



**Department of Computing**  
**IS52018C: Software Project**  
**Group K**  
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# 1. INTRODUCTION

## 1.1 OVERVIEW

This document discusses the design, architecture and evaluation of the EventAR web application being developed for the module 'IS52018C: Software Projects' as part of our degree at Goldsmiths, University of London.

The report evaluates details of the four phases of our project: initiation, planning, execution and closeout, including the requirements analysis, design and development of the application, issues faced during development, tests performed, and the evaluation of the web application.

## 1.2 BACKGROUND AND MOTIVATION

As availability of Internet access on mobile devices develops year after year, users have been able to make use of search services while on the go. In a recent study, Teevan et al. found that users generally do not have a specific place in mind while issuing a local search query [1].

There are already multiple examples of successful applications for finding local activities and/or planning events of all kinds. Almost everyone uses Facebook and its Local (previously called Nearby) feature for discovering upcoming events nearby. DesignMyNight and Drinki lists bars in London, Foursquare and OpenTable does the same for restaurants, Dice covers music events. They are targeting only a small group of people with a certain interest. These apps suffer from a variety of flaws: the information is not always up-to-date, the app is confusing, poorly laid out and designed, and often crashes. The event planning apps available (Juggle, Birthday & Party Planner, BigNight: Dinner Party Planner, Advencha, PartyMaker) offer basic event management features such as a to-do list, shopping list, guest list (some with invitation and RSVP features), budget planner. However, they are often hard to navigate and overly complicated. They do not have features for finding the most suitable venue and service suppliers for your event.

Our main objective is to create software that is simple, intuitively easy to use, beautifully designed, functions well consistently in all modern browsers, and is compatible with all devices. We aim to build a unique online platform giving the combination to not only discover but also plan events, with the ability to filter your search to meet your requirements. The interactive virtual view feature makes EventAR stand out: event planners can experience a potential venue without having to travel to it in person, thus saving valuable time and money.

## 1.3 PROJECT OBJECTIVES

- Market research: identify competing applications and evaluate their characteristics and weaknesses
- Outline technical specification for the project including design, methodology, programming language and softwares used for development
- Create a fully developed application that allows users to view and plan events
- Provide a USP with AR venue viewing
- Construct a Single Page Application (SPA) that can be used across a range of devices
- Give users powerful search tools that enable them to find their perfect event
- Develop a clean modern User Interface (UI) that is easy for users to learn
- Produce a strong theme that can be used within the app as well as marketing material
- Allow service providers an efficient way to add themselves to the app so that users are able to interact with them
- Provide a good user experience so that users return in the future to reuse the app
- Test and evaluate the application in terms of usability and meeting the user requirements

## 1.4 REPORT STRUCTURE

This report is split into 8 sections. This section has outlined the main concept and objectives of the project.

Section 2 describes the technology used to create the software and the methods applied for development and research. It also outlines the problems faced during different phases of the development process and details of how they were overcome.

Section 3 includes usability evaluation methods and results.

Section 4 contains the technical documentation for the software. This includes design principles, technical architecture and any changes from the original ideas described in the project proposal.

Section 5 discusses how we checked whether the product being developed is meeting the specified requirements and our approach to Quality Assurance including test plans, test cases and test results.

Section 6 has an evaluation of our work in developing this application, as well as the areas of future improvements which could be done.

Section 7 contains the list of references.

Section 8 is comprised of all additional materials such as detailed technical architecture, diagrams, test results and other supporting documents.

## **2. DEVELOPMENT RECORD**

### **2.1 DEVELOPMENT METHODOLOGY**

#### **2.1.1 Introduction**

A software development methodology is a framework that is used to structure, plan, and control the process of developing an information system.[2] We considered the advantages and disadvantages of the most popular approaches before selecting the most appropriate methodologies and technologies for our project.

#### **2.1.2 Waterfall model**

The Waterfall model is a linear development method. It consists of the following phases: requirements analysis, design, implementation, verification, and maintenance. Each stage has specific deliverables, is well documented, and must be completed before moving on to the next one. This framework provides a structured approach however it is: inflexible, slow, and risky. Any problems with the project are often not discovered until system testing is conducted.[2][3][4] The Waterfall method works well for smaller, short projects where requirements are very well understood and the scope is not expected to change rapidly.

#### **2.1.3 Agile development**

Agile development methods break software development work into small increments. Iterations typically last from one to four weeks and working software is delivered during each cycle. The customers are heavily involved, and changes can be discussed and features can be implemented or removed based on feedback, at any stage of the development process. Each iteration involves planning, analysis, design, coding, unit testing, and acceptance testing. At the end of the iteration, the team reevaluates project priorities [5]. This method helps to validate user requirements and encourages innovation and flexible response to change [6].

## **2.1.4 Prototyping**

A prototype is a concrete representation of a single part or all of an interactive system [7]. Prototyping helps to test the usability of the software and it allows experimenting with various design solutions, leading to improvement in product quality. It starts with creating a low fidelity (sketch, paper) prototype for the user and stakeholders to comment on, and then the prototype can be modified or discarded, depending on the feedback received. This approach also has its disadvantages: it is time consuming and developers can become too attached to their initial prototypes.

## **2.1.5 Kanban**

Kanban is a very simple system, essentially the virtual version of a board with sticky notes on it. The cards represent individual tasks as they flow through the development process and they move from left to right. Each column on a Kanban board represents a stage in the workflow. It is recommended to limit the number of cards (i.e. the amount of work in progress) allowed at each stage to reduce the need to constantly re-prioritise tasks and to reduce waste from multitasking and context switching [8].

## **2.1.6 Conclusion**

Based on the methods described above we concluded that the agile approach is the most suitable for our project. We also used prototyping where possible and used a Kanban board (Trello) to manage our workflow.

# **2.2 DEVELOPMENT TOOLS**

## **2.2.1 Introduction**

This project has turned out to be challenging in many ways. In the early development stages, our plan was to build a native application for iOS and Android platforms and a website at the same time. Soon it became obvious that the team would not be able to build native apps within the given relatively short time frame. Since learning new programming languages takes a lot of time, it was decided to develop our application in a familiar language. Once this was agreed upon, the team proceeded to select the most appropriate tools. For the purpose of this project only software that is free to use was considered.

## **2.2.2 Website vs. Web Application**

Websites are informal, static pages that provide and present content. Typically users cannot interact with anything and no database is required because websites don't store any information from the user. On the other hand web applications are interactive, platform independent and dynamic; they can bring in additional information with the help of an API. Users can register, create profiles, manipulate

and access data that is stored in a database or on a server. We knew that our app would heavily rely on user interaction and, naturally, chose to build a web application.

### **2.2.3 Integrated Development Environment/Text Editor**

There is a great number of free text editors and IDE's available that range from simple and language-specific to full-featured platforms. Team members used their preferred editors to code, edit, test and debug our web application. The most popular choices were Atom, IntelliJ IDEA, and Visual Studio Code. They work across different operating systems, provide syntax highlighting, auto indentation, preview, Git integration, come with built in support for HTML, JavaScript, CSS and many other languages. They provide many tools and features that helped us develop the app.

### **2.2.4 BootStrap**

We used the BootStrap library to create the responsive layout.

### **2.2.5 jQuery**

We used jQuery, a common JavaScript library, to add interactivity and animation to our application.

### **2.2.6 JavaScript**

JavaScript is a popular full-stack language, the only language that runs natively in the browser, and can double up as a server-side language as well. JavaScript was taught in the Introduction to Programming module during the first year of our studies, so it was a logical choice for this project.

### **2.2.6 Vue.js**

Vue is a progressive framework for building user interfaces. The core library is focused on the view layer only, and is easy to pick up and integrate with other libraries or existing projects [9]. Vue enables developers to declaratively render data to the DOM using straightforward HTML-based template syntax.

### **2.2.7 Firebase**

Firebase is a mobile and web application development platform. It has realtime database, authentication system, and other services that allowed us to develop EventAR without server-side programming. Firebase is built on Google infrastructure and scales automatically [10]. We used its authentication API to allow users to register and sign in. Once signed in, authenticated users can access a dashboard (the secure area of the site). [Appendix A]

### **2.2.8 Vue-router**

Vue-router is the official router for Vue.js. It deeply integrates with Vue.js core to make building Single Page Applications with Vue.js a breeze [11]. With Vue.js, we constructed our application with components. Components extend basic HTML elements to encapsulate reusable code. We mapped these components to the routes and let vue-router know where to render them. [Appendix A]

## **2.2.9 Git**

Git is the most popular version control system. We used GitLab, a web-based Git-repository manager to access, manage, and share the source code amongst the team members.

## **2.2.10 APIs**

To make sure the app is able to display various event information, an API had to be implemented. An API (Application Programming Interface) is a software intermediary that allows two applications to talk to each other. For example, the Twitter API allows applications to send their own tweets from another source.

The Google Maps API [12] has been selected as the services provided by Google are simple to implement, and in the case of confusion with the implementation of the API, it is easy to query within the public documentation. We utilized several features of Google Maps API, such as: geolocate using an address, limit queries to a set location (i.e. London), create and delete markers, display events/venues in a radius of a given distance.

In order to provide users with dynamic information regarding their searches, it was decided to use Eventbrite's API web services to pull the associated events into our application. [13]

The selected APIs can deliver the users real time information about the events they are searching for, such as time and date, location, pricing, and ticket availability.

We faced some issues while integrating APIs. This was especially the case with the Eventbrite API since the documentation available was puzzling for first time users of the API.

As with the other portions of the project, the implementation of the APIs was tasked to an individual and then passed onto the testing team. From here feedback was given back to the developer with constructive criticism for improvement and potential features to be added.

## **2.2.11 AR Development**

The Augmented Reality (AR) feature of our web application - when outlined within our initial proposal - was planned as an interactive visual room planner with a preset layout and draggable components. We wanted the app to take advantage of AR and give users the ability to choose between different layouts or tailor the space available to their own needs. The concept itself is innovative and therefore was defined as the exclusive feature or “unique selling point” of our application. The implementation of the AR feature was the most technically challenging part of this project. Due to time constraints, we agreed to deviate from the proposed implementation of AR. We decided to use a 360 media viewer as an alternative that allows us to display panoramic images on the venue pages, providing a virtual view experience similar to our original plans. [14]

## **2.2.12 Conclusion**

It was decided to develop a simple web application using HTML, CSS and JavaScript as all team members have experience with these programming languages. Learning a new programming language would have been time consuming, potentially causing delays in the project schedule. Unfortunately, some team members found the Vue.js framework challenging and failed to learn how to use it. If we were choosing all over again we'd probably go with the widely used React, because it is well-documented and there are many tutorials and examples available.

# **3. FORMATIVE EVALUATION**

## **3.1 AUGMENTED REALITY IMPLEMENTATION**

### **3.1.1 Research**

In the preliminary stages, limited research had been done into the practical implementation of AR of our project. Some of the main influences we found when researching were relatively new technologies, still being developed by large companies. IKEA launched their “IKEA Place” app [15] in September 2017. It is a free iOS application which works with all new generations of the iPhone from the iPhone 6s. Following their version history (available in the iTunes preview page [16]) we can see that in only a few months, more than 14 version updates were made. This helped us understand that to get a working version in the time given, AR development was something that needed to be split into smaller more manageable tasks and then continuously improved.

Facebook is another great example of developed AR for smartphones [17]. Their implementation of AR goes hand in hand with face recognition technology to apply filters and animated stickers onto both pictures and videos uploaded to their social media sites (including Instagram [18]). These features gave a huge boost to their traffic and interaction in recent years. All of a sudden, users had the ability to manipulate images and videos using only their phones. In our project, the images were to be preloaded by venues, understanding this took us to the first stage of the AR operation, 360 imagery.

### **3.1.2 Constraints**

Given that AR systems are relatively new, one of the first constraints we faced was in finding suitable software that was readily available and free to use. Facebook’s Developer Kit [19] was what we first used to experiment with AR. It was quite difficult to download and run on anything other than the newest version of Mac OS, and even once we had it seemingly running, it became clear that the “free” version of this technology was a limited demo. The search continued until we found 360 Player.

360 Player is a powerful and flexible tool to upload, share and embed 360-degree images [14]. We made a group account on the software's website which gave us free lifetime access to the player. The website has a social media style layout, whereby people could create a profile and the 'players' they had created and in turn they could see a library of compatible images and all other profiles, it was a very good alternative solution.

When it came to uploading our venue images, we found another setback. The players were extremely versatile and had the ability to be embedded into our working code. However, the upload requirements were very strict. The following image dimensions needed to be exact to create a player:

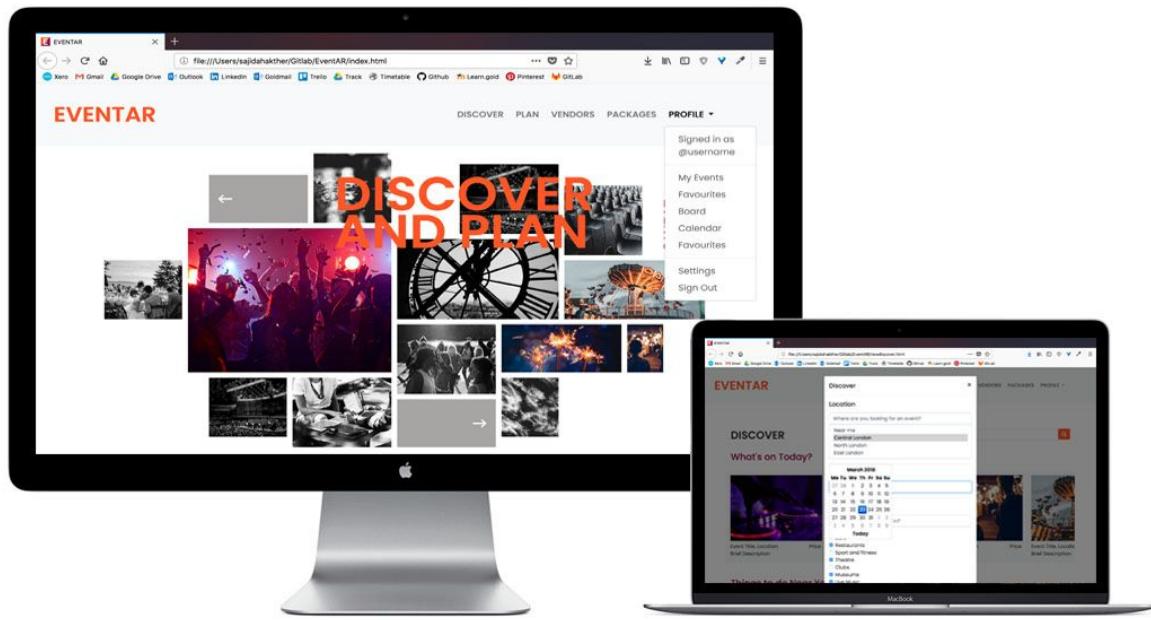
- Equirectangular format (ratio width : height = 2:1)
- JPEG or PNG encoding
- file size limited to 30MB
- image resolution limited to 80 MegaPixels [14]

It meant that we needed to develop an understanding for photography and image manipulation. Upon investigating how to either take pictures, or edit existing pictures to fit these measurements, the most common tool recommended was Photoshop. Although not a free piece of software, a couple members of the team already had access and we could take advantage of a couple weeks' worth of free trials [20]. This brute force approach was done by creating a frame size with the above requirements and then overlaying and manipulating the image to fit. This at first created very distorted 360 players, visibly pixelated and not something we wanted to use to display venues. It became clear that the initial image needed to be taken at a wide angle with a good quality camera in order to remain intact. More so, it needed to be compressed so that when viewed it would give the impression of standing in one spot and rotating around the room [Appendix B].

### **3.1.3 Integration**

Given the time constraints of the project, we wanted to get a functioning player embedded into the app as soon as possible. Therefore, we used stock images available on the 360 Player blog [21] to get a dummy player that we could test. Once created, each player came with unique integration code. This could be inserted into our app easily and manipulated within the CSS files to comply with the page layouts. There was an issue with the load time when first added, which meant it took a long time for image to load fully onto the page. However, this resolved itself as we progressed in our understanding of Vue.js and cleaned up our code.

# 4. DESIGN AND IMPLEMENTATION



## 4.1 DESIGN OVERVIEW

The front-end team has focused on creating a clean, modern user interface aided by animations to provide a smooth user experience. There is a strong thematic design carried across all the pages with visually pleasing images and features to attract users. Accent colours such as purple and orange have been used to highlight the details against the monochromatic background and text. The website has been created to be easily accessible, with an intuitive user experience that gives users full control over the tools. This enables users to search and find exactly what they are looking for.

A minimalist design was chosen to allow the webpage to load much faster as it lacks unnecessary information, images and distracting pop-ups. The use of whitespace prevents the webpage from looking congested and creates a pleasant user experience. In a generation where the average human attention span is rapidly declining, users are shown to be less tolerant when they are dissatisfied [22]. Therefore, it was vital to keep a simplistic user interface as this:

- makes the content very clear and concise
- enhances clarity for users
- maintains users focus
- helps users navigate around the webpage with ease
- increases traffic to the webpage [23]

## PLAN

A stress-free, timely and cost-efficient way to organise your event the way you envision it. Helping you find exactly what you need to run your event successfully.

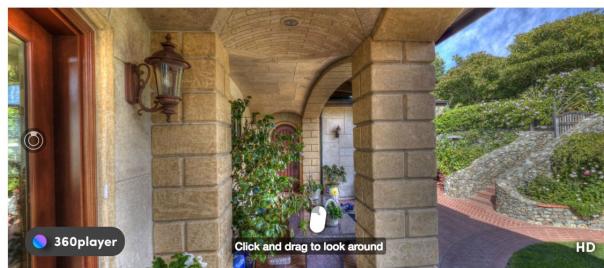
## DISCOVER

Never miss out on new experiences. Showing you museums, restaurants, festivals and events that meet your interests and are taking place near you.

## VEND

Promote your business through advertising. Help planners check off their list of vendors needed by reaching out and delivering your service.

The information has been shared and displayed in a variety of forms such as images, videos and text. For instance, on the landing page, short summaries of each main feature has been included and placed in blocks using the grid layout. This has been done so that users can easily digest the information and get a quick understanding of what the website is about and what can be done. Instead of using a jumbotron as a header which is a common design feature in most modern websites, an interactive grid layout slideshow was created and this was inspired by codrops [24]. This intuitive design insured that our landing page stood out against its competitors as this arrangement and colouring was a unique way of displaying images.



### Grosvenor Hotel



From £9000 per day

A unique venue located in South West London at Kensington Event Centre. 18837 square feet, holding up to 1700 guests. A perfect setting for your wedding, corporate retreat, or private event. Brief description of the venue, where it is located and the capacity of people it holds.

[Read Reviews](#)



# EVENTAR

DISCOVER PLAN VENUES VENDORS PROFILE ▾



Signed in as  
Sajidah Akther

My Events

Favourites

Board

Calendar

Favourites

Settings

Sign out

When developing EventAR, we placed a focus on building a user-friendly, clean and functional navigation as this determined whether users could navigate around the website and find the information they are looking for with ease. It was crucial for us to consider the usability of the website so that it could set EventAR apart from its competitors like Eventbrite, Time Out London and Design My Night [Appendix F][25][26][27]. We noticed that although these platforms are successful, two of them lacked the ability to plan events such as birthday parties, ceremonies or weddings. Design My Night was one of the websites that held this feature but we found difficulty reaching the planning section of the page which meant it wasn't as easily accessible. Moreover, the user interface looked quite congested which could be distracting and overwhelming for planners who would prefer a simplistic interface that enabled them to gather or form ideas. From collecting user feedback [Appendix I], the team learnt that users main concern with planning events were 'time and money'. Therefore, it was important to structure the website in a way that made planning events very time-efficient and cost-effective. EventAR provides a tailored experience for its users with the option to filter their search by price, type of event, location, capacity, date and time. Meaning users are able to plan an event that meets all their requirements.

Users can easily navigate to this area within:

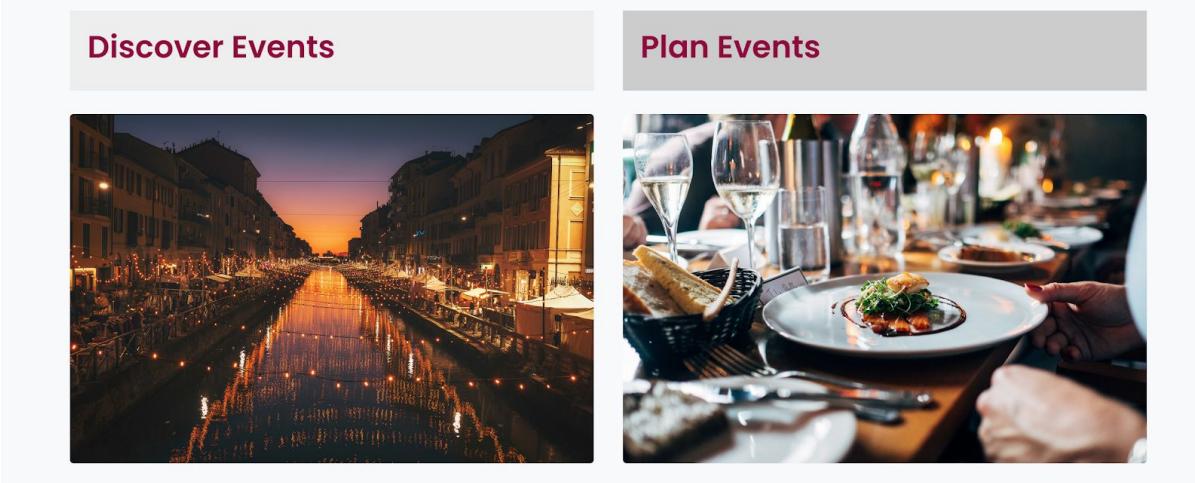
- The landing page

A quick search section has been added. Created an accordian for the categories, 'Discover events' and 'Plan events' are buttons that expand and close the filtered search when the user clicks on them. This keeps the layout very organised and clean.

- The 'discover' or 'plan' menu

The 'search' button is located on the top right when the user enters the menu. When the button is clicked, the filtered search opens up in a modal. The team found that this layout worked best when viewed on smaller devices as users could easily exit the modal and continue browsing instead of needing to scroll to find the rest of the content. It created a smooth user experience.

## SEARCH



The image is a screenshot of the EventAR mobile application. At the top, it says 'Discover' and has a navigation bar with 'VENUES', 'VENDORS', and 'PROFILE'. Below this is a 'Location' section with a search bar and dropdown options for 'Near me', 'Central London', 'North London', and 'East London'. There's also a 'Date' section with a search bar and a 'Interests' section with a search bar and a list of checkboxes for 'Art', 'Bars', 'Restaurants', 'Sport and fitness', 'Theatre', 'Clubs', and 'Museums'. To the right, there are several event cards with images, prices, names, and descriptions.

## 4.2 COLOURS AND IMAGES

The team had chosen a complementary and contrasting colour scheme; with the bold, vibrant accent colours against the monochromatic background and text. Complementary colours are visually pleasing as they establish a satisfactory medium the eye can reside in since the eye is provided a balance [28]. Orange is a

warm colour associated with excitement whereas purple is associated with sophistication. "Purple utilises both red and blue to provide a nice balance between stimulation and serenity that is supposed to encourage creativity" [29]. Vivid colours were used as they have a powerful impact on users, especially when viewed in high definition. According to research, this colour combination suited the target market. The team also felt that the colour combination represented the concept of EventAR effectively and elevated the sophistication of the overall design.

**SEARCH Q**

**SEARCH Q**

The black text above a white background creates contrast, improves text visibility and draws user attention as it clearly divides the sections. The stark, complementary colours enable the text on the web page to be easily readable, especially to individuals with varying levels of colour blindness or impaired vision. For the buttons, orange backgrounds were chosen so they could be clearly identified on the page. When users hover over the buttons, the colour changes to purple to indicate that it is clickable. White text has been used to name the function of the buttons. The text being the brightest element helps reduce eye strain by focusing the attention of users.

## EVENTAR

DISCOVER PLAN VENUES VENDORS PROFILE ▾



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Price

Event Na  
A brief de

## Upcoming Events in London



The images used on the web pages were taken from Unsplash and are labelled for reuse. License: "All photos published on Unsplash can be used for free. You can use them for commercial and noncommercial purposes. You do not need to ask permission from or provide credit to the photographer or Unsplash, although it is

appreciated when possible. More precisely, Unsplash grants you an irrevocable, non-exclusive copyright license to download, copy, modify, distribute, perform, and use photos from Unsplash for free, including for commercial purposes, without permission from or attributing the photographer or Unsplash. This license does not include the right to compile photos from Unsplash to replicate a similar or competing service.” [30][31]

## 4.3 ACCESSIBILITY

Bootstrap is a framework that supports accessibility, and was used to help build a responsive website. [32] The grid system made the website easily viewable, and ensured that the user will receive a similar experience when accessing EventAR through a tablet, mobile phone and desktop screen.

To increase the accessibility of our web page, headings were used to organise the structure of the content. Visual separation such as whitespace and border was used so that users are able to distinguish blocks of content from one another. Forms were also designed for accessibility by positioning each field properly, and labelling form fields suitably so users know what should be entered into the field. [33]

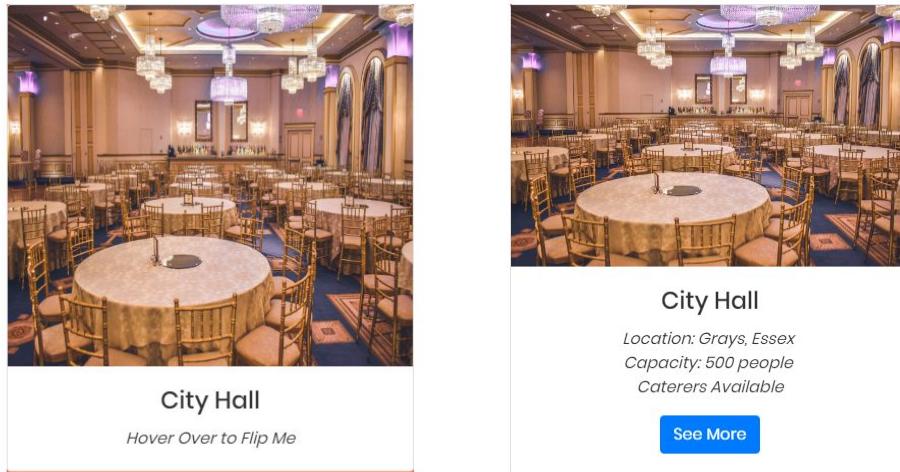
The screenshot shows a dark-themed login or sign-up form. At the top left is the word "EVENTAR" in red, and at the top right is a grey three-dot menu icon. Below the header is a "CREATE ACCOUNT" button. The form consists of three input fields: "Email", "Username", and "Password", each with a corresponding horizontal line for text entry. Below the password field is a "SIGN IN" button. To its right is a "REGISTER" button. Further down are two social media connection buttons: a yellow "CONNECT WITH GOOGLE" button and a blue "CONNECT WITH FACEBOOK" button.

## 4.4 USER-CENTRED DESIGN

User-centred design creates an efficient, satisfying and user-friendly experience [34]. We conducted research with our target users where we collected their preferences and needs. This research was carried out in the form of one-on-one interviews and group activities which allowed users to express their opinions on what needed to be improved or added. We also observed the steps they took to proceed a task. From this, we are able to design a user interface which accommodated and supported the users natural behaviour in a way that would be satisfying.

Prior to designing any page, a wireframe was made and this was gone through each team member and users to receive their input and agreement on what should be materialised. This was efficient as it ensured that not only everyone was content with the structure and design of the website, but it also meant that we could confer on how a typical user would interact with the interface. By seeing where design elements are placed, the site navigation is improved as you understand how easy it would be for the user to see the important details, and where its not needed [35][Appendix G].

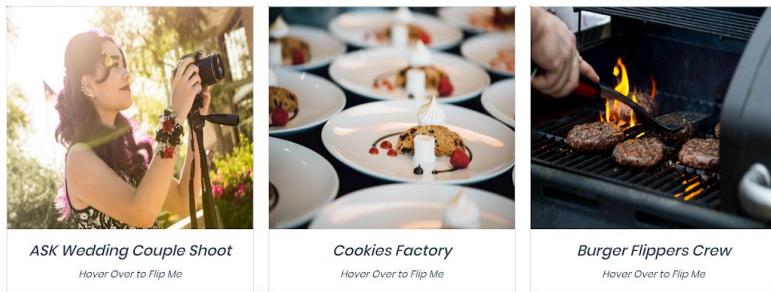
EventAR's main purpose with planning and searching events is to make the experience stress-free, and the design needs to correspond with this. This is why minimalism was emphasised upon, if there were a lot of components on one page it can be very distracting for the user to focus. In addition to this the main details and information need to be conveyed so that the user can make quicker and more informed decisions when choosing vendors, excessive content on one page would affect this.



The cards clearly show this, with so many vendors to choose from, it's easier for the user to determine whether they like the venue from the image shown. If they want to see the main important details they can hover over the card. This would not only save users time as it doesn't require them to scroll through loads of images or view all of the venues description. Instead users could quickly decide whether the venue would be suitable for them by checking if:

- the location is suitable or nearby
- the capacity is enough
- the pricing meets their budget

## VENDORS



For the vendors page it was decided to use cards in a grid layout, this would maximise the usage of the whitespace on the page. The card flip animation design was inspired by a Jeremy Condon design [40].



Graham

March 10th 2018  
3 days ago



Perfect Hall, Spacious and Clean!

This hall was perfect, came with all facilities and everything was ready before we knew it. EventAR is perfect when it comes to booking venues. The event managers were really nice, all at a decent price too, will definitely recommend it to anyone who needs to book a venue!



Sam

February 29 2018  
30 days ago



Lavish Hall for Weddings!

This hall was perfect, came with all facilities and everything was ready before we knew it. EventAR is perfect when it comes to booking venues. Don't forget to ask for the caterers who did a lovely job with a nice menu. Personalised entrance, with decoration already set out, making it a perfect venue!

Leave a Review

Give a Rating out of 5



How was your experience?

With EventAR, we wanted to ensure users could voice their opinion and that transparency was shown. This way users could see what exactly the venue offers and how other people's experience was with the services. Our review section with a rating system provides that, allowing users to view ratings and compare venues. Users can then choose with certainty and have all the

information presented to them in order to make clear cut decisions.

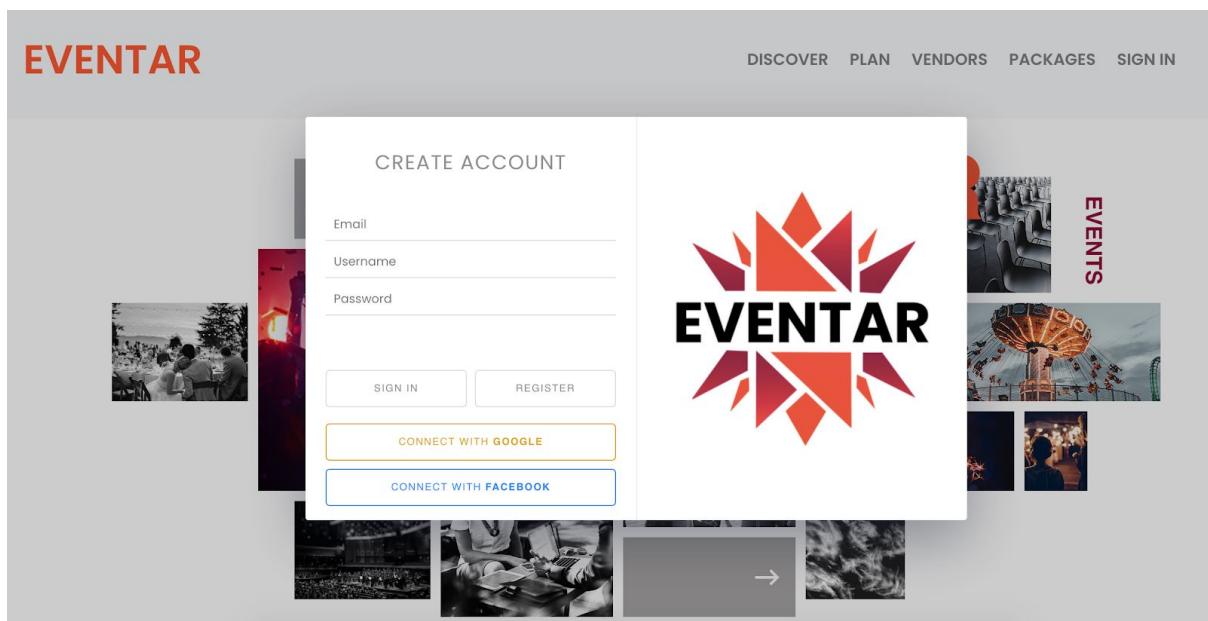
A clear form was created so that users could add their reviews with ease. In order to emphasise clarity, individual ratings for each comment are shown. This combination increases the user's confidence in choosing a venue, not only giving an extent of trust but also reducing any unforeseen surprises they may not expect when going to the venue. It was also important to show the date of when the review was left so that the user could evaluate whether the information and experience that user had was outdated. This contributes to the business model by increasing purchases of venues/vendors, our target market would be heavily influenced by reviews that

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would sway their decision on booking. The stars rating animation was inspired by Erdem Arslan CSS Design[41].

The login/register form is one the designs that was altered based from the feedback we got with our users was the login page [Appendix H]. When the initial login page was created, we decided to show the target users of how it looks and operates. A live demo was presented in one-to-one interviews to gauge feedback. The response we received was that although the login form was ‘aesthetically pleasing’, a more “modern” modal type of design would tie in better with a minimalistic theme.

Based on the feedback [Appendix I], the team found that users much prefered a simplistic ‘arrangement’ and a design that is “more modern with a sleek look”. Therefore, using a modal seemed more suitable, the benefits were that users can also be on other parts of the page and not have to directly navigate to a different page just to login or even register. The modal would pop up and the venue or vendors they were looking at would still be in the background, giving them the opportunity to get back to what they were looking at. Additionally there was space for our logo to be integrated, which wasn’t the case with the original form.



## 4.5 REFINING DESIGN

The front-end team initially drafted 11 designs for the logo. After merging the drafted ideas and making further alterations of the design, it led to the final drafts and eventually the final design [Appendix L]. As there were many designs, we decided it would be appropriate to first cut it down to 5 designs and then gauge user-feedback in order to filter out which logo would best represent EventAR. The user-feedback was received by showing all the drafts via an online questionnaire that was sent out [Appendix K]. This method seemed the most appropriate as it was easier to quickly recognise what design was most favoured amongst our users.



The team asked 40 users which logo design out of the 5 designs they preferred. Logo 4 was the most popular as 37.5% of our users chose this design, second being logo 2 with 25%. The team members also agreed that logo 4 seemed very fitting as the geometric shapes resembled creativity which tied in with planning events. Some of the logos that were drafted looked far too professional and corporate which didn't represent the flexibility users

have when using our platform. After deciding on a logo, the team made a few more adjustments. The shapes were filled in with the two accent colours of purple and orange, and the text was changed to fit in with the minimalistic style that is carried throughout the web application.

After many drafts and alterations of our wireframes for the web application pages [Appendix G], we gave our focus group one more opportunity to interact with the web application once they were created. Through this, the team was able to test the user control flow experience. What the team gathered from users was that the web application felt static and that more user interactivity was required. Therefore animations were added when the user scrolls through the sections; Animate.css [36] was used so that the subheading would appear from the left and Hover.css [37] was used so that a underline would appear when users hovered over some titles. The team also changed the standard carousel into an interactive image grid slideshow. Moreover, the buttons have been made more interactive when active or hovered over, through the change of colour or an appearing outline.

Due to the way each browser functions, there were some issues faced regarding the layout of the web page depending on the browser used to view the pages. For instance, mobile devices had no issues with their displayed pages on Safari, however when using Google Chrome there were some components in the wrong grid. We took

these issues on board and looked at ways to make the web application more responsive to enhance browsing experience, however there are still some of these issues present to be improved upon in the future.

One of the issues we eradicated was responsiveness, we ensured that all interactive actions were working and that all information was accessible at all screen sizes, and this was achieved by using the Bootstrap framework. This meant that if the user was to view the web application on their mobile device then all the components were placed in the correct areas and that the font was consistent throughout the page. Also on the discover page, we put a date range in the search/filter box, making it effortless for the user to choose their desired dates.

It was found that having a large search section at the top of the page was a poor design choice as it meant that while desktop users would be able to access the search controls easily, mobile users would have to scroll through the different search elements on the page before they were able to access the search results. To counter this issue, we used the Bootstrap library to create pop out windows within the page that would scale to the user's screen size and display. [Appendix H]

This improved the user experience as it meant instead of having a large search section at the top of the page, a modal is displayed providing the options for search queries. This was a large improvement in terms of the design of the page as it meant that smartphone users would receive the same user experience as Desktop OS users. With the modal enabled, it is still possible for desktop users to view all the search functions at once, however smartphone users don't have to scroll through all the search controls that would have previously been displayed at the top of the page.

## 4.6 DIFFICULTIES

One issue the front-end team had early on in development was that when the team originally began designing the application, not every member was using the same version of Bootstrap. This caused an issue when common controls were being created through using the base layout for each page. The use of different bootstrap versions meant that the navbar and footer was not displayed correctly as the stylesheets were overwriting each other. This issue was identified early in the development process however some work had already begun causing the front-end group to discuss the outcome. It was decided to use the newer version of Bootstrap as this would be more future proof causing some pages to require updating. This

was an improvement however as with the newer version of Bootstrap the app was better suited for integrating with other web technologies such as Vue.

Another issue the design team faced was the difficulties in implementing pages into the vue.js framework. This was a new framework which we hadn't come across before that didn't have a lot of videos, tutorials or extensive documentation. When migrating the work into vue.js, despite it recognising HTML and CSS, some of the tags still weren't recognised, resolving these incompatibility issues made the migration time consuming.

However the framework eradicated issues that existed when attempts were made to do the web application pages separately, with conflicts in merging the files and folders together. For instance, when the navigation bar and footer were created by one member, another member tried to integrate it into their files for implementation. Issues were arising regarding the merging of two or more branches. As the Vue.js framework utilises components, you could add and edit each individual component which effectively acts as separate sections or entirely different pages. This meant you could keep a template for each page consisting of the header, logo and footer as constants and didn't have to be recoded for each page. By working on the same git repository, the team members could view any changes made and work on the project collectively.

One of the issues the team also came across was the layout of the cards on the vendors page. When testing, we noticed that the vendor cards did not appear in 3 column for all browsers, for instance on Google Chrome is appeared fine however on Internet Explorer, only a single column was shown. However we didn't see this as a major issue, from our one-to-one interview the users stated that it looks aesthetically pleasing in both arrangements, and the web application page is still responsive on mobile devices.

## 4.7 FUTURE PLANS

There were many other ideas and concepts which were either discussed or even created that weren't implemented in the web application. The design team deciphered whether these plans for implementation were feasible or, in some cases, they were simply not needed.

One of our future plans consists of creating a personalised user experience, whereby the web application is able to adapt to the user's needs and interests without much user input. Hopefully incorporating this when a user is logged in and determining from the previous search filters, the main page in discover would suggest events that are likely to be of interest to the user instead of random upcoming events and what's currently trending.

Another proposed concept was that of a budget planner that was initially going to be

implemented, however this was replaced with the implementation of packages, so that the user can choose venues, vendors, artists, caterers etc. Although we currently do have a price variable when searching where the user can change the variables of searching for a venue under £300 for example, it doesn't give them the capability of adjusting other costs for other aspects of planning. Hence why the budget planner is a part of the future plans for the application. If a user was planning an event, they would have more control over how much of their funds they would like to allocate to any aspect of the event. For example with an initial budget of £8,000, they could allocate £1,200 to caterers, £3,000 for the decorations etc., this would then be portrayed in a visual representation of a pie chart, giving the user a easier reading of their budget.

Moreover in order to increase social integration and keep users updated, to create a notification centre where users are notified about upcoming events, venues on offer to ensure they don't miss out on opportunities. This will also be further expanded so that users are reminded to leave reviews for events they've booked, as well as notify them that they can add vendors at a discount price for packages. Notifications would additionally let the users know whether the venues are still available for their dates and will keep users more prepared in case the venue gets booked out. This interaction would be beneficial for users a well as providing data from their responses that allowing for further improvements.

## 5. QUALITY ASSURANCE

In terms of quality assurance for creating our app we set a required standard revolved around the design, performance and how satisfied our audience is with our product. In order to achieve this throughout the development process we constantly evaluated our app to ensure we stay on track with the initial ideas we wanted to implement. In order to avoid deviating we had constantly used slack and Trello to plan each step in the design process and also to contract each other so there were fewer mistakes made in development process due to the constrained time.

The first stage of testing was to design as many test cases as possible that were going to be needed for the modules that were being created. To design the test cases the testing team purposively imagined tests that had a high likelihood of failing, as the point of testing is to find bugs and not to pass tests. Test cases were designed as follows: an expected outcome, test steps and once the test was completed then the actual outcome.

Unit testing was the first round of initial tests. Unit testing was important as it enabled scrutiny to every line of code that were single file components. The benefit of start with unit testing is that any bugs can be detected before any integration of modules occurs. Doing this makes bug fixing much easier as when integrating we can then narrow down bugs to code that interacts with other modules. The unit tests

were done in a progressive manor; as whenever a module was updated and pushed to git by the development team it would be unit tested. The advantages of doing it this way was that unit tests had already been written for most of the code, apart from the updated parts. This meant everything from before could be tested automatically then the new unit tests could be written and in the future and reused. This made testing much more time efficient.

The initial framework chosen for unit testing was Mocha [42]. A reason for this was that it is a very popular framework so there are many guides out there for how to use it. Another reason is that it can work alongside webpack and since we were already using webpack to load our project into a browser window it made setup easy. After more research had been done it was chosen to switch from Mocha to Cypress. Cypress [43] was chosen for this as it can not only do unit testing but integration testing too. Cypress also has a plugin that works alongside with Chrome64 which displays the web application with the tests taking place. Being able to see the tests taking place in real time, made it much easier to see the problems that were occurring. As not always the bug is present in the module that is being tested but can be present in the coded tests cases themselves. For example, the testing team wrote a test case in Cypress that automatically registered someone to EventAR. The test case was failing; in the Cypress graphical user interface it showed that nothing was being wrote inside the password box when the test executed. Seeing this the testing team could easily notice that they had made a spelling error in the tag name for the password box and then quickly fixed it. Cypress also has a tag selector tool that tells the tester what each object on the webpages tag id is. Overall the extra research in to testing frameworks made the experience a lot more streamlined. [Appendix E]

Integration testing was the next stage of testing after Unit. Integration testing took place whenever a module was combined with another or others (Which would only happen if all Unit tests passed). This was done as although module single file components make work flawlessly it is very rare that when multiple modules are combined they interact with each other with no problems. Examples of things that were tested during this phase are: sign up/login functionality, searching and filtering and links/routes between pages. Integration testing was done gradually, as each module was combined to current project one by one. Doing it this was crucial, as it made bug fixing much easier since bugs could be isolated to how once module interacts with others. If all the modules were combined in one go, all the files would need to be rigorously checked for where these bugs were happening. Testing done this way can often lead to more bugs being created by fixing other ones since the whole process would be very messy [Appendix E].

After integration testing, system testing was started. System testing is done in a black box manner, this meaning the tester does not need any knowledge of the inner working of the program. System testing was done in two parts. Part 1 was simulating a user and ensuring all design and functionality worked as expected. Part 2 was reviewing our original system requirements we set out at the start of the project and reviewing if EventAR met those. Part 1 involved writing test cases then simulating

them as a user. These user test cases can be seen in the appendix, an example of a test case was: All interactive actions should work as expected at different screen sizes. From this example you can see focus at this stage was the user interface. This is because all the technical tests had been completed at an earlier stage, but they could not spot the intricacies that a user would. After writing our proposal the team dedicated many more hours into how developing EventAR could be possible. [Appendix C,D]

The final part of the testing phase was user testing. User testing was done in two ways, focus groups and user questionnaires. For both, the user was told to explore the site or use a specific function, then answer a series of questions about EventAR. All user's comments were then reviewed in team meetings to decide what we could do to meet user requirements we did not initially.

An example of our user testing was a designed focus questionnaire. [Appendix I] The results of the testing showed users had a problem with the sign and register functions being on two different pages. A quote from a user was "In my opinion the register page and sign in page could go together to make the website more streamlined". In response to this it was decided to create the sign in and register functionality a pop-up window. This reduced the amount of clicks and traversing for the user; making it quicker for them to get to the content of the site. Another criticism that users had was how we used too much white space on the sign-in and register pages. To quote a user "Sign-in and register page has too much white space" The pop-up window also fixed this problem. The final problem users had was that the home page seemed too boring and did not grab their attention. A user said, "Nothing pops out at me, the site seems quite plain, also too much white-space on the home and sign-in and register page.". To solve this a slide show was created on the homepage that cycles pictures of venues/events.

Towards the end of development a focus group was done to help find any small details EventAR was missing. [Appendix I] During this focus group it was found that users thought a google or facebook sign in function would benefit the register process. A user said "Not really, as there is only so much you can do with registering and signing in, but using google sign would make it quicker if people wanted to use that option" The team used this idea and added google and facebook register/sign in. Adding this feature makes EventAR more accessible as it speeds up the register process.

# 6. SUMMATIVE EVALUATION

## 6.1 EVALUATION OF OUR WORK

Initially our plan was to create native mobile and web applications, this would have meant that users will be able to search and plan events from their desktop/laptop as well as on their phone when on the move. However, our team later realised that due to the amount of rich features we wanted to implement into EventAR, it would be a daunting task and not feasible to create the app for three different platforms. Also with the response of the team members it was clear to see there was more experience with web development as opposed to iOS or Android app development. It would have been time consuming to learn how to develop mobile apps. Therefore by evaluating the advantages and disadvantages of going for either platform, it was decided that it would be better to develop a single page application, simply because it offers dynamic interactions resembling native mobile and desktop apps. This eradicated the need for a native application yet still give access for users who would like to search on the go, or even prefer looking at bigger screens for planning events. With the larger viewing area making it easier for users to look at details of images as well as use 360 degree augmented reality to really explore the venues.

By creating a single page application the team was able to focus on another of the core features of the app which was that it would be usable on multiple devices with a range of OS's. This also made development easier as features would not need to be ported across for different versions of the app. When testing, multiple devices were used to make sure that all the features and layout were consistent across a range of devices and made adjustments where necessary. [Appendix D]

Another of the objectives the team initially laid out was for users to have an easy and powerful way to search within the app based on multiple parameters. The front-end team created a design for the search feature that fit well with both desktop and mobile devices that would allow users to refine their searches. [Appendix H]

The front-end team also created a clean and modern design as we originally planned to which we utilised throughout the app with the use of colours and white spaces. This helped to give the web app a strong theme that users would learn associate with the EventAR brand as these colours were also used within the logo.

## 6.2 FUTURE AR DEVELOPMENT

The definition of Augmented Reality clearly states that, unlike virtual reality (which creates a totally artificial environment), augmented reality uses the existing environment and overlays new information on top of it [38]. Given that; our project does not technically implement AR. We are using an existing environment (venues), but the 360 Player is more so an implementation of 'Degrees of Freedom' (DOF) which refers to the amount of flexibility a user is given within an environment. [Appendix B] [39]

In the future, we plan to build an image manipulator which allows for 3D-style model images to be over-laid and therefore give the user the ability to plan a space out for an occasion. This will achieve our ultimate goal of fully integrated AR within the application that venues will be excited to be featured on, and customers will see an advantage in using.

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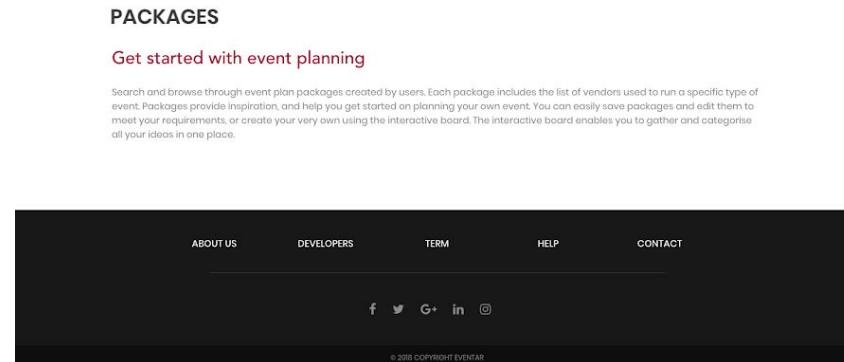
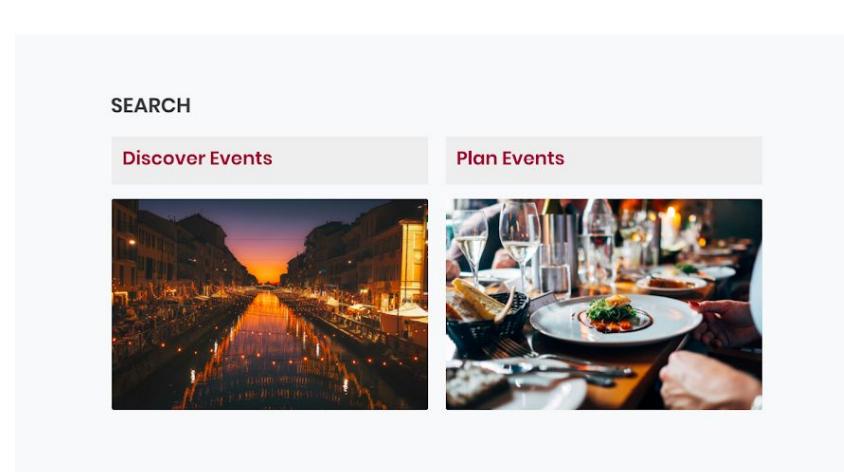
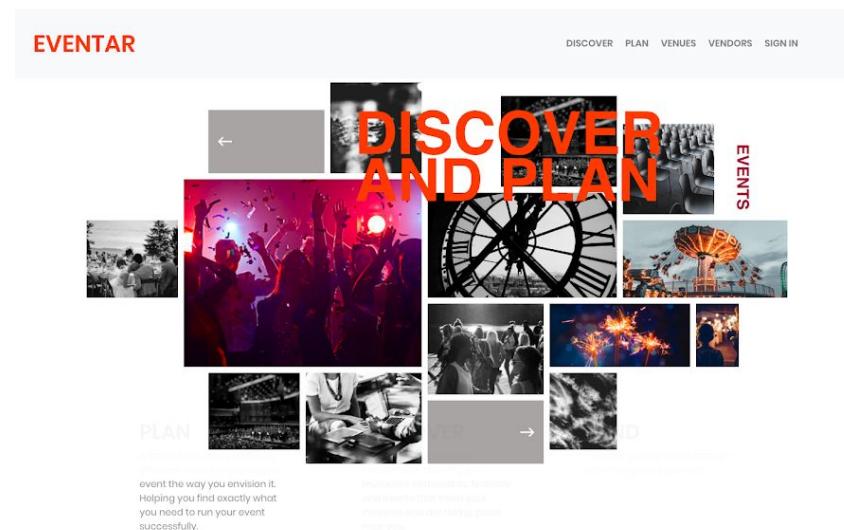
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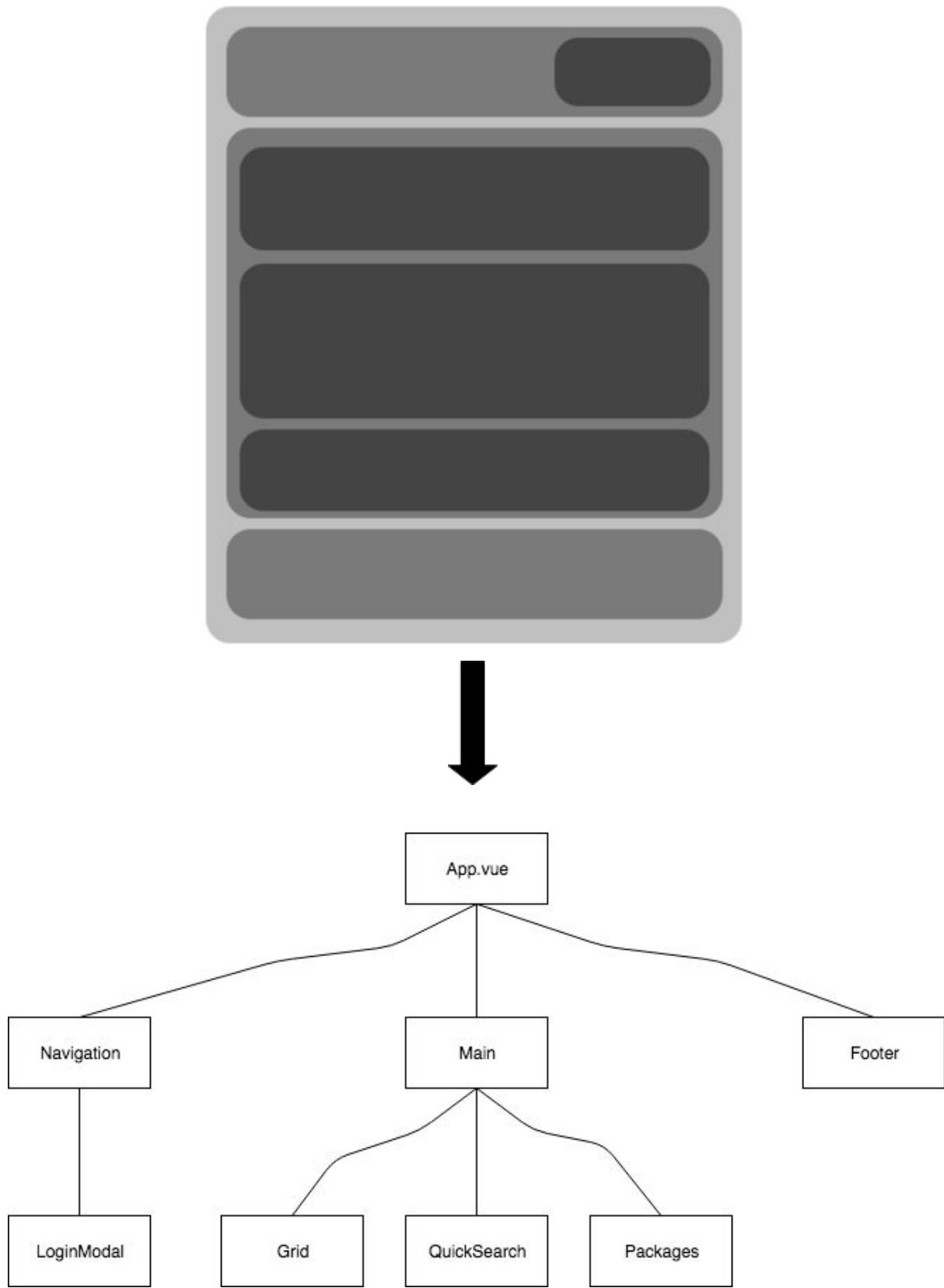
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# 8. APPENDICES

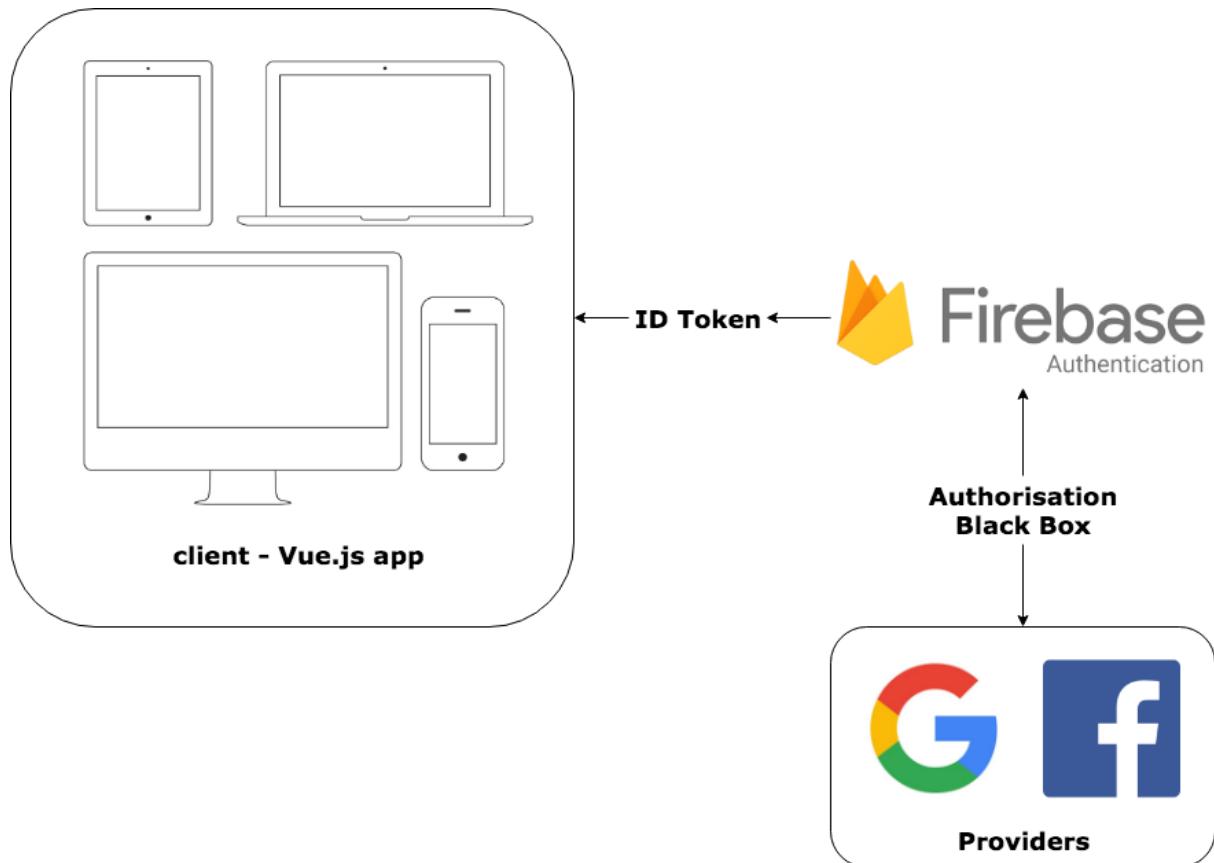
## 8.1 APPENDIX A: ARCHITECTURE



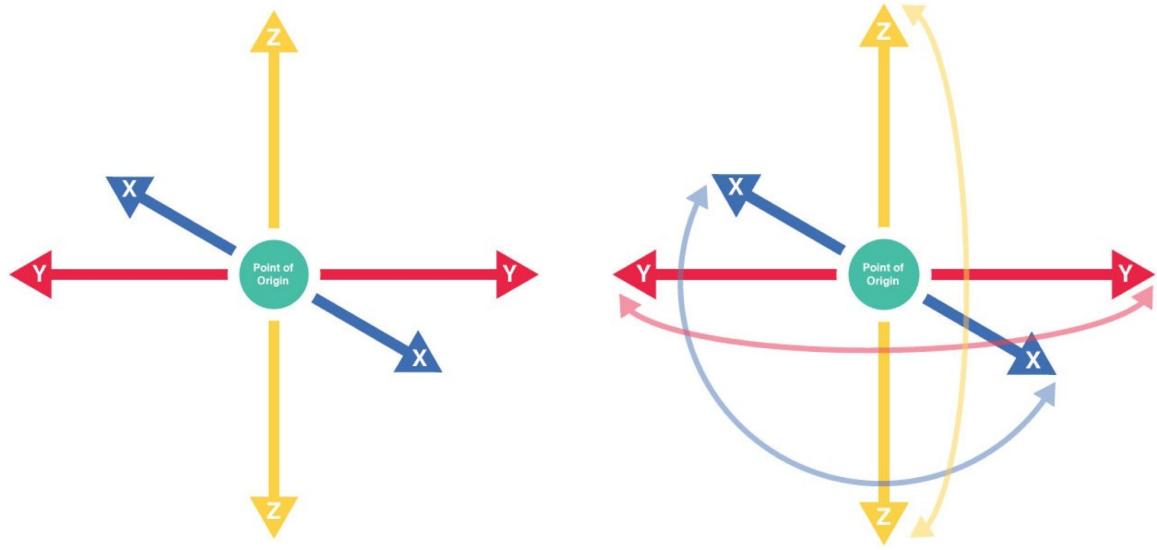
Application interface abstracted into a tree of components:



The following diagram shows how the frontend and Firebase communicate with each other. The frontend configures the sign-in user interface and retrieves the Firebase Authentication ID.



## 8.2 APPENDIX B: DEGREES OF FREEDOM



Combining the three axis's and their circular representations gives us a 360 degree compilation.

## 8.3 APPENDIX C: WEBPAGE TESTING REPORTS

### Index Page

#### Format

- Expected Result: What is expected of the web page.
- Test: Testing if the result complies with what is expected.
- Actual Result: The result of the test.
- I have highlighted bold the tests that failed.

#### **1. Interactive buttons and text should display an indicator to the user that it is interactive when hovering over with the mouse pointer.**

- a. Test: I hovered over each button and interactive text at multiple screen sizes.
  - i. The submit button does not change colour to show interactivity.

#### **2. All information should accessible no matter the screen size.**

- a. Test: Reducing the screen size length and width ways by 10% then recording when any information is lost.
  - i. When reducing the screen size to the smallest possible the bottom of the slideshow is covered by the Plan section underneath.
  - ii. On the largest screen size, the discover image below the slideshow covers some of the image slideshow; when the slideshow is on the “Discover and Plan” and “Create and Explore parts”

#### **3. When hovering over text or a text box the appropriate text cursor should appear unless it is an interactive link at all screen sizes.**

- a. Test: Hovering over all the text one section at a time and recording if the text cursor is present or not at different screen sizes.
  - i. All text works as intended.

#### **4. All interactive actions should work as expected at all screen sizes.**

- a. Test: Going through each interactive button and text and seeing if they work as expected while ignoring incomplete links due to lack of other pages.
  - i. When the screen size is below 50% the new drop-down bar for navigation doesn't work.
  - ii. No other problems.

**5. Font should be consistent throughout the page.**

- a. Test: Copying and pasting every line of text into word and ensuring it's the same.
  - i. All text was consistent as was Arial.

**6. There should be a correct use of space between fields on all screen sizes.**

- a. Test: Get multiple opinions of the use of the space between fields as it subjective.
  - i. On the large screen size everything looks fine with correct use of spacing.
  - ii. When scaling the screen to less than 50% the images go straight to the smallest size fit for mobile screens instead of slowly scaling. This creates too much wasted space between the image slideshow and the Plan, Discover and Vend part.
  - iii. No other problems.

**7. The correct use of spelling and grammar must be present.**

- a. Test: Copying all text into and spelling and grammar checker as well as using own knowledge of spelling and grammar.
  - i. The "Eventar" at the bottom of page contained in the "Subscribe to our Newsletter" box should be "EventAR".
  - ii. No other problems.

## Discover Page Testing

### Format

- Expected Result: What is expected of the web page.
- Test: Testing if the result complies with what is expected.
- Actual Result: The result of the test.

**1. Interactive buttons and text should display an indicator to the user that it is interactive when hovering over with the mouse pointer.**

- a. Test: I hovered over each button and interactive text at multiple screen sizes.
- b. Result:
  - i. When moving into the grey box that contains Best of London on the discover page, the text which writes "Discover the best museums [...] workshops in and around London" and "Receive weekly updates [...] and the latest news from Eventar"(Text in white box underneath). Both become underlined for the full

duration of the mouse being in both the grey and white box instead of just one set of text being underlined when hovering over with the mouse.

ii. The submit button at the bottom of the page for sending emails does not indicate interactivity.

iii. When reducing screen size to below 75% the navigation bar at the top of the screen disappears and you are given the option of a drop-down bar. The bar doesn't display interactivity and doesn't function at all.

iv. All other buttons and interactive text on the page work as intended at all screen sizes.

## **2. All information should accessible no matter the screen size.**

a. Test: Reducing the screen size length and width ways by 10% then recording when any information is lost.

i. All information is accessible (Including the search function) apart from the previously mentioned drop down menu which is broken when reducing the screen size.

## **3. When hovering over text or a text box the appropriate text cursor should appear unless it is an interactive link at all screen sizes.**

a. Test: Hovering over all the text one section at a time and recording if the text cursor is present or not at different screen sizes.

i. When hovering over the headings in the search/filter pop up box there is no text cursor visible. Instead they work as a button which takes the user up to the location choice and highlights it.

ii. The text as described in Test 1.i) does not display the text cursor when hovering over due to the problem previously described there.

iii. All text boxes work as expected, this includes inside the search/filter pop up box at all screen sizes.

iv. All other text works as expected at all screen sizes.

## **4. All interactive actions should work as expected at different screen sizes.**

a. Test: Going through each interactive button and text and seeing if they work as expected while ignoring incomplete links due to lack of other pages.

i. Inside the search/filter pop up box when choosing the interests, no matter which text you click on it selects "Art" instead of the actual text option clicked.

ii. When choosing the date inside the search/filter pop up box the default date is 31/12/1899 when should be todays date.

iii. As previously mentioned at 1.iii) the drop-down bar doesn't work when it is present at smaller screen sizes.

iv. The price range slider inside the search/filter pop up box doesn't work as intended. This is that fact you are not able to choose a range of two prices but just one price. The range slider should also give the option of typing in values and displaying an accurate value beside the slider of the price chosen.

v. All other interactive actions work as expected.

**5. The user should be able to filter results using all options given.**

a. Test: Choosing all options given.

i. This is possible after clicking on all options plus the use of the Greater London option in location.

**6. All fields in the search/filter function that must be chosen, need to be indicated with a “\*”.**

a. Test: Looking at the search/filter pop up box and seeing if this is correct.

i. None of the fields indicate this, they either need to or a default value must be given for location, date and range. Then the interests will assume all of them if none are selected.

**7. Font should be consistent throughout the page.**

a. Test: Copying and pasting every line of text into word and ensuring it's the same.

i. All text was consistent as was Arial.

**8. There should be a correct use of space between fields.**

a. Test: Get multiple opinions of the use of the space between fields as it subjective.

i. Nathan: "The use of space between fields is fine as there is enough to distinguish between each field without wasting space"

**9. The correct use of spelling and grammar must be present.**

a. Test: Copying all text into and spelling and grammar checker as well as using own knowledge of spelling and grammar.

i. The "Eventar" at the bottom of page contained in the "Subscribe to our Newsletter" box should be "EventAR".

ii. Maybe the "range" in "Price range" in the search/filter box should have a capital "R" but that can be personal preference to which looks better.

iii. Maybe the "fitness" which follows the "Sports and fitness" in the interest's options in the search/filter box should have a capital "F".

Additional Points:

- The date select function in the search/filter box should have a date range instead of one specific date.

## 8.4 APPENDIX D: SYSTEM TESTING

### 8.4.1 Google Maps API User Testing

#### Format

- Expected Result: What is expected of the web page.
- Test: Testing if the result complies with what is expected.
- Actual Result: The result of the test.
- It isn't necessary to read all apart from additional points.

#### **1. Searching for an address should show the correct address on google maps**

- a. I will search for multiple known address e.g. my home address, Goldsmiths College Address, my term time address and addresses in 5 other countries.
  - i. All correct addresses were shown.

#### **2. Scroll wheel should allow the user to zoom in and out on the map**

- a. I will hover over the map and zoom in and out.
  - i. Map does zoom in when scrolling up and zoom out when scrolling down.

#### **3. Holding down left or right mouse button on the map then moving the mouse should drag the map in the moved direction.**

- a. I will try holding down each mouse button then moving the mouse.
  - i. The map does exactly as expected.

#### **4. All button features on the map should work as expected.**

- a. Click or use every feature on the map.
  - i. All features work as expected. (Street view, terrain, satellite, full screen, zoom in and out)

#### **5. Everything on the page should still be available and scale to smaller screens.**

- a. Reduce the screen size by 10% each time and note if any problems.
  - i. Everything is still accessible and looking fine on smaller screens.

#### **6. Interactive buttons and text should display an indicator to the user that it is interactive when hovering over with the mouse pointer.**

- a. I hovered over each button and interactive text at multiple screen sizes
  - i. All interactive elements indicate they are interactive to the user.

**7. When hovering over text or a text box the appropriate text cursor should appear unless it is an interactive link at all screen sizes.**

- a. Hovering over all the text one section at a time and recording if the text cursor is present or not at different screen sizes.
  - i. All text and text boxes work as expected.

Additional Points

- Add an autocomplete feature where a list of suggestions come up underneath the search bar.
- Restrict users to only entering their postcode as we do not need their complete address.
- Add a visual which shows the location the user has searched for example a pin or circle on the map.
- When searching for events or venues in a certain radius it should show a large no filled circle around the users address with visuals of all the events/venues inside it.
- Only allow UK postcodes and return a friendly error message if not.

#### **8.4.2 Sign Up and Login**

Format

- Expected Result: What is expected of the web page.
- Test: Testing if the result complies with what is expected.
- Actual Result: The result of the test.
- It isn't necessary to read all apart from additional points.

Sign Up/Login Specific

- 1. Refreshing the page should reset all data inputted into the form.**
  - a. Enter text into all fields then refresh the page and note if the fields become empty.
    - i. After refresh all fields for sign in and register are emptied.
- 2. The form should not submit if the email address is not valid and should display a friendly error message if invalid.**
  - a. I will enter multiple invalid email addresses into the text field and note if the form submits and if it displays a friendly error message.
    - i. The form does not submit when using an invalid email address.
    - ii. An error message does appear but maybe it should say "Please enter a valid email address" instead or something similar.

- 3. The form should not accept weak passwords.**
  - a. I will enter multiple weak password including '1', 'password', 'password123', then note if the form accepts.
    - i. Weak passwords such as a password are accepted.
- 4. There should be a message displaying the minimum requirements for the password**
  - a. Check the page before and after submitting a bad password to see if a message is displayed.
    - i. When submitting a password of less than 6 characters a display message is shown telling the user the password needs to be 6 characters at least.
- 5. The password field should display characters as '\*\*\*\*' to protect to the users' password.**
  - a. Enter a password and note if characters are displayed as '\*\*\*\*'.
    - i. Characters are shown as '\*\*\*' inside the password field.
- 6. The form should accept all valid email types.**
  - a. I will sign up with multiple different email providers, including – 'Gmail', 'Outlook', 'Yahoo', 'Mail.com', 'Proton Mail', and 'gold.ac.uk'
    - i. All emails tested worked.
- 7. The Email field should not accept any spaces and display a friendly error message telling the user that spaces are invalid when spaces are used.**
  - a. I will try to sign up using a valid email address with spaces on each end and note if the form submits and an error message is displayed.
    - i. An error message is shown but it is not specific as it does not say that the problem is the result of spaces.
- 8. The database should truncate all leading and following spaces from name and username fields.**
  - a. Enter names with leading and following spaces then check in the database if the spaces are truncated.
    - i. No name or username fields.
- 9. If the email address doesn't exist, then the user should receive an error message saying so when logging in.**
  - a. Try to sign in with an unregistered email address.
    - i. There is no error message specific to this

- 10. The username and name fields should not accept special characters and should display a message telling the user either after submitting special characters or before.**
  - a. Try and signup using special characters in name fields including '!#\$%^&\*{}[]/-=' then note if the form submits and if an error message is displayed.
    - i. No username or name fields.
- 11. Selecting remember me should allow the user to be signed in for a long period of time.**
  - a. Sign in then check after 24 hours if still signed in.
    - i. No remember me function.
- 12. The user should be automatically logged out after a period of inactivity or not being on the site if remember me was not chosen.**
  - a. Sign in then leave the page and go back to the page in 30 minutes to see if the user has been logged out.

Additional Points:

- Add second password field for sign up to account for human error.
- Merge the signup/login page onto one page or use up more of the white space per page (Front end)
- Add a remember me function if possible.
- Add additional required parameters for a password e.g. mix of lowercase and uppercase
- When clicking inside the password box a display box could appear saying the required password parameters.
- If possible add specific error messages e.g. 'email address contains spaces' 'The email address entered is not registered'
- Captcha implementation to stop bots.
- Implement forgot password function.

## 8.5 APPENDIX E: UNIT AND INTEGRATION TESTING

```
4  //Unit tests
5  describe('Testing text fields', () => {
6    beforeEach(() => {
7      cy.visit('/');
8    });
9    it('Should display sign in with Google.', () => {
10      cy.visit('/');
11      cy.get('[data-cy=google]').should('be.visible');
12      cy.get('[data-cy=google]').contains('Sign in with Google');
13    });
14    it('Discover link should display Discover text', () => {
15      cy.get(':nth-child(1) > .nav-link').contains('Discover')
16    });
17    it('Plan link should display Plan text', () => {
18      cy.get(':nth-child(2) > .nav-link').contains('Plan')
19    });
20    it('Vendors link should display vendors text', () => {
21      cy.get(':nth-child(3) > .nav-link').contains('Vendors')
22    });
23    it('Packages link should display packages text', () => {
24      cy.get(':nth-child(4) > .nav-link').contains('Packages')
25    });
26  });
27
28 //Integration testing
29 describe('Testing login function', () =>{
30
31   it('Should allow the registered user to login and take them to the main page', () => {
32     cy.get('[data-cy=email]').type("nathanlamplough@live.co.uk")
33     cy.get('[data-cy=password').type("password")
34     cy.get('[data-cy=sButton').click()
35     cy.url().should('include', '/main')
36   });
37   it('Should log out the signed in user then take them to login page', () =>{
38     cy.get('[data-cy=logoutButton]').click()
39     cy.url().should('include', '/login')
40   });
41 });
42
43
44 describe('Testing routes', () =>{
45   it('Register link should take to register page', () => {
46     cy.get(':nth-child(6) > .nav-link').click()
47     cy.url().should('include', '/sign-up')
48   });
49   it('Create one link should take to register page', () => {
50     cy.get(':nth-child(6) > .nav-link').click()
51     cy.url().should('include', '/sign-up')
52   });
53 });
54});
```

```

2  //integration test
3  describe('Testing sign up feature', () =>{
4      it('Should allow a new user to sign up', () => {
5          cy.visit('http://localhost:8080/#/sign-up');
6          var a = Math.floor(Math.random() * 10000) + 1;;
7          var email = a+'@outlook.com'
8          cy.get('[data-cy=emailSignup]').type(email)
9          cy.get('[data-cy=passwordSignup]').type('password')
10         cy.get('[data-cy=signUpButton]').click()
11         cy.url().should('include', '/main')
12     });
13 });
14 describe('Testing routes', () =>{
15     it('Sign in link should take to login page', () => {
16         cy.get(':nth-child(5) > .nav-link').click()
17         cy.url().should('include', '/login')
18     });
19 });
20 //unit tests
21 describe('Testing text fields', () =>{
22     beforeEach(() => {
23         cy.visit('http://localhost:8080/#/sign-up');
24     });
25     it('Should read lets create an account', ()=>{
26         cy.get('[data-cy=createText]').should('be.visible');
27         cy.get('[data-cy=createText]').contains("Let's create a new account")
28     });
29     it('Should read register', ()=>{
30         cy.get('[data-cy=signUpButton]').should('be.visible');
31         cy.get('[data-cy=signUpButton]').contains("Register")
32     });
33     it('Should read, or go back to login', ()=>{
34         cy.get('[data-cy=goBack]').should('be.visible');
35         cy.get('[data-cy=goBack]').contains(" or go back to login")
36     });
37     it('Should display sign in with Google.', () => {
38         cy.visit('/');
39         cy.get('[data-cy=google]').should('be.visible');
40         cy.get('[data-cy=google]').contains('Sign in with Google');
41     });
42     it('Discover link should display Discover text', () => {
43         cy.get(':nth-child(1) > .nav-link').contains('Discover')
44     });
45     it('Plan link should display Plan text', () => {
46         cy.get(':nth-child(2) > .nav-link').contains('Plan')
47     });
48     it('Vendors link should display vendors text', () => {
49         cy.get(':nth-child(3) > .nav-link').contains('Vendors')
50     });
51     it('Packages link should display packages text', () => {
52         cy.get(':nth-child(4) > .nav-link').contains('Packages')
53     });
54 });

```

To view the full code, visit the following link on GitHub:

[https://github.com/nathanlamplough/EventAR\\_Testing](https://github.com/nathanlamplough/EventAR_Testing)

## 8.6 APPENDIX F: COMPETITORS

### Eventbrite Organiser App

Features	Drawbacks
<ul style="list-style-type: none"> <li>• Real-time Data; Watching live ticket sales (shows a graph allowing the user to analyse attendance and trends)</li> <li>• Ticket scanning facility #Scan QR codes through app for checking in.</li> <li>• Allows the user to add an event they found to their calendar</li> </ul>	<ul style="list-style-type: none"> <li>• Two apps can make it confusing for the user, where they may prefer both integrated into one for easier access.</li> <li>• Doesn't tackle planning an event head on.</li> <li>• The user interface for the organiser app can be overwhelming for user.</li> <li>• Was criticised for having a lack of a login database for users so that they can save particular events, or set reminders.</li> </ul>

### Design My Night

Features	Drawbacks
<ul style="list-style-type: none"> <li>• The booking form is actually quite intuitive and covers a wide range of options. Also allows the user to customize the little things that go into planning a bigger event</li> <li>• Has icons which signify "Nightclub" "Chatting and drinking" "After work drinks" this is a simple add-on which can create a vision for the user to see if the venue will be suitable for their event.</li> </ul>	<ul style="list-style-type: none"> <li>• To actually plan an event itself, it is more difficult for the user to get to than it should be.</li> <li>• Overall UI looks crammed and once again overwhelming for a user who simply wants everything to be organised.</li> <li>• Doesn't ALWAYS allow users to immediately see any venues that they can possibly book.</li> </ul>

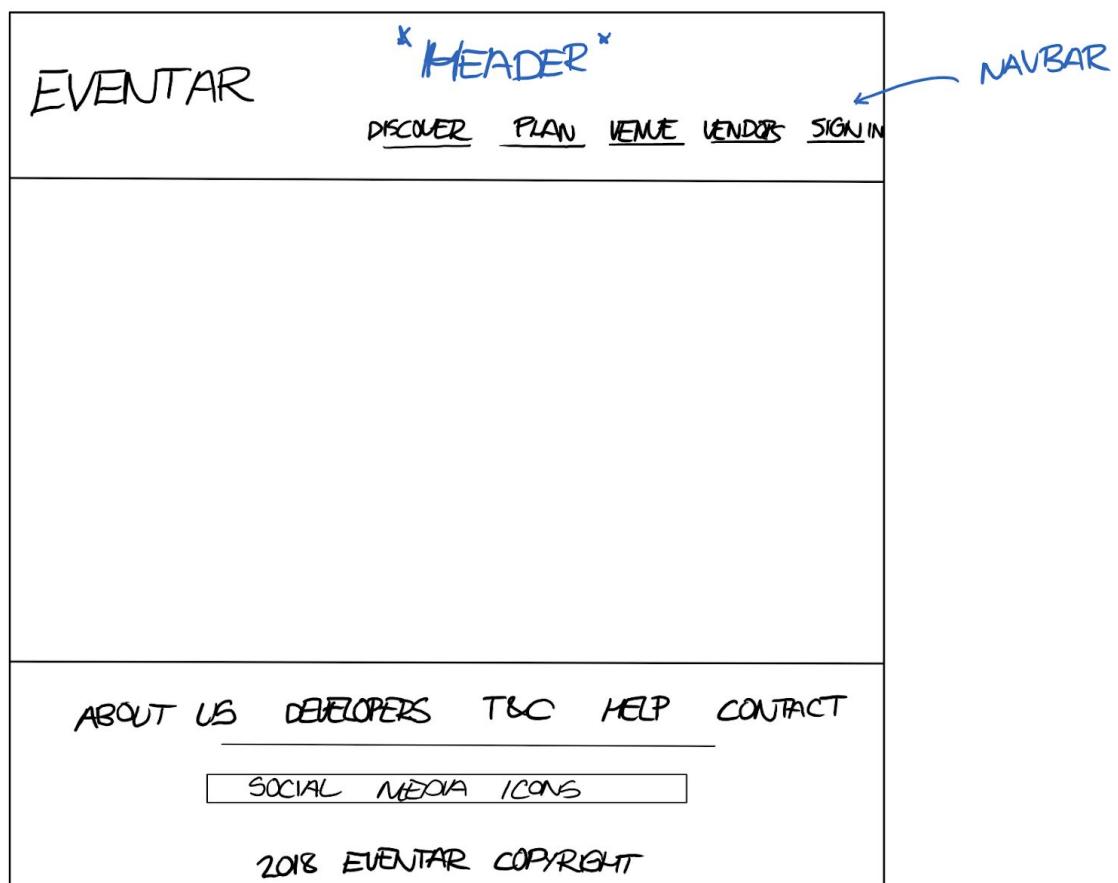
### Time Out London

Features	Drawbacks
<ul style="list-style-type: none"> <li>• The website is quite simple and not as cramped as opposed to dream my night, thus not overwhelming.</li> </ul>	<ul style="list-style-type: none"> <li>• The website doesn't really assist with planning events, but it helps with searching pre-existing events.</li> </ul>

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• The website provides a wide range of events and gives offers that are going on at the time.</li><li>• People post comments allowing users to gauge feedback and opinion on the events.</li></ul> | <ul style="list-style-type: none"><li>• The posts make the website look like a blogging site rather than it being segmented, hence it can be more organised.</li></ul> |
|--|--|

## 8.7 APPENDIX G: WEB APPLICATION WIREFRAMES

Base - Header and Footer



## Sign up/Login in page

The initial wireframe for the sign in/login page which later was altered.

A hand-drawn wireframe for a sign up/login page. The top section contains a logo labeled "EventAR Logo" and navigation links for "HOME", "SIGN UP", and "ABOUT US". A red box highlights the area of the geometric design background. The middle section features a "SIGN ME UP!" button above a series of input fields for "NAME", "SURNAME", "DATE OF BIRTH", "EMAIL", "PASSWORD", and "CONFIRM PW". Below these is a "SIGN UP!" button. A link "LOGIN IF YOU HAVE AN ACCOUNT ALREADY" is also present. The bottom section is titled "ABOUT EVENTAR" and contains a "Brief Description" field. A note "scroll down to find out more" with a downward arrow is located between the middle and bottom sections.

EventAR Logo

HOME SIGN UP ABOUT US

SIGN ME UP!

NAME  
SURNAME  
DATE OF BIRTH  
EMAIL  
PASSWORD  
CONFIRM PW

SIGN UP!

LOGIN IF YOU HAVE AN ACCOUNT ALREADY

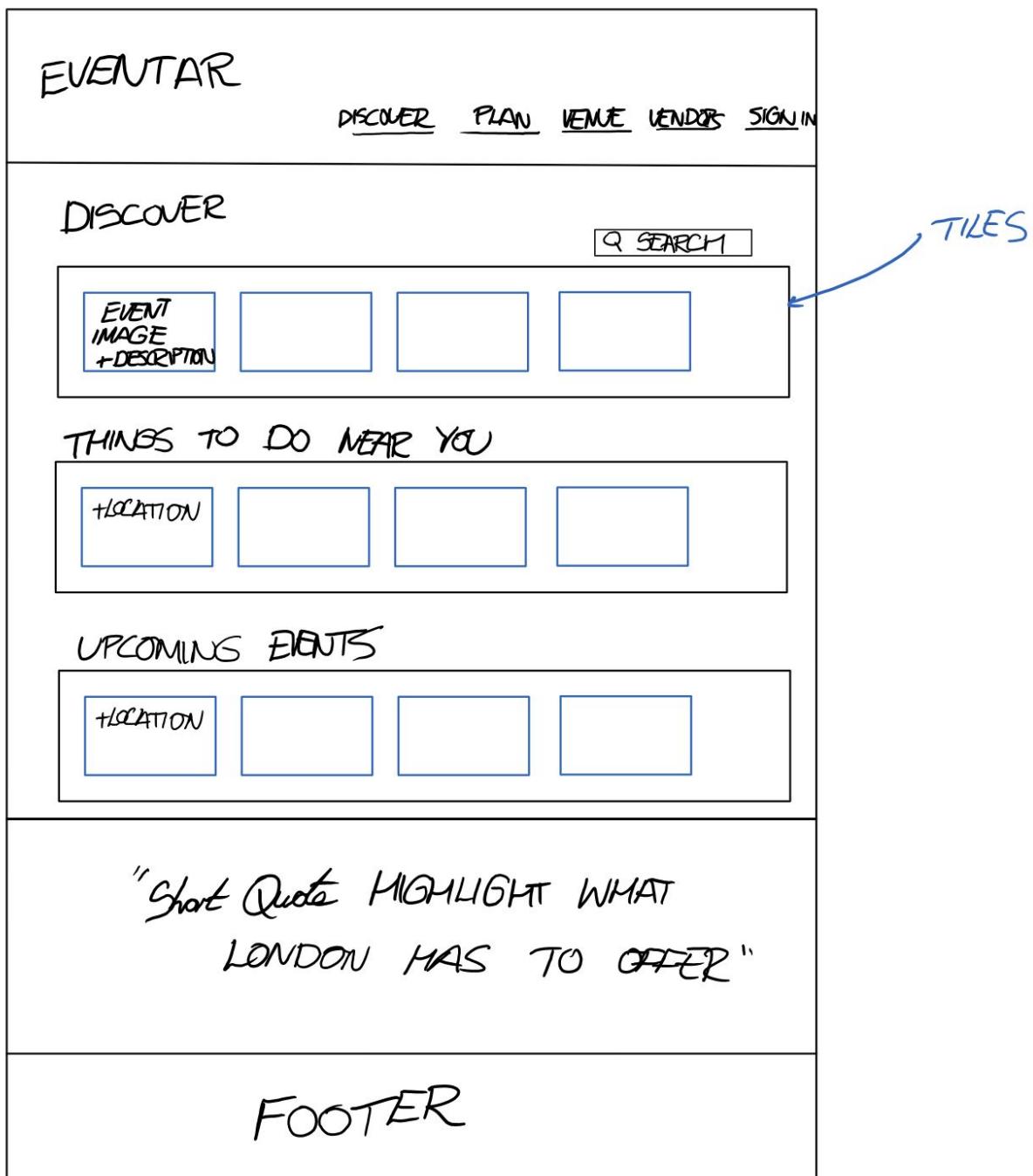
scroll down to find out more

ABOUT EVENTAR

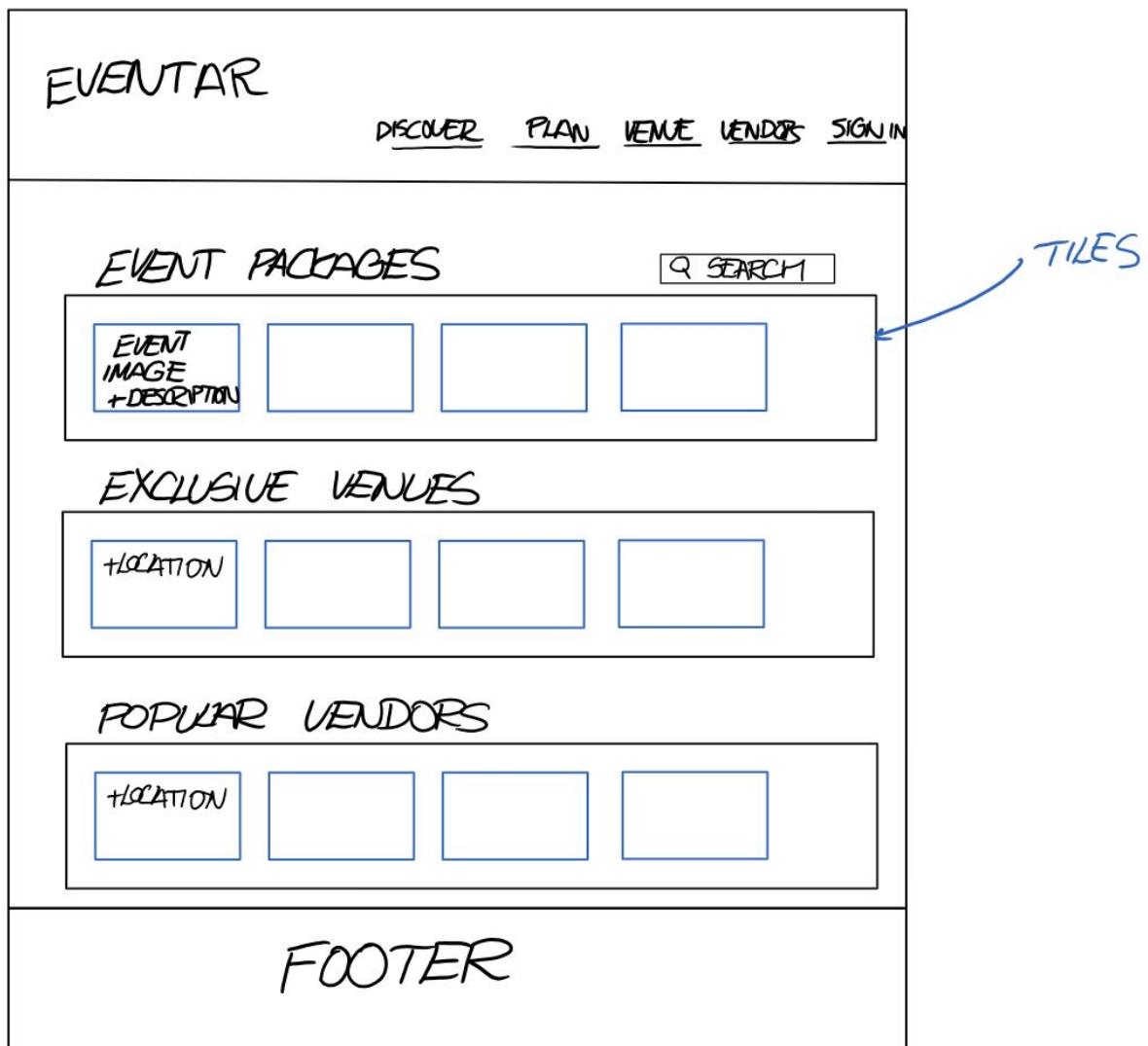
Brief Description

Red Box  
highlighting  
area of  
geometric design  
(background)

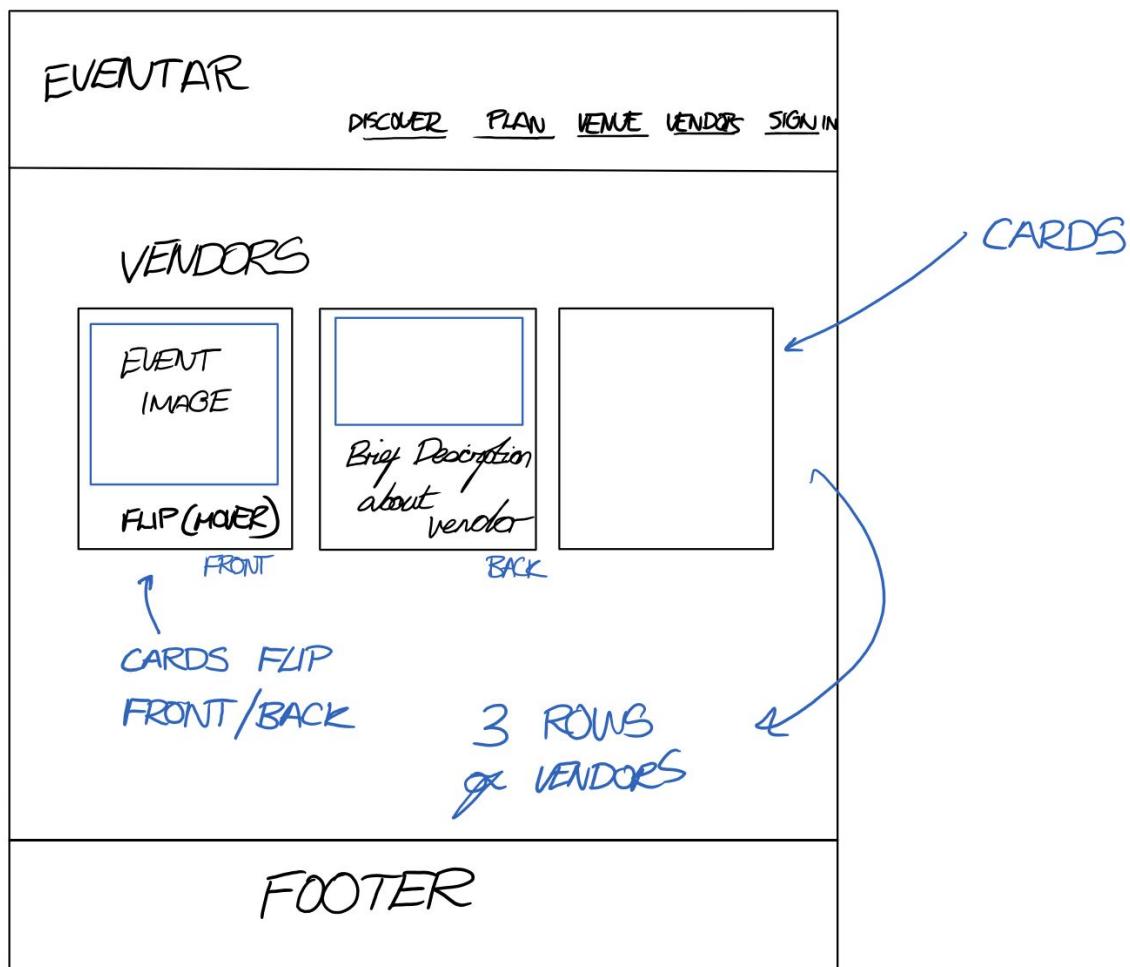
## Discover Page



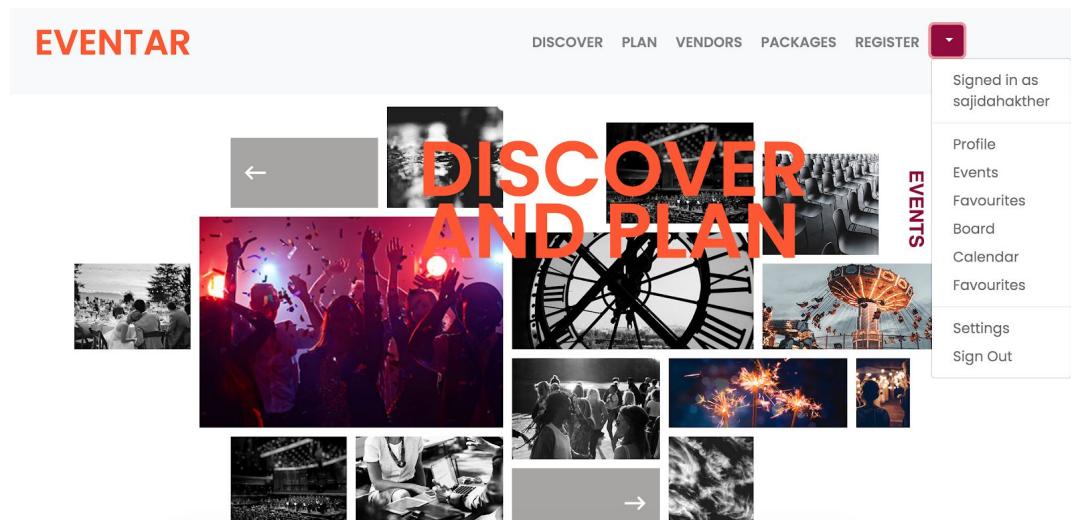
## Events Page



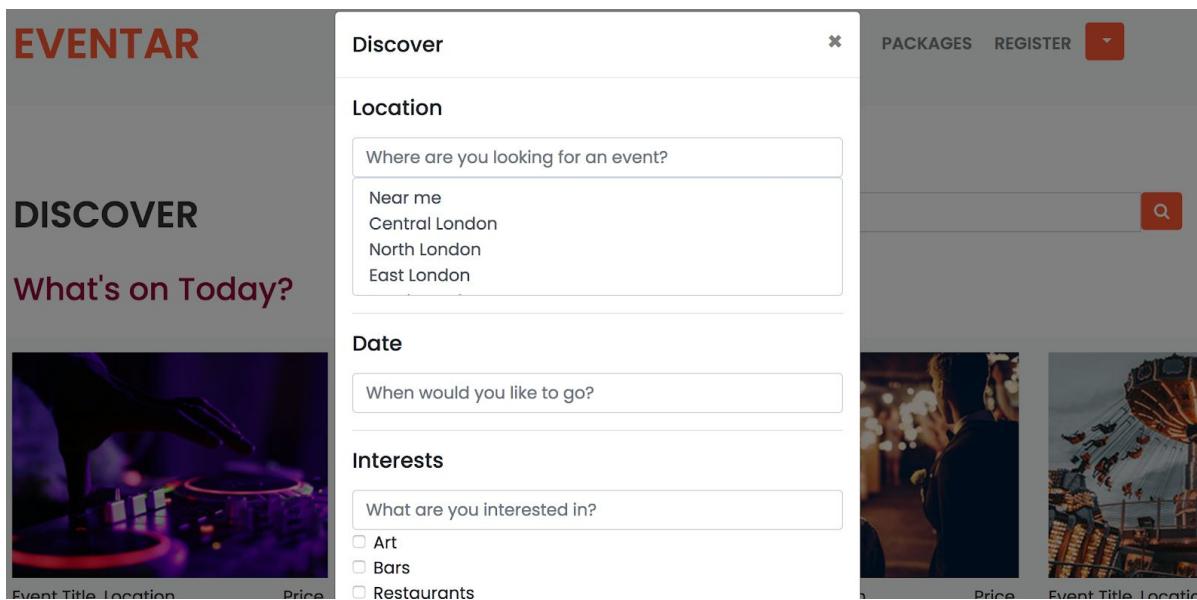
## Vendors Wireframe



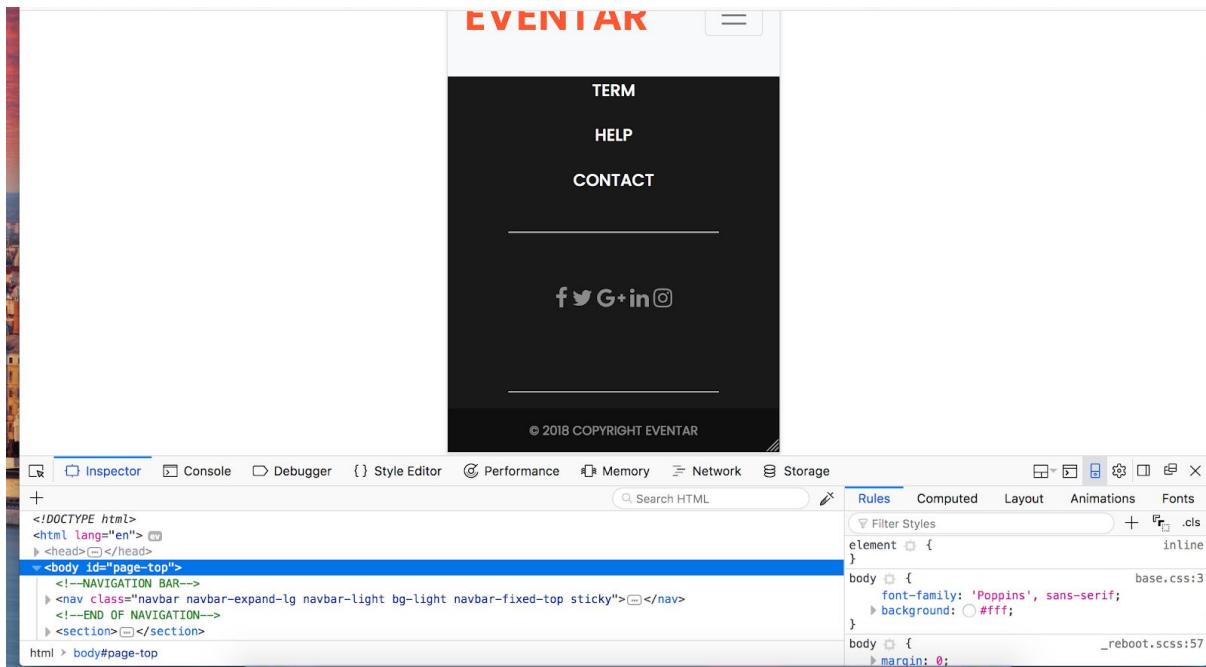
## 8.8 APPENDIX H: DESIGN STAGES OF APPLICATION



Started off creating the web page on HTML then integrated it all over to Vue where we had a static navigation and footer.



We created a modal for the filtered search because we found this worked best when viewed on smaller devices, as users could easily exit the modal and continue browsing instead of needing to scroll to find the content.



We checked the responsiveness of our webpages by viewing it on development mode.

When we created our sign in/login page, this was our initial design which then developed into a modal.

**SIGN IN**  
If you already have an account with us, input your details by clicking the button below  
**LOGIN**

**SIGN UP**  
Email Address  
User  
Password  
Confirm Password  
**SIGN UP**

Or Register/Login With Us Using Existing Social Media Accounts!

**EVENTAR** DISCOVER PLAN VENDORS PACKAGES SIGN IN  
**CREATE ACCOUNT**  
 Email  
 Username  
 Password  
 SIGN IN REGISTER  
 CONNECT WITH GOOGLE  
 CONNECT WITH FACEBOOK

## 8.9 APPENDIX I: USER FEEDBACK

### One-to-one interviews

These are quotes extracted from different one-to-one interviews we had.

#### Do you believe the accent colours of Purple and Orange are appealing?

**Basanti:** *I think the colours are great, they clash well with each other and can be used to highlight different things, I.E Purple for text and Orange for Headings maybe?*

**Khalil:** *Great colours in my honest opinion*

**Himesh:** *I think the colour contrast is good.*

#### If you were to search for an event or plan one, would you rather do it on your phone or laptop?

**Basanti:** *For searching events my phone, for the sake of easiness and portable access, but for planning my laptop for ease of seeing venues on a larger screen.*

**Khalil:** *To be honest it doesn't matter, because I can view the website on all modern smartphones, so by having a web application I can use it on either platform independent on what I want to do, plan or search.*

**Himesh:** *I believe that by searching for events it's easier on phone to get geographical pinpoint location too with the smartphone compatibility feature. It would make more sense to plan on a laptop.*

#### By looking at the wireframe designs, which one do you think could be improved?

**Basanti:** *By looking at the login and sign up page, I think the page could be more modernised, seems a bit static with the fields and no use of drop down menus.*

**Khalil:** *I think that the wireframes are all okay, I think however for the vendors page, the cards at the back should have a button for "See More"*

**Himesh:** *I believe all the wireframes look great, no improvements needed. Once they have been materialised then it will be easy to see whether there's any tweaking required.*

#### By looking at most of the pages are materialised, what improvements do you think we could make?

**Basanti:** *I think the website seems a bit static, see if you could do something on the vendors page maybe for an animations for the cards i.e action when you hover over them?*

**Khalil:** *I believe the website could have some improvements, it seems static when hovering over texts and buttons.*

**Himesh:** *I don't see any issues, just make the website a bit more user responsive when changing to a mobile display that's all.*

## Feedback from surveys

Users discussed their needs, concerns and providing further suggestions.

- “Application eliminate the guesswork by providing a rundown of the vendors used to run a certain event as this would save time”
- “An interactive board to view their ideas for event-planning which enables categorisation”
- “Concern is the money and time it takes to plan/discover an event”
- “Be able to compare between two venues and read reviews”
- “Ability to see a plan of floor and being able to select certain decor and features to match, creating seating plan and being able to share the floor plan. To be able to upload your own objects for the augmented reality.”
- “Non-invasive ads, ability to know noise limit when looking for a venue for a music event.”
- “Be able to save previous event plans so if for example I wanted to use the same caterer again I can look back on my previous event.”
- “To find the best deal, catering quotes”
- “I would like it to be all encompassing so I could have my to do list, guest lists (RSVP status) equipment needs all in one place. It would excellent if attendees could then engage with the platform too e.g. post photos of the event.”
- “Portability is vital and exclusive deals with the app. Would like notifications for when venues become available for bookings. Instant recommendations of venues suited to what I'm looking for. Notifications and reminders to show the upcoming events you have planned. Emails for certain offers.”
- “Capacity limit, whether the venue has a license to sell alcohol, if the venue is exclusive to a certain age group, if the venue has any equipment open to use e.g PA/sound system, lighting. Seeing calendars for venues so you can see when they have slots available.”
- “Colour to track events on calendar and ability to send out invitations.”

- “If I was searching for an event I’d like for the app to show a map of the events in an area so it’s easier to see where they are/how close to home. Direction to event venue.”
- “Profiles for people and being able to add people as friends. Profile showing past booking so can rebook. A private group chat within the event app. Create groups and vote on which venue is best for the event.”
- “Gig recommendations for music taste”
- “Shows food menus”

## Design User Feedback

Feedback collected from focus groups, and the improvements the group have made based on the feedback:

*“The design looks quite clean and the content is very clear. I like the incorporation of simplicity, which ensures that the user isn’t fed too much information and doesn’t make it too complicated for them. I like the arrangement, only improvements that can be made is to make the design a bit more modern with a sleek look.” – Tanjil*

**Improvements made by the team:** We have made the design more modern by switching the jumbotron out for a photo grid. We have stored the images of venues, vendors in a vertical scroll section so users can quickly get a glimpse of what is available. We also included a 360 player so users can view the interior of venues.

*“The navigation is very clear. I like the simplicity of the app layout, the colours, and the overall modern look. In the packages, it would be useful to be able to read the reviews by previous clients of a catering service to see how they felt about their service as it would help users to feel more confident about the service they choose. I’d like to see a messaging feature, where I could multi-plan the wedding, share event plan with other users to get suggestions and their input. The application can be improved by receiving updates and notifications of wedding deals, discounts, promotions of venues, and upcoming events that relate to my interests.” – Jamila*

*“As suggestions for functionality for the app, I think there should be a place where*

*users can leave reviews and ratings for the venue with a comment section. This is useful for another individual to gauge whether the venue will be suitable for their own event.” – Saif*

**Improvements made by the team:** We have added more information on venues, a description, the price, capacity, rating and the ability to leave reviews or favourite. However, we were not able to add a multi-plan/messaging feature but this is something we would have tried to implement if we had more time.

*“I think the app is perfect for planning or searching for events. Looks simple to use.” – Khalil*

*“I really like the start page, with the differentiation of searching and planning, there should however be a way where they can potentially switch between one and another a bit easier? As opposed to having to go back to the home page. I like the implementation of colours and arrangement.” – Jayna*

**Improvements made by the team:** We have added a quick search section in the main page where users can click ‘plan’ or ‘discover’ and the accordion opens up to a search function. This makes it easier for users to quickly find what they are looking for without needing to switch pages. There are a few bugs with this feature as the accordion sometimes does not open when it is clicked, we hope to fix this issue in the future.

*“I would have liked to see an interactive board where you can pin your ideas. Other than that I like being able to see popular places and what is happening within the area, as well as the ability to search through many venues, read information and favourite them” – Sarah*

**Team:** We initially did plan on implementing an interactive board similar to that of Pinterest however using the pictures from google/pinterest required a server.

# Design Questionnaire

## EventAR Design

EventAR is an event planning and searching website. Please go to the website through the link below and complete the instructions and questions in the questionnaire. <https://eventar-85053.firebaseio.com/#/>

\* Required

Please take your time and explore EventAR for a few minutes

How readable was the text? \*

	1	2	3	4	5	
Hard to read	<input type="radio"/>	Easy to read				

How do you feel information on across the site was displayed? \*

	1	2	3	4	5	
Poor	<input type="radio"/>	Good				

How did you find exploring EventAR? \*

	1	2	3	4	5	
Hard	<input type="radio"/>	Easy				

How were the use of colours? \*

	1	2	3	4	5	
Poor	<input type="radio"/>	Good				

How was the use of white space? \*

	1	2	3	4	5	
Poor	<input type="radio"/>	Good				

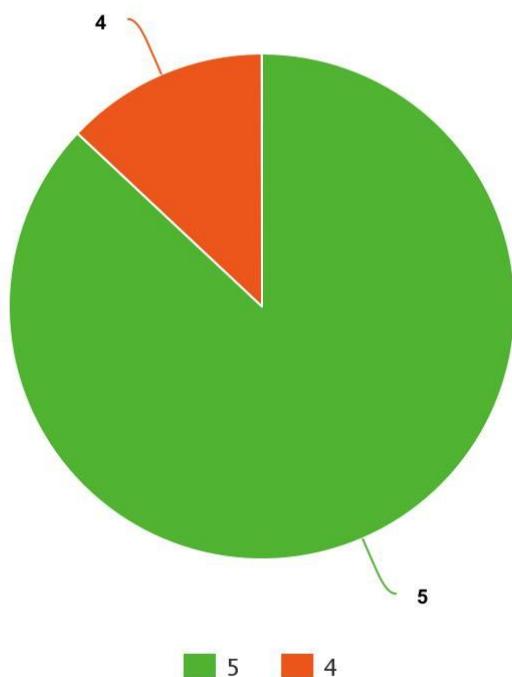
Please elaborate on any problems you had with site and include any features or changes you think will benefit EventAR \*

Your answer

## User Design Questionnaire(Questions Seen above) Results:

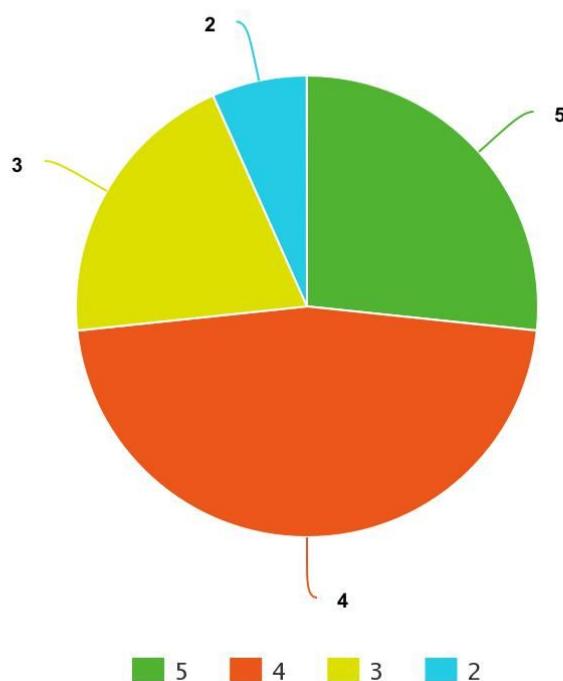
Q1: 1 = Hard to read 2 = Easy to read

How Readable Was the Text?



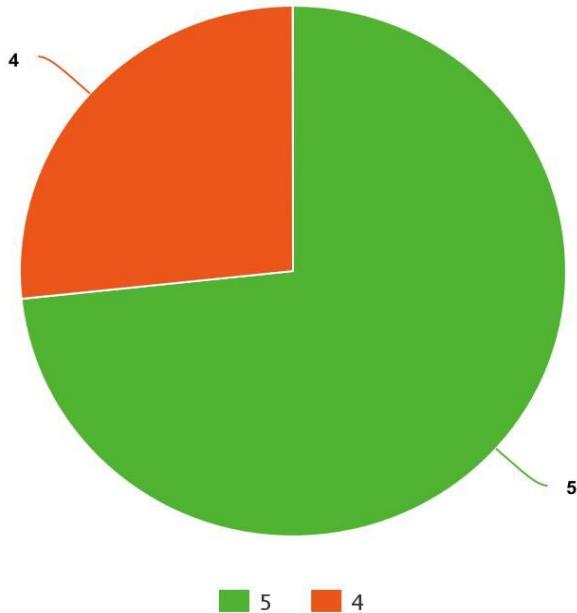
Q2: 1 = Poor, 5 = Good

How do you feel information on across the site was displayed?



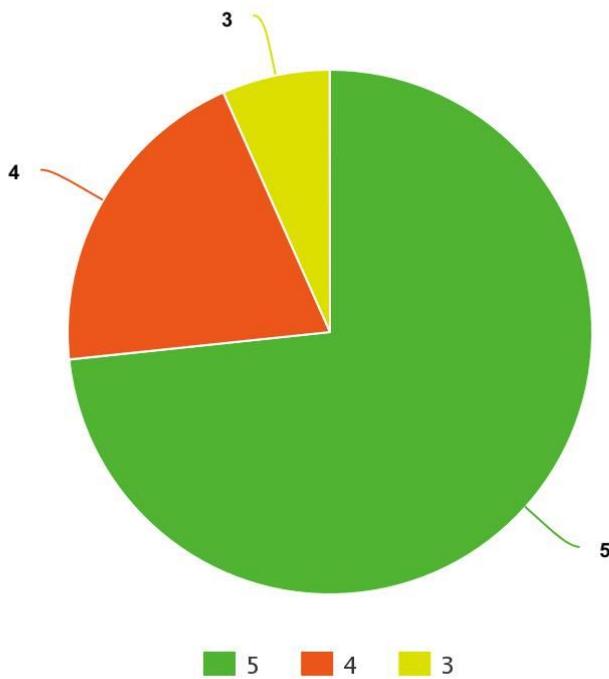
Q3: 1 = Hard, 5 = Easy

How did you find exploring EventAR?



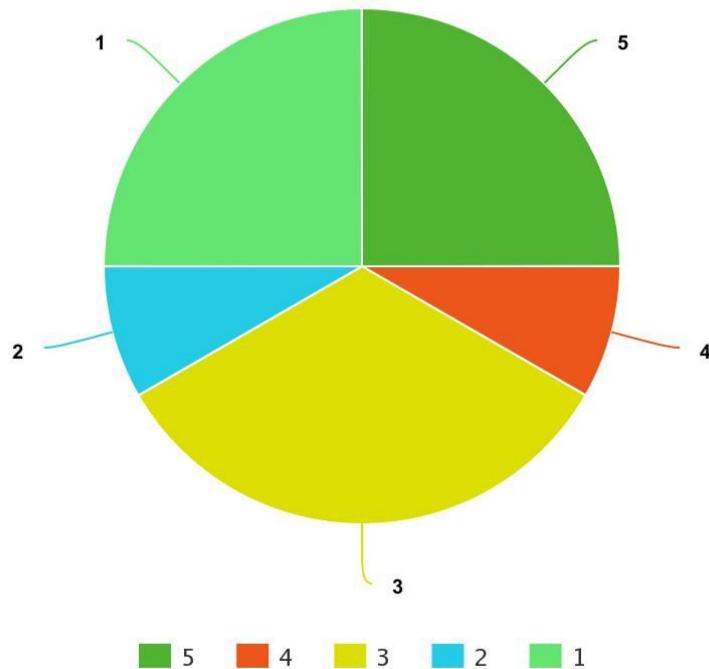
Q4: 1 = Poor, 5 = Good

How were the use of colours?



Q5: 1 = Poor, 5 = Good

How was the use of white space?



Q5: Please elaborate on any problems you had with site and include any features or changes you think will benefit EventAR:

- There is too much white space on the home page. You have to scroll down more than you need to find the search part.
- You could add a user review section.
- Nothing pops out at me, the site seems quite plain, also too much white-space on the home and sign in and register page.
- Having two separate pages for sign in and register means I have to do more clicking than I feel I should be doing
- You could combine the sign in and register page also too much white space on the homepage.
- Everything looks okay and accessible but boring.
- The sign and register pages have too much whitespace.
- I like the site, it is clear and good but it has no special quality.
- Too much white space on sign in and login pages
- the site is well designed
- In my opinion the register page and sign in page could go together to make the website more streamlined

- The site is modern and interesting
- The sign in and register page are very plain
- The home page doesn't capture my attention well enough
- Sign in and register page has too much whitespace

### Focus Group User Testing Transcript:

All users were asked the following questions:

1. Please register and sign in to EventAR.
  - a. How would you describe this process?
  - b. Is there anything that you think would improve this process?
2. Please explore EventAR for a few minutes.
  - a. How did the site compare with your expectations?
  - b. Was it clear what EventAR is and can do?
  - c. Was there anything you particularly liked about the site?
  - d. Was there anything you particularly disliked about the site?
  - e. How did you find navigating the site?
  - f. Is there anything that you think would improve navigating the site?
  - g. What do you think of the design of the site?
3. Please use the 360 image player on the venue page.
  - a. Was the experience using the player as expected?
  - b. Did you find the player helpful?

Please summarise your experience with EventAR and describe anything you dislike/like and what could be improved.

Jack:

- 1.a "Registering and signing in was made simple with the modal window"
- 1.b "Have an option to sign in with google to make the process faster"
- 2.a "The website matched my expectations as it was laid out clearly and modern like all up to date websites I visit."
- 2.b "I was able to read the information on the homepage which informed me on what I can do."
- 2.c "I really liked the 360-image player as I've never seen this before."
- 2.d "I liked everything about the site."
- 2.e "Going through the site was easy as there is a nav bar at the top of the page"
- 2.f "Could have a bread crumb trail"
- 2.g "The design is very clear and the colour scheme works well."
- 3.a "I found the 360 image player easy to use".
- 3.b "The player allowed me to get a better understanding of how the venues will look"
- "I think the site is good as a whole and serves its purpose well"

Jamila:

- 1.a "I found it easy to register, the process is like how all other web pages should be"
  - 1.b "I think it is simple and good as it is"
  - 2.a "The website went beyond my expectations as I did not expect the use of 360 images"
  - 2.b "Yes as the home page has 3 parts which tells you everything the site can do"
  - 2.c "I liked the colour scheme as it had a clean feel to it."
  - 2.d "On some pages there was too much scrolling"
  - 2.e "Going across the website was as expected"
  - 2.f "no"
  - 2.g "The design was good, I liked the use of images and minimum text"
  - 3.a "Yes it was simple to understand and use"
  - 3.b "Yes I could get a better idea in my head of what the venues will look like in real life"
- "The webpage works fine and does its job"

Kurt:

- 1.a "The process was easy and quick"
  - 1.b "You could add signing in with Facebook or Google"
  - 2.a "For a modern website it matched my expectations"
  - 2.b "I found information about the site on the home page and I then knew what EventAR is for and can do"
  - 2.c "I liked the review system and it will make users know which events and venues are worth choosing"
  - 2.d "I think the site could use more colour"
  - 2.e. "The webpage was easy to go through because of the heading links for each page"
  - 2.f "Navigating the site is perfect at the moment.
  - 2.g "The site design displays the information in a great way as not much reading has to be done"
  - 3.a "I used the 360 image player and it worked how all the previous ones Id used before."
  - 3.b "Yes, it would reduce making mistakes when choosing a venue as you can see clearer how big it is"
- "It was an average experience but I definitely can see how it will be good for searching for events and venues"

Saifur:

- 1.a "It was good and compared well with popular sites I use"
- 1.b "No"

2.a "I did not know what to expect as I haven't used an event planning website before, but I did enjoy my experience and liked the idea of EventAR."

2.b "Yes I learnt about planning and discovering on the homepage."

2.c "I liked the 360 image player, it add a lot of value to the site"

2.d "No I liked the site"

2.e "Navigating EventAR felt natural and was like every other good web page"

2.f "I can't think of anything off the top of my head"

2.g "The design is my favourite thing about the website, it uses images and colour in a captivating way"

3.a "Yes"

3.b "As I said before, it adds a lot of value as you really get a feel of a place through it compared to a 2d image"

"I very much like EventAR and I would definitely use it and recommend to friends when it is fully completed"

Kishaanth:

1.a "Simple and effective"

1.b "Not really as there is only so much you can do with registering and signing in but using google sign would make it quicker if people wanted to use that option"

2.a "It was a good site and seems like it will do everything an event planning and searching website should do"

2.b "Yes I found information across the site explaining what EventAR is."

2.c "I liked the review system, to me this is essential for a venue searcher"

2.d "No"

2.e "It was normal, I liked that all pages you could get to through the nav bar and the pop up modals made it less cluttered"

2.f "No"

2.g "I liked it, the colours and use of white space was done well to maximise the optimal point between a cluttered look and boring look"

3.a "Yes, I could look all around a room"

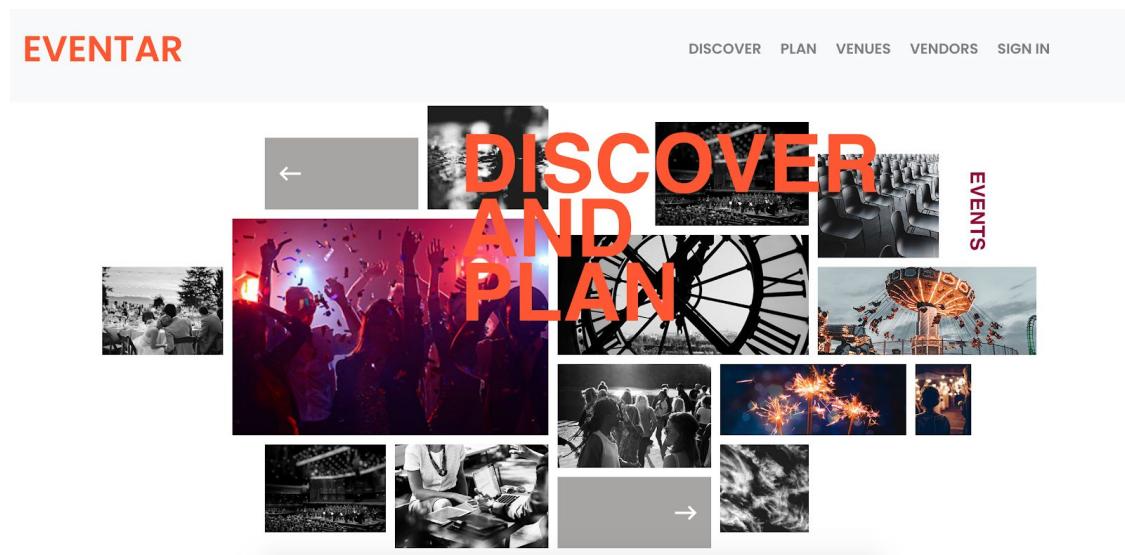
3.b "Yes, it makes actually visiting a place less needed"

"I think EventAR at the moment is good and I look forward to seeing the finished product"

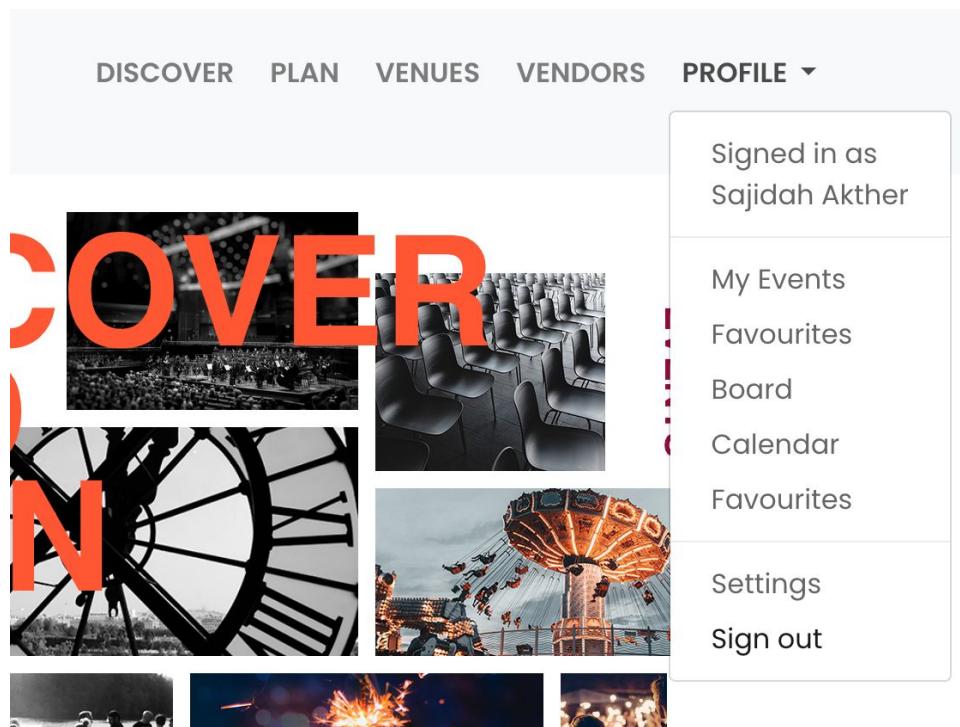
## 8.10 APPENDIX J: FINAL EVENTAR WEB DESIGN

### Landing Page

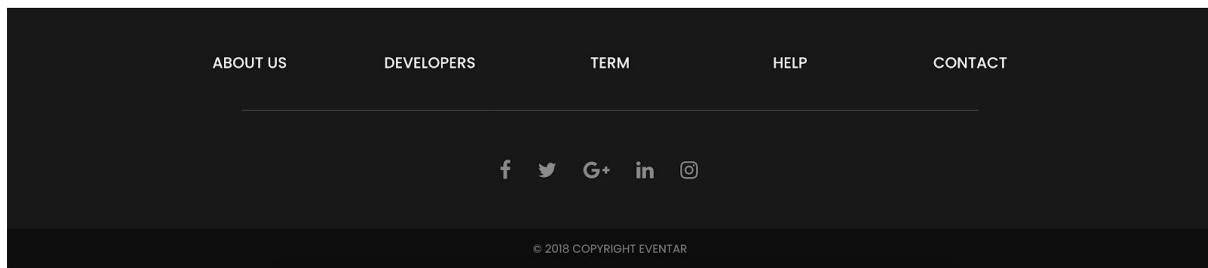
#### Header



#### Navigation



## Footer



## Quick Search

A screenshot of the EventAR website's quick search interface. The top navigation bar includes the "EVENTAR" logo in red, followed by links for "DISCOVER", "PLAN", "VENUES", "VENDORS", and "SIGN IN". Below this is a section titled "SEARCH" with two buttons: "Discover Events" and "Plan Events". The "Discover Events" button is currently active, showing a large image of a canal at night with buildings on either side. The "Plan Events" button shows an image of a restaurant table set for a meal. The overall layout is clean and modern.

Created an accordian for the quick search categories so that it keeps the layout very simple and organised. “Discover events” and “plan events” are buttons that expand and close the filtered search.

# Discover Page

## Browsing Events

EVENTAR

DISCOVER PLAN VENUES VENDORS PROFILE ▾

### DISCOVER

What's on Today?

SEARCH Q



Event Name

Price

Event Name

A brief description about the event.



Event Name

Price

Event Name

A brief description about the event.



Event Name

Price

Event Name

A brief description about the event.



Event Name

EVENTAR

DISCOVER PLAN VENUES VENDORS SIGN IN



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Event Name

A brief de

### Upcoming Events in London



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Event Name

A brief description about the event.



Event Name

A brief description about the event.

## Filtered Search

EVENTAR

Discover

X

VENUES VENDORS PROFILE ▾

Location

Where are you looking for an event?

- Near me
- Central London
- North London
- East London

Date

When would you like to go?

Interests

What are you interested in?

- (Check the boxes)
- Art
  - Bars
  - Restaurants
  - Sport and fitness
  - Theatre
  - Clubs
  - Museums
  - Live Music

Things to do Near You



# Plan Page

**Categories:** Event packages, exclusive venues, popular vendors

EVENTAR

DISCOVER PLAN VENUES VENDORS SIGN IN

PLAN

Event Packages

SEARCH Q



Weddings



Birthdays



Ceremonies



Parties

EVENTAR

DISCOVER PLAN VENUES VENDORS SIGN IN



Wedding Venues



Banqueting Halls



Conference Rooms



Performance Spaces

Popular Vendors



Caterers



Florists



Photographer



Videographer

## Filtered Search

EVENTAR

Plan

Event Type

What type of event would you like to plan?

- Wedding
- Birthday
- Ceremony
- Party

Venue Location

Where would you like to host this event?

- Near me
- Central London
- North London
- East London

Date

When do you plan to hold this event?

Capacity

How many guests will be attending?

A photograph of a woman in a red dress holding a white bouquet with red flowers.

Exclusive Venues



Parties



# Venues Page

## Venue Categories

EVENTAR

DISCOVER PLAN VENUES VENDORS SIGN IN

## VENUES

### Venue Categories



Wedding Venues



Banqueting Halls



Conference Rooms



Performance Spaces

When a category is clicked, it directs the user to the venue listing for that category. We plan to implement this feature completely in the future.

## “AR” Venues and Information

EVENTAR

DISCOVER PLAN VENUES VENDORS SIGN IN



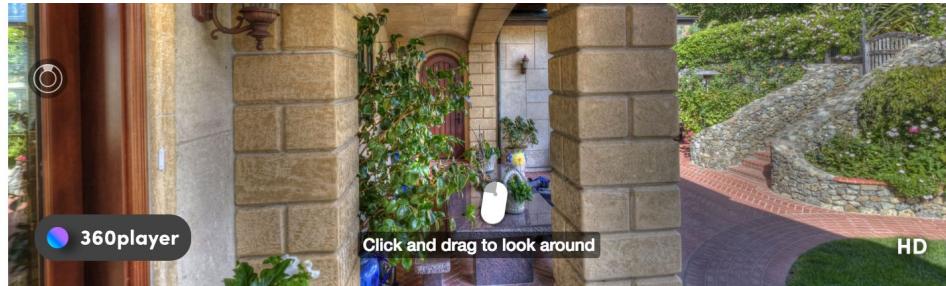
John Hendry Pavilion

★★★★★

From £5000 per day

A unique venue located in South West London at Kensington Event Centre. 18837 square feet, holding up to 1700 guests. A perfect setting for your wedding, corporate retreat, or private event. Brief description of the venue, where it is located and the capacity of people it holds.

The 360player allows users to receive a virtual tour of the venue. For each venue, the name, price, rating is listed as well as a brief description. Users also get to read reviews and favourite the venue.



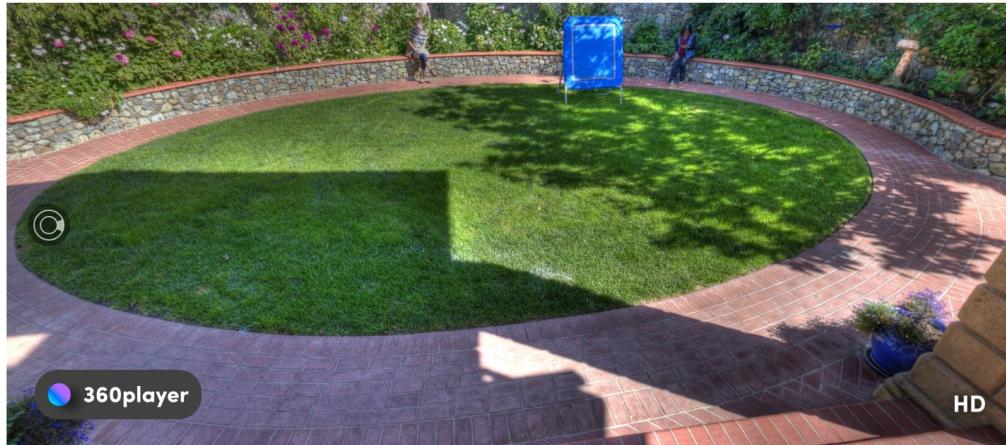
## Grosvenor Hotel

★★★★★

From £9000 per day

A unique venue located in South West London at Kensington Event Centre. 18837 square feet, holding up to 1700 guests. A perfect setting for your wedding, corporate retreat, or private event. Brief description of the venue, where it is located and the capacity of people it holds.

[Read Reviews](#)



## Grosvenor Hotel

★★★★★

From £9000 per day

'Read reviews' directs to Reviews Page

## Reviews Modal



Graham

March 10th 2018  
3 days ago



### Perfect Hall, Spacious and Clean!

This hall was perfect, came with all facilities and everything was ready before we knew it. EventAR is perfect when it comes to booking venues. The event managers were really nice, all at a decent price too, will definitely recommend it to anyone who needs to book a venue!



Sam

February 29 2018  
30 days ago



### Lavish Hall for Weddings!

This hall was perfect, came with all facilities and everything was ready before we knew it. EventAR is perfect when it comes to booking venues. Don't forget to ask for the caterers who did a lovely job with a nice menu. Personalised entrance, with decoration already set out, making it a perfect venue!

#### Leave a Review

Give a Rating out of 5



How was your experience?

Submit

## Vendors Page

### Cards

#### VENDORS



*ASK Wedding Couple Shoot*

*Hover Over to Flip Me*



*Cookies Factory*

*Hover Over to Flip Me*



*Burger Flippers Crew*

*Hover Over to Flip Me*



This is the back of the card when flipped, shows more information.

*ASK Wedding Couple Shoot*

*Location Coverage: London*

*Capacity Coverage: 500 people*

*Video Production also available*

**See More**

## 8.11 APPENDIX K: LOGO USER FEEDBACK

This shows the questionnaire used to filter the Logo Design drafts

### EventAR Logo Designs

Hey,

If you can please spare a minute or two to just take the time and give us feedback on what design you think is the most appropriate for our brand EventAR. As well as looking at the attractiveness of the logo, take into consideration which would seem the most fitting with our brands goal.

EventAR is a platform that allows you to search and plan events this consists of breaking it down from selecting venues, vendors, looking and packages as well as many more features such as looking at venues in the view of augmented reality.

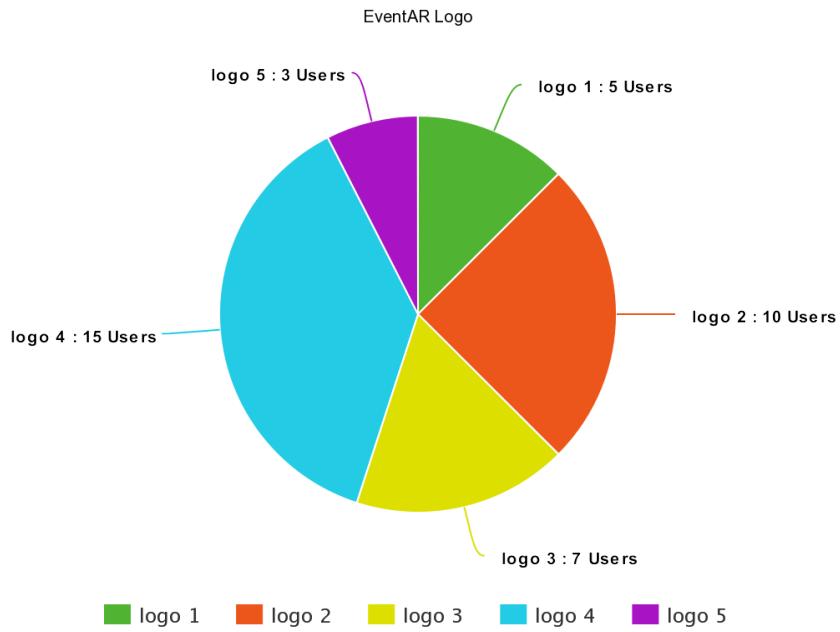
#### Drafts



#### 1. Which design do you prefer?

Mark only one oval.

- Logo 1
- Logo 2
- Logo 3
- Logo 4
- Logo 5



## Logo User Feedback

**By looking at the logo design 4, what can be improved?**

**Abdullah:** *I think that logo 2 had a better font, maybe a merge for that with logo 4's text would be better*

**Mario:** *I believe that the accent colours orange and purple should be represented in the abstract vector popping out of the text*

**Francesca:** *I think that you can make the font abit smaller and the abstract triangles abit bigger*

## 8.12 APPENDIX L: DESIGN STAGES OF LOGO

These were the drafts that led to the final logo design. The user feedback choice of Logo 4 led to refining the final logo.

