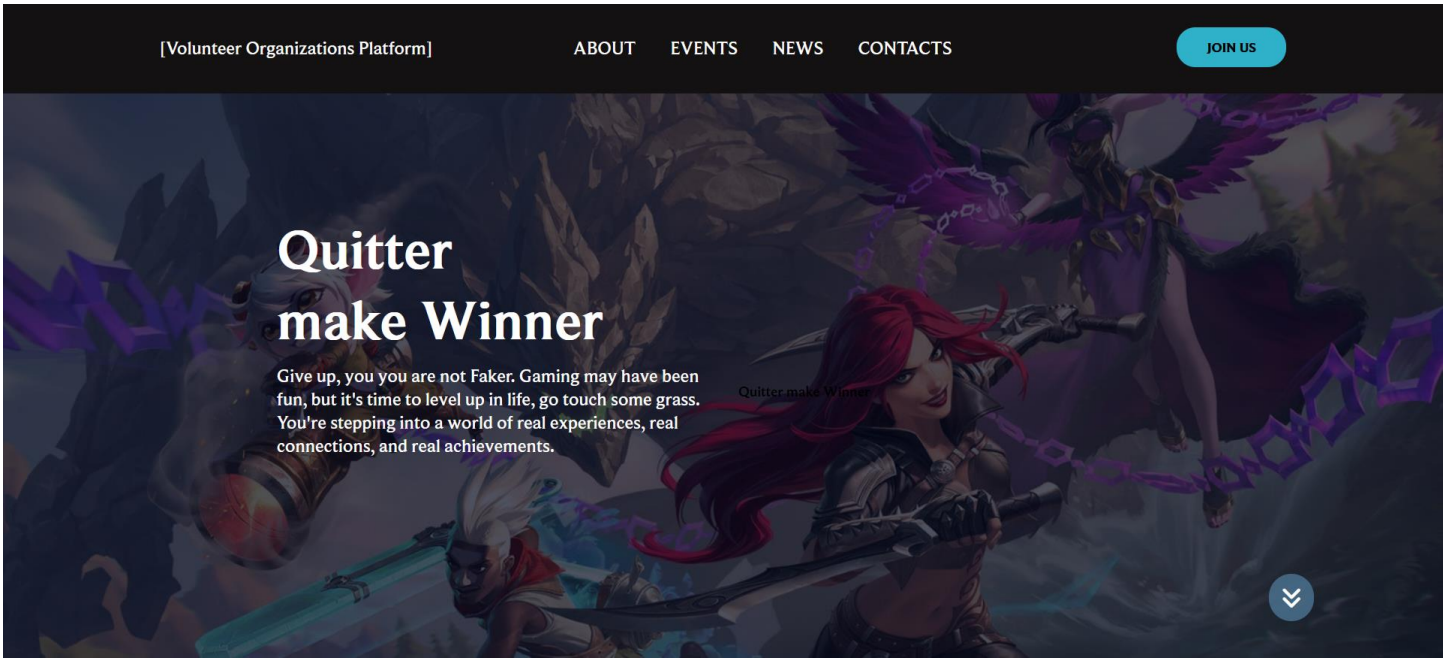


Checkboxes that user can click to opt in to emails. Checkboxes correspond to different types of emails the user can choose to

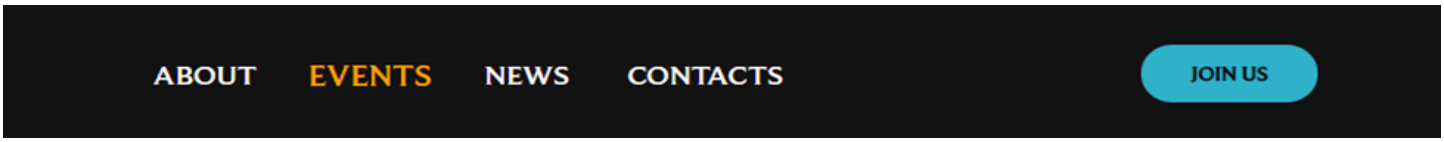
Milestone 1 Webpage Design:

This final design heavily draws inspiration from the websites we researched. Our goal is to convey a positive message through a combination of innovative quotes and captivating imagery, all visible briefly on the homepage.

We believe that a single powerful quote paired with an impactful image can instantly uplift visitors and set a positive tone for their browsing experience.

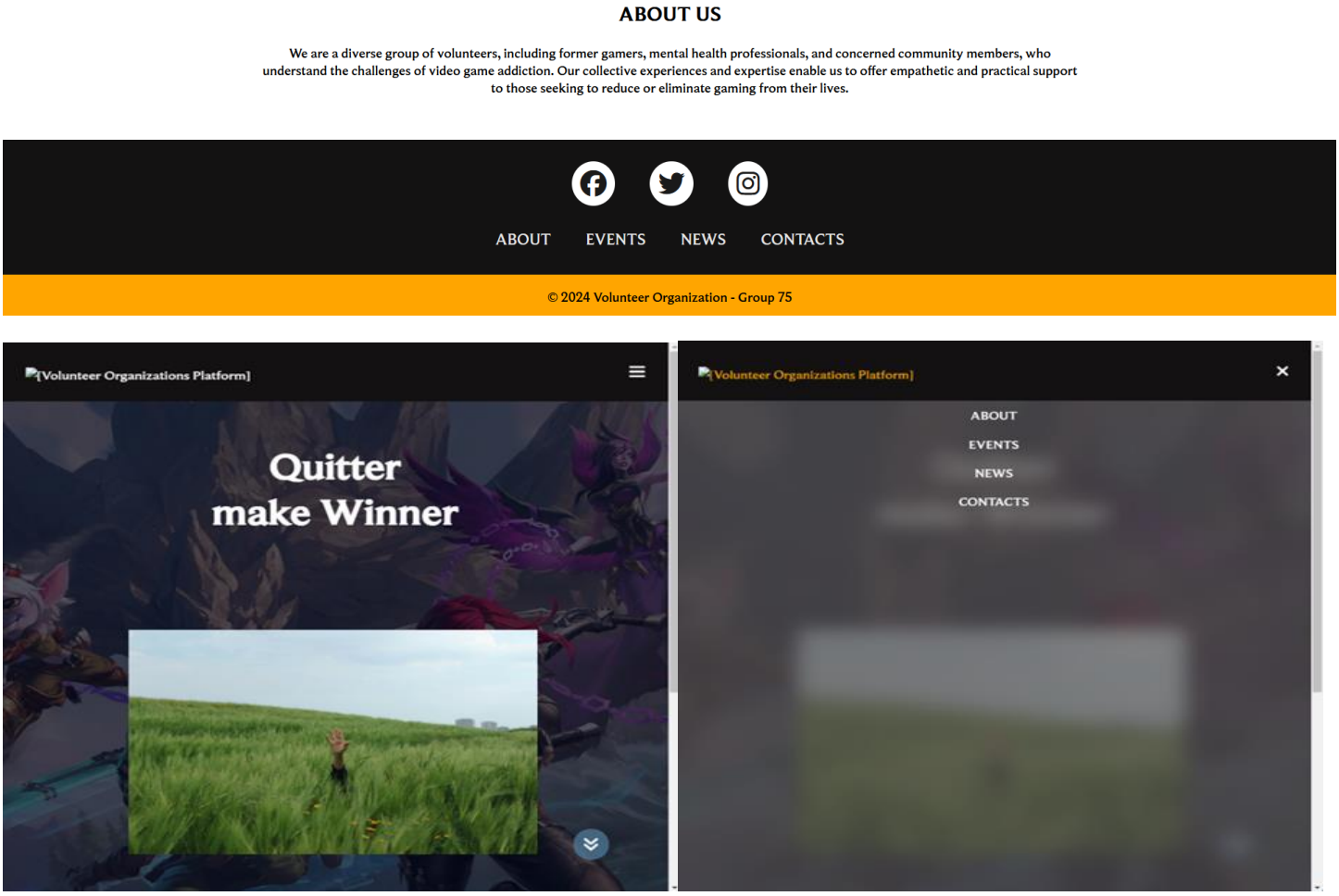


The primary colour scheme utilized throughout the website consists of orange and blue tones, drawing considerable influence from the aesthetics of the video game the project is based on, League of Legends.



We also enhanced the interactivity of the page by incorporating CSS hover effects, which create a pop-up effect when users hover over elements containing URL attributes. This feature has been implemented as part of the main page template, creating a more modern ‘feel’ for the page.

Examining the main page and footer, you will notice ample white space is used to facilitate easy scanning and reading. This deliberate choice avoids overwhelming the reader with cluttered content, thus enhancing engagement, and fostering a positive browsing experience on the website.



Expanding on interactive website development, we further explored responsive design principles. Our research included studying resources such as W3Schools' guides and reading several example templates. This gave insight into creating layouts that can adapt to different screen sizes and devices, ensuring our website is accessible and user-friendly across various platforms.

Here is an example snippet of the final css stylesheet

```
@media (max-width: 1222px){
  .navbar .nav_links, .navbar .action_btn, .section_text p { display: none;}

  .navbar .toggle_btn, . drop_down { display: block;    }

  .drop_down.open{ right: 0;    }
  .banner_main{      grid-template-columns: 1fr;}
}

@media (max-width: 450px) {
  .banner_main {
    display: flex;
    flex-direction: column;
    justify-content: center;}
```

```
    .section_text {
      font-size: 18px;
      margin: 0 auto;
      text-align: center;}

    .section_image img {
      width: auto;
      max-width: none;
      height: auto;
      max-height: none;
      transform: scale(0.69);     }
}
```

We used two different media querys to change the display of the website using css once certain screen dimensions are detected by the browser.

Max-width: 1222px Media Query:

This media query targets devices with a maximum width of 1222 pixels, typically larger screens such as tablets and desktop computers.

The styles within this media query hide certain elements of the navigation bar (nav_links and action_btn) and display a toggle button (toggle_btn) instead. This is a common pattern in responsive design, where navigation elements are collapsed into a menu icon to save space on smaller screens.

Additionally, a dropdown menu (drop_down) is displayed when open, providing access to hidden navigation items.

The layout of the .banner_main section is adjusted to have a single column (grid-template-columns: 1fr) to accommodate the reduced screen width.

Max-width: 450px Media Query:

This media query targets devices with a maximum width of 450 pixels, typically smaller screens such as smartphones.

Within this media query, the layout of the .banner_main section is further adjusted to center its content vertically (display: flex; flex-direction: column; justify-content: center;).

The size of the image within the .section_image class is scaled down using the transform property, ensuring that it fits well within the limited screen space without losing its aspect ratio.

Some aspects of the css styling used in the project so far has been inspired by this YouTube tutorial: *Responsive Website Using HTML And CSS Step By Step, by Tahmid Ahmed,* posted 18th of December 2022

https://www.youtube.com/watch?v=IXucQAEkIMo&list=LL&index=11

Data Plan:

The purpose of this section is to discuss the interactions between server and client.

We are looking to implement JWT (json web token) https://github.com/auth0/node-jsonwebtoken as our form of secure communication and authentication. This should allow us to implement a fairly robust example of encrypted communications without a large amount of overhead, since we can just send use a cookie with the web token to verify if the user is logged in or not.

In a commercial setting, **the login page would be handled by OpenID, but for the initial demonstration of the website we will perform authentication on the server**-side. This includes storing passwords, which will be stored with an 8 character salt and hashed using the SHA2 algorithm. This should definitely be changed but it should suffice for an educational demonstration.

The rest of the data plan will be included with the Microsoft excel spreadsheet.

https://developer.hashicorp.com/vault/docs

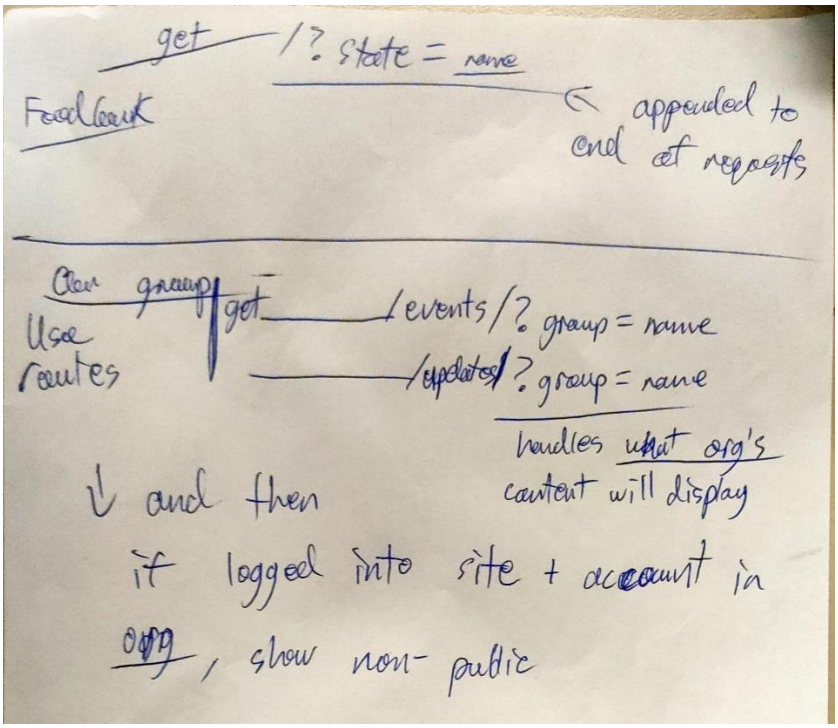
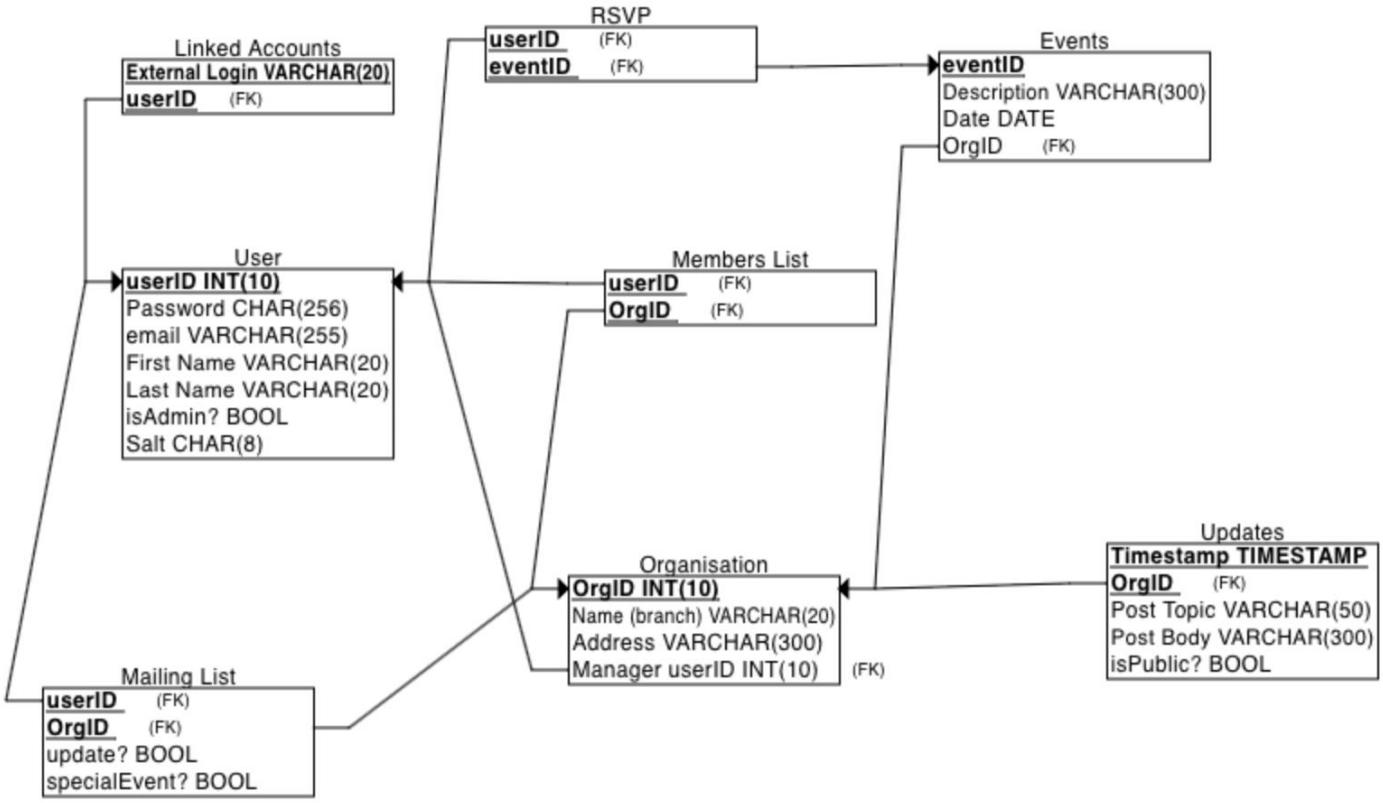


Figure: Request layout for the /events and /updates GET request

Database Schema:

This Database Schema will be used to implement the web application's database during development.


Linked Accounts
External Login VARCHAR(20)
userID (FK)
RSVP
userID (FK)
eventID (FK)
Events
eventID
Description VARCHAR(300)
Date DATE
OrgID (FK)
User
userID INT(10)
Password CHAR(256)
email VARCHAR(255)
First Name VARCHAR(20)
Last Name VARCHAR(20)
isAdmin? BOOL
Salt CHAR(8)
Members List
userID (FK)
OrgID (FK)
Updates
Timestamp TIMESTAMP
OrgID (FK)
Post Topic VARCHAR(50)
Post Body VARCHAR(300)
isPublic? BOOL
Organisation
OrgID INT(10)
Name (branch) VARCHAR(20)
Address VARCHAR(300)
Manager userID INT(10) (FK)
Mailing List
userID (FK)
OrgID (FK)
update? BOOL
specialEvent? BOOL