



Task Centered System Design Planning: “ExploreWise”

Jeongah Lee | jeongah.lee@ucalgary.ca

Jason Ngu | jason.ngu1@ucalgary.ca

Anmol Rana | anmol.rana@ucalgary.ca

Mahira Zabin | mahira.zabin1@ucalgary.ca

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1. Phase 0: Setting the Stage

1.1. Background Environment

ExploreWise is a Calgary-based travel startup with 20-50 employees. Currently, ExploreWise provides the best and most up-to-date travel recommendations and information for its clients. This includes assistance in choosing a travel location, finding flight deals, booking accommodations, obtaining travel insurance, and more. Clients seek out these services well before their trip in their initial planning phase where they work out the logistics of their trip. ExploreWise provides these services to clients through their travel agents, who can be contacted through phone, email, or in person at ExploreWise's office locations.

ExploreWise is looking to expand their services provided to clients by taking advantage of increased ownership of personal devices and how travelers are opting to use online tools to create their own personalized travel itineraries instead of using the likes of travel books or brochures. Therefore, ExploreWise wants to expand its services provided to clients by creating an online travel planner website that can be used before, during, and after a trip.

1.2. General Expectations of System

The travel planner website created for ExploreWise will be used by clients to plan their trips. The main expectation of the system will be to be able to create a travel itinerary. The system will allow clients to easily explore and find events to add to their itinerary. The website will allow for an intuitive overview of the itinerary that the client has created for easy viewing and editing. The itinerary will serve as an easy and organized way to plan a specific type of trip that the client wishes to have.

On top of the itinerary, the system will also include other simple features that can benefit clients in their travel planning. This can include the likes of a budget tracker or a quick referral to external websites for clients looking to book their own accommodations.

1.3. System Constraints

Building a new system requires more time and resources compared to modifying an existing system. Therefore, working within the tight timeline and budget given by ExploreWise will be challenging. Implementing features and meeting the major objectives of the system will be the main priority. However, building a new system will mean that there are no constraints or limitations from previous systems that will restrict the design of this current system.

There is total freedom of design and layout as long as it accommodates a website to be displayed on personal computers.

This system will be designed to be used from client's personal computers. There are no plans for it to be used at a kiosk or a dedicated workstation because the main objective of the travel planner website is for clients to be able to plan out their own trips and be able to modify their itinerary wherever they please. Future iterations of the website may be designed to accommodate a website displayed on a phone screen, or a phone app, but currently, the website's use is best recommended for a computer.

2. Phase I: Identification

2.1. Expected Users

User 1 - Business Traveler

Brian Shaw is a 32 year old business traveler. He goes on business trips frequently. Trips usually last under a month. He is tech-savvy and is familiar with using digital tools for planning.

User 2 - Travelling Family

The Bob family is comprised of a young married couple with 2 young children. The family goes on annual trips to a different country each year during the kids summer break. The parents are not very tech savvy, but are comfortable with basic technological skills like using services on the web.

User 3 - Long-Term Traveler

Emily is a long-term traveler. She is 30 years old and works remotely with a flexible work schedule. She has been a frequent traveler for the past 10 years and is planning to go on a long-term trip to Calgary. She is very knowledgeable and skilled at using technology to research, plan, and budget her trips.

User 4 - Backpacker

Roy is a 23 year old recent university graduate and going on his first backpacking trip. He is planning to stick to a tight budget of \$50 a day, and is looking at cheap accommodations instead of hotels. He is comfortable with technology, but has limited knowledge on planning a backpacking trip.

User 5 - Student Traveler

Lauryn is a university student in her 20s. She is at the stage in her life where she's eager to explore the world and gain diverse experiences. She is going on a budget friendly trip to a location that aligns with her studies and where she can gain valuable knowledge.

2.2. Work Context

User 1 - Business Traveler

Work setting includes going to domestic and/or international business trips. Typically situations for business travelers include filling the time in between business meetings/other work related activities. A change to the business schedule during the trip may occur, in which case, other parts of the trip will need to be readjusted. Aspects such as hotels are not relevant since it may be pre arranged by the company.

User 2 - Travelling Family

Family trips during the summer are common. Traveling families can go on trips that last anywhere from just a few days to a couple months. It is likely that children's specific amenities will be sought out. Sticking to a strict schedule will be difficult when with younger kids.

User 3 - Long-Term Traveler

For long-term travelers, it is typical for them to stay for months in one location. As such, their plans for accommodations will be different from other travelers. They may plan their accommodations way in advance. Additionally, they could be less inclined to create a packed/fully planned out itinerary for each day since time is not as limited compared to short trips.

User 4 - Backpacker

It is typical for backpackers to be on tight budgets. This will be reflected in their transportation options and accommodations they choose to stay at. Typically, they are in situations where they try to make the most out of their limited budget and seek activities that are meaningful to them.

User 5 - Student Traveler

Student travelers often are in situations where they can only travel on a tight budget. It is common for students to be quite comfortable with technology and be resourceful enough to take advantage of online tools when planning trips.

2.3. Task 1 - Adding/Removing Events from Itinerary

Task Description: Brian is a frequent business traveler In his 30s, who is now in Calgary for the first time for a meeting. He finds out at midday that his business meeting, which was supposed to start at 1 PM, has been rescheduled to 6 PM. Due to this, Brian adjusts his itinerary for the day. He removes watching A Christmas Carol at Theater Calgary at 6 PM from his itinerary as he can no longer attend it. He wants to find recreational activities to add on to his itinerary for the time until his meeting at 6 PM. Brian explores options for activities and events happening in Calgary during the afternoon. He browses through available recreational activities and events and identifies several that pique his interest. He then selects a specific activity, such as visiting Studio Bell at 1 PM, and a restaurant, like River Cafe, for a late lunch at 3 PM. Brian updates his itinerary by adding these activities, ensuring he makes the most of his time in Calgary before his rescheduled business meeting at 6 PM.

Brian falls under the user group of business travelers. He also represents many users who want to be able to modify their itinerary on the fly efficiently. While this task might not be performed daily, it is crucial for users like Brian to efficiently manage their itinerary and keep it organized despite schedule changes. Therefore, this task is of high importance as it involves the user's ability to adapt quickly to unexpected changes in their schedule, a common occurrence not only for business travelers but also for any other travelers who have a last minute change in plans.

2.4. Task 2 - Viewing Itinerary

Task Description: Emily, an adventurous solo traveler, frequently goes on solo trips to new places to learn more about different cultures and histories. Her latest adventure destination is in Machu Picchu, where there are a myriad of enriching activities she can attend such as exploring the ancient Inca ruins, hiking the Inca Trail, and learning about Inca history and culture. Before leaving for the airport for her latest trip, she wants to ensure that she can view her itinerary anytime she wishes, especially in remote areas where she might not get cell service. She enters her travel app and accesses her downloaded itinerary, confirming her travel plans. Feeling reassured that she doesn't have to worry about remembering her plans and can view them at her convenience, she leaves for the airport with one less thing occupying her mind.

Emily falls under the user group of backpackers. This task holds high importance as it is a routine and essential activity for travelers, especially those traveling alone. Viewing the itinerary is a frequent task that users perform throughout their journey to stay informed about their travel plans. The ability to access the itinerary easily and quickly is crucial for the user's peace of mind, ensuring a smooth travel experience. The nuances of this task involve the user's need for convenience, accessibility, and reliability when accessing their travel information. Real-time updates and offline access are crucial features and the user interface designed for backpackers should prioritize simplicity and accessibility.

2.5. Task 3 - Viewing User Recommendations

Task Description: John and his family are in week 2 of their summer vacation to Calgary. John's family is composed of his wife, and 3 kids between the ages of 4-8. John is looking for an event to go to as a family this afternoon that is kid-friendly. He wants event recommendations from people who have actually visited a place and recommends it for other tourists. Therefore, John calls up his friend Harry, who is also a father of 2 young kids, and was on vacation in Calgary last summer. Harry had visited Heritage Park with his family last summer and recommends John do the same. Harry mentions that Heritage Park is kid-friendly with educational learning opportunities, scavenger hunts, and open space for young kids to run around in. John is satisfied with the event suggestion, and decides to go to Heritage Park with his family from 10 AM - 11:30 AM today.

John and his family fall under the user group of family travelers. John also represents a reasonable number of users who want to view events that are recommended to them by other tourists who have gone on the same trip, and want to filter those user recommendations to the type of event they are looking for. It is common for travelers to be interested in events that other travelers recommend, so this is a frequently done task if it is convenient to do so. For example, it would be cumbersome for John to contact multiple people who have gone on a trip to Calgary and ask them about their event recommendations. However, if there was a convenient way for John to view event recommendations, then it would make a difference in how often John carries out this task.

2.6. Task 4 - Managing Budget Tracker

Task Description: Lauryn is a junior in college, currently visiting Calgary during her summer break for 7 days. She is working part-time and strives to save whatever she can after paying her tuition and living expenses in college. Being on a strict budget, Lauryn plans and picks a limit of \$850 for her trip and notes down her flight (\$200) and

Airbnb costs (\$350) in her notepad. As she starts her vacation, she continues keeping track of every single expense, such as the McDonald's Big Mac she ordered, costing \$12.5 and the Starbucks pumpkin spice latte for \$9.8. She also ensures to budget in some fun activities, such as going to Banff (\$200) or exploring the Calgary Zoo (\$110). Initially, she decided to visit the Zoo but after hearing much praise there is from the locals about Banff, she scratches out the budget listing for Zoo and writes down \$200 for her day-long Banff tour on the 5th day of her trip. She then pulls out her phone, opens the calculator and types in all the expenses and calculates how much money she has left for the 6th and 7th day of her trip, in order to decide how many more activities she can cover.

Lauryn falls under the user group of a student traveler. She also represents a good number of users who want to keep track of their budget and refrain from overspending from their savings, helping them pick between the massive number of activities to do during their trips. It is common for tourists to continuously calculate the costs of living, eating outside and visiting tourist spots during a tour. However, it is a time-consuming activity to repeatedly calculate the remaining budget and add or remove various expenses to the notepad. Hence, if there was a faster way to calculate the budget left over, it would allow more time for the travelers to explore rather than thinking about the money being spent.

2.7. Task 5 - Booking Services

Task Description: Jacob is a 35 years old digital nomad, who works remotely and enjoys traveling to different locations for long periods of time. He is exploring various locations across Canada to find out the best place to settle when he retires in 20 years. His next destination is Calgary and he wants to find a reasonable accommodation which offers a great view of the downtown area and has access to public transit. Therefore, he goes online and searches for hotels and rentals in Calgary, presenting him with 20+ websites to look through. He takes 3 hours going through each of the websites, comparing the prices to find the best value deals as the quality of service matters to him as much as the cost. He then finds a good deal for a rental apartment which would charge him \$9500 for 6 months. He then scans the entire website to ensure that it is a safe platform to book the accommodation from. Jacob is satisfied with the website, he pays the price and confirms his stay.

Jacob falls under the long term traveler who represents a comparatively smaller group of users who want to book accommodation for a long period. However, he represents a large group of users who seek protected and safe platforms for financial transactions. It is common for travelers to want a good place to stay within a reasonable budget. Oftentimes, they would have to scan through multiple websites, trying to find the best deal. However, if

there was a more efficient way for Jacob to insert his desired trip length, and receive a list of great deals from safe platforms, it would make it easier for him to move onto the next steps of planning his trip.

2.8. Method of Task Collection and Validation

We collected the tasks by conducting interviews on family and friends who traveled. We conducted interviews on a wide range of travelers including students, business travelers, and parents of young children. During the interviews, we collected background information such as their age, comfortability with technology, travel experience, and typical travel budget. Then, we collected various stories from their trips or trip planning that were in any way related to travel planning. From the interviews, we got a grasp on common tasks and the different types of tasks that different types of users faced.

To validate our tasks, we conducted a survey on the various tasks we extracted out of the interviews. The surveys were able to reach more people and we were able to get a general sense of how often the tasks we decided on were faced by different travelers. The survey results aligned well with what we collected from our interviews. However, if our interviews did not yield common and relevant tasks, the survey would have allowed us to realize that the people we interviewed were not inclusive of common users.

4. Phase II: Key Users + Tentative List of Requirements

Absolutely must include:

- Add events to itinerary
- Edit events in itinerary
- Delete events in itinerary

These functionalities serve as the backbone of the app, enabling users to shape and customize their travel plans effectively. All users start planning for their trip using an itinerary, and being able to add events to their itinerary acts as a foundation upon which users build their entire trip. Being able to edit the itinerary after adding events is equally important as well, as travel plans are dynamic. Users will want the flexibility to modify existing plans on their itinerary. Lastly, to enable the previous feature, being able to remove events from the itinerary is important too. These functionalities let the itinerary of a user to be up to date, aligning with the user's ever-changing plans,

therefore we feel they must absolutely be included. Adding, editing, and deleting events in the itinerary are basic features that are necessary. They provide the necessary tools to create, edit, and have a well-organized itinerary, ensuring a smoother travel experience for all users.

Should include:

- List events based on filter criterias selected by user
- View itinerary in a full view
- Log expenses spent on trip
- Display current state of budget

Filtering events based on different criterias is a system requirement that will be useful to most users. Most people will have preferences for the type of events they want to look for based on their user group, personality, hobbies, etc. That is why it is in the should include section, but not in absolutely must include because even without a way to filter through events, it will still be possible to find the same events, it will just take longer. Viewing itinerary in full view is also a system requirement that all groups of users can benefit from. Lastly, managing the budget tracker is a task that certain groups such as backpackers and student travelers will greatly benefit from. Although some users might find the budget tracker to be no use to them, we cannot ignore 2 large groups who will most likely go on a budget friendly trip.

Could include:

- List events that users have recommended for others
- Get assistance in booking hotels
- Get assistance in booking flights
- Get assistance in finding a rental car

Listing events based on user recommendations is a nice to have feature for individuals who really value going to places people have vouched for, but it is not a necessary feature for any of the user groups. It is the main aspect in the viewing user recommendations tasks, so we decided to include it in this category. As for the systems requirements related to booking accommodations, it is only needed for one task (of booking services). These system requirements will be useful to some users, but for user groups such as business traveler, they will most likely not use these system requirements at all if their company has taken care of their accommodations for them. Therefore, we decided to include system requirements related to booking accommodations in the could include category.

Exclude:

Because we believed all 5 of our users were relevant and should be included in the design of the interface, we did not end up with any system requirements from the tasks and users to exclude. All system requirements were either important to all user groups, or at least a few user groups, which we believed were worth including in the system.

5. Phase III: Prototyping

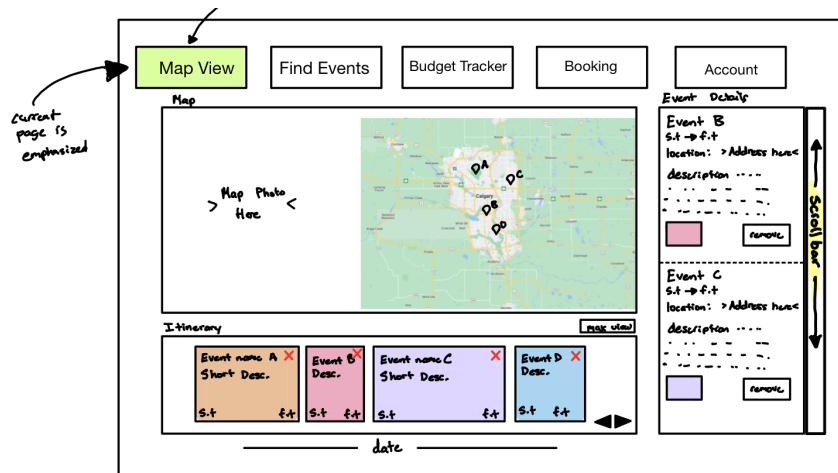


Figure 5.1: Final Low-Fidelity for Map View Section of Website (Default Landing Page)

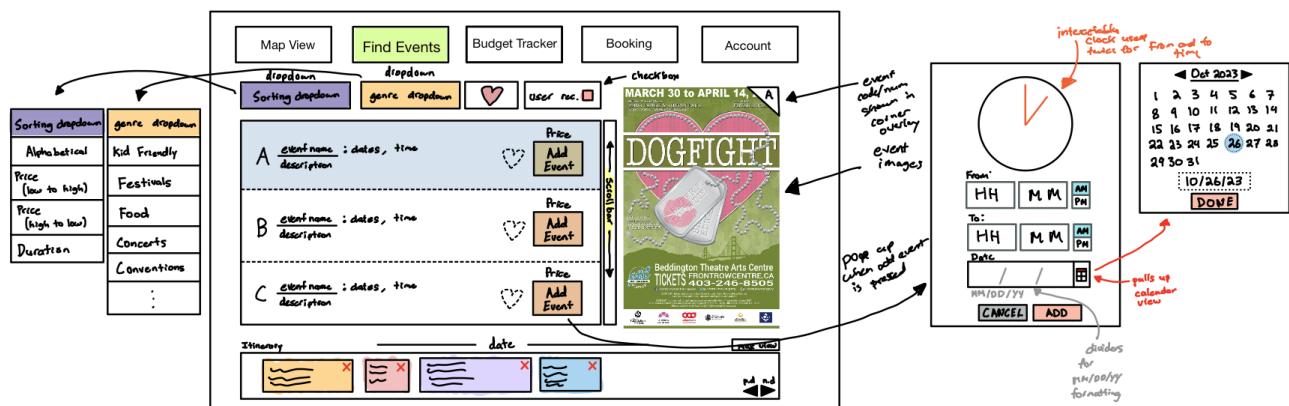


Figure 5.2: Final for Find Events - has two drop downs for filtering, and two pop-ups for adding event

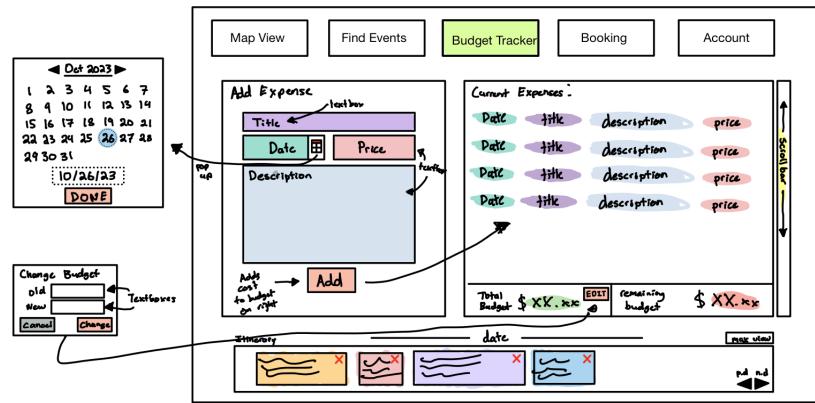


Figure 5.3: Final for Budget Tracker - has two pop ups for editing budget and adding date for budget

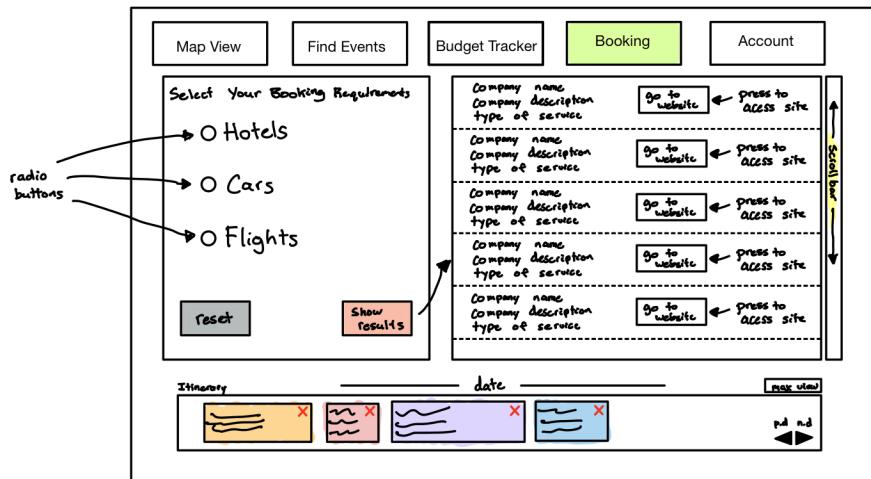


Figure 5.4: Final for Booking Page - Has no additional drop downs, but radio buttons to select specific results shown

Figure 3.5: Final for Account (Sign in and Register)

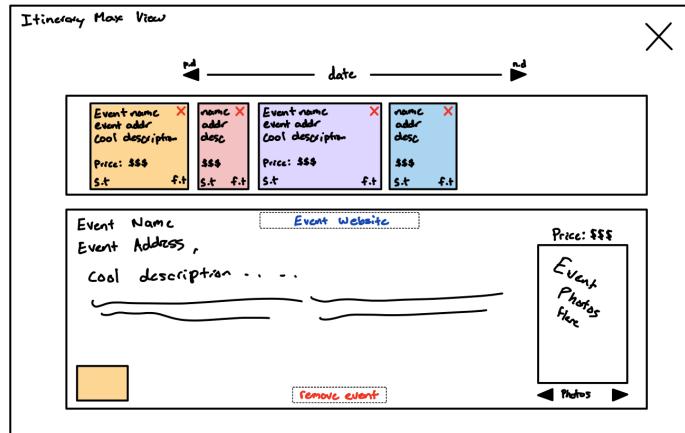


Figure 5.6: Max View Window; making a full screen based around itinerary

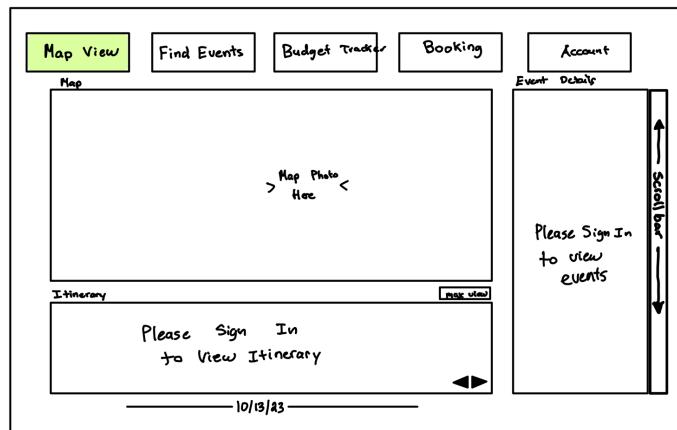


Figure 5.7.1: Map View Landing Page when User first opens website (not logged in)

Figure 5.7.2: Account View Page when User has selected Account and typed in a username and password
(Register becomes grayed out when the Sign in side has been selected)

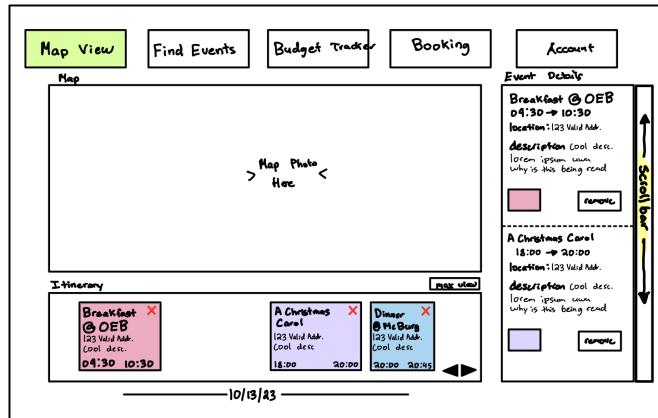


Figure 5.7.3: User is returned to Map View after sign in, and Itinerary is populated

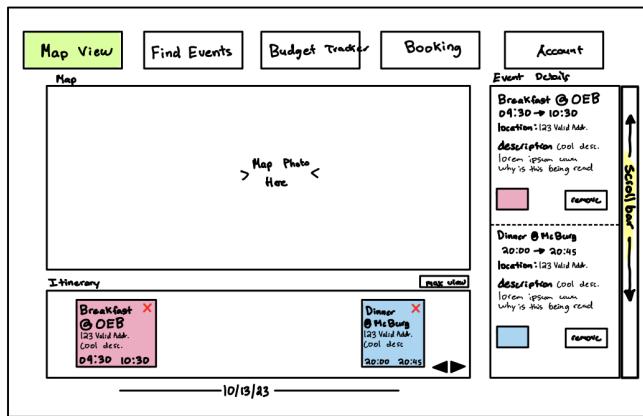


Figure 5.7.4: Map View after user removes “A Christmas Carol” from Itinerary, thus updating the itinerary and user detail sections

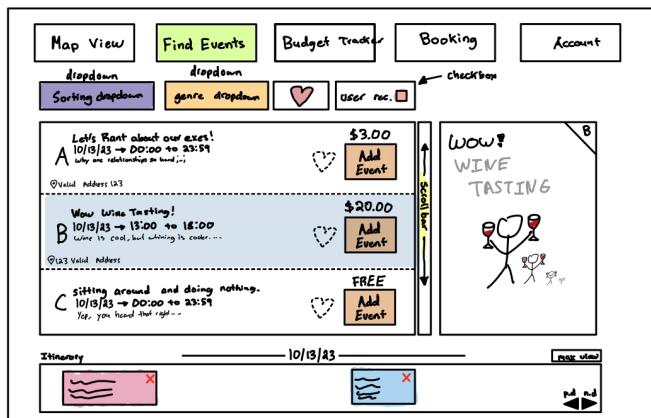


Figure 5.7.5: User Switches to FInd Events tofind new events to fill in his itinerary for his new unexpected free time, eventually settling on Event (B) (highlighted in the blue)

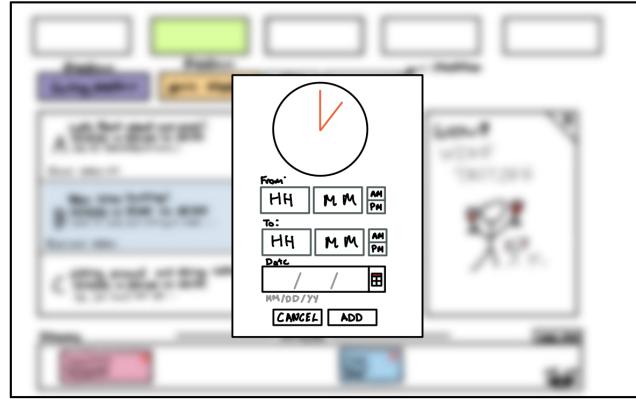


Figure 5.7.6: User Presses “Add Event” For Wine Tasting and popup shows up w/ interactable clock shows up for user to input time

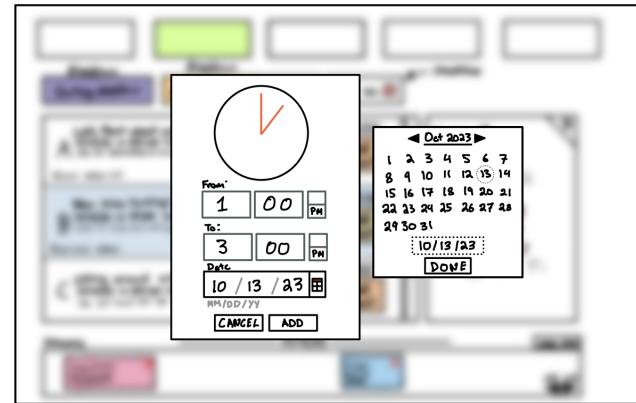


Figure 5.7.7: User then enters a “From” and “To” time in 12H clock, in addition to selecting the date via the calendar add-on popup

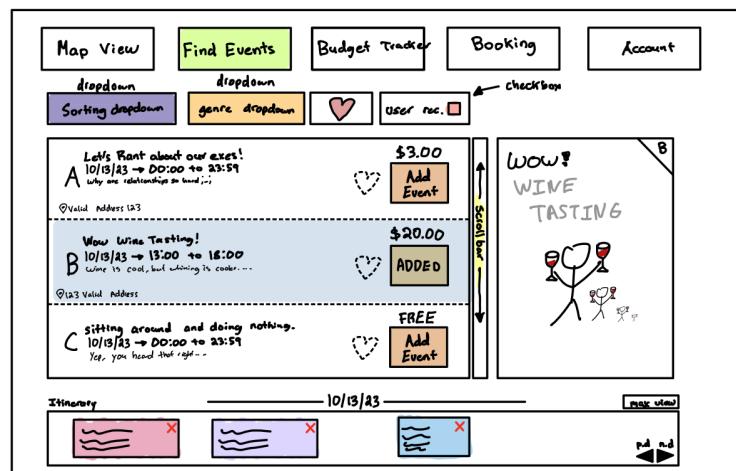


Figure 5.7.8: Wine Tasting from 1:00pm to 3:00pm has been successfully added to the user’s Itinerary

6. Phase IV: Task-Centered Walkthrough

6.1. Task 1 - Adding/Removing Events from Itinerary Walkthrough

Figure 6.1.1 below shows the prototype diagram for steps 2-7

Task Steps	Motivated? Knowledgeable?	Comments/Solutions
1. Brian enters the ExploreWise travel planner website using his laptop.	Motivation: High motivation since Brian wants to edit his itinerary by removing an event and adding in another Knowledge: High knowledge, he just needs to know the website's domain.	
2. Brian lands on the 'Map View' homepage, and moves his cursor to the top Navigation bar and clicks 'Account'	Motivation: Medium motivation since Brian wants to access the itinerary his secretary has created, which can only be done by logging in. Knowledge: Low, no explicitly labeled button called login.	Problem: Button to login is labeled 'Account' instead of 'Login', which can be confusing to some as they may think 'Account' is for listing account details. Solution: Make the button labeled 'Login' and make it stand out in the navigation bar.
3. Brian moves his cursor over to the first text box labeled Username, and inputs his username.	Motivation: High motivation since Brian wants to login to access the itinerary his secretary created. Knowledge: Low since there are two text fields labeled 'Username' on the page	Problem: the sign in (for users already with an account) and register section is side by side on the same page. This can be confusing for users who are not familiar with the difference between sign in and register. Solution: Have sign in and register on two different pages

<p>4. Brian then moves his cursor over to the next box labeled Password, and enters his password.</p>	<p>Motivation: High motivation since Brian can only gain access to his itinerary via his password.</p> <p>Knowledge: Low since there are two password fields on the page.</p>	<p>Same as No 3</p>
<p>5. Brian then moves his cursor down and clicks the Login button, he is then automatically returned to the Map View section of the website.</p>	<p>Motivation: High since this is the last step to logging in.</p> <p>Knowledge: 'Login' button is clear and the only button in the area</p>	<p>Problem: He can insert a wrong password/username.</p> <p>Solution: Directed to the next page. He sees an error message saying "Invalid username or password". Brian checks his username and password and realizes he had forgotten one of them. He clicks the back button and starts over.</p>
<p>6. Brian then moves his cursor down to the saved event in his Itinerary for 6-8pm ("A Christmas Carol"), and clicks the top right red "x", to</p>	<p>Motivation: Medium as Brian initially intended to remove it, and he still has the option to not do so.</p> <p>Knowledge: Medium, no explicit label called 'remove event'.</p>	<p>Problem: The meeting has been changed to the previous time and Brian wishes he could undo the removal.</p> <p>Solution: He clicks the undo button to retrieve his previous event in his itinerary.</p>

remove it from his itinerary		
7. Brian now moves his cursor to the Navigation Bar and selects Find Events	<p>Motivation: High as Brian has the intent of finding and adding a new event to his itinerary to fit his changed schedule.</p> <p>Knowledge: Medium, the button is clearly labeled 'Find Events' and in the navigation bar, but he may be under the false impression that he can give events in the map on the current page.</p>	<p>Problem: The map in the 'Map View' only shows drop pins for events in the itinerary, but users might think that they can search for new events to add to the itinerary through looking at the drop pins on the map.</p> <p>Solution: Clearly state in the 'Map View' that the map shows events entered in the itinerary.</p>

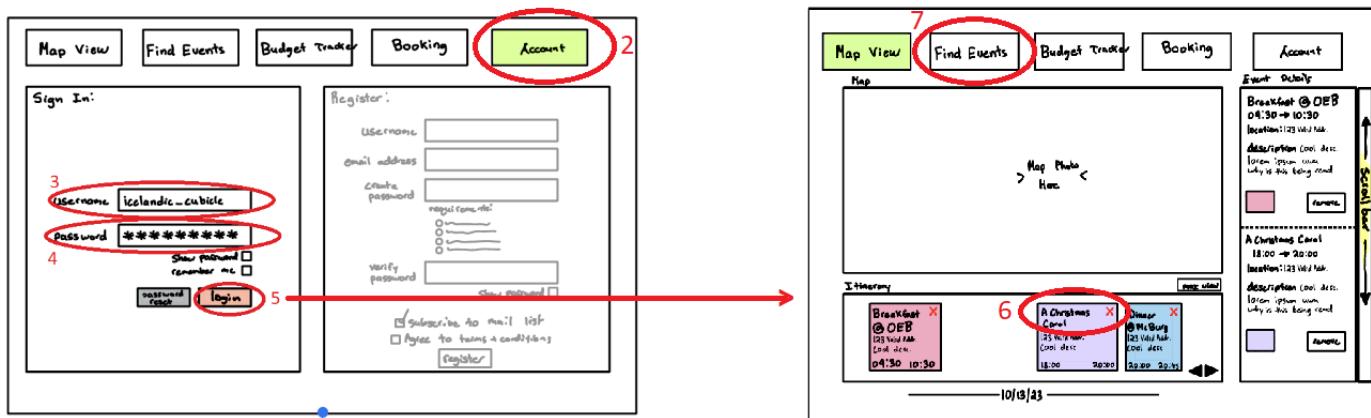


Figure 6.1.1

Figure 6.1.2 below shows the prototype diagram for steps 8-12

Task Steps	Motivated? Knowledgeable?	Comments/Solutions
8. Brian now sees a list of possible events, and	<p>Motivation: High, he wants to find an event which he finds interesting</p>	<p>Problem: He can get frustrated with many events that don't interest him. He can also have trouble navigating through the events.</p>

begins scrolling to discover he events he may find interesting	<p>Knowledge: Medium, there are many events for him to look through.</p>	<p>Solution: Add filters and display clear categories for the events to be sorted in.</p>
9. Brian finds an interesting Wine Tasting Event happening at 1pm, and clicks the 'Add Event' Button	<p>Motivation: High, he is interested in the event and wants to add it to his itinerary</p> <p>Knowledge: High, he finds an interesting event and clicks on add button once he finds one</p>	
10. Brian is now prompted by a pop-up window to input a date in a given format (MMDDYY), a start time (HH:MM) and a finish time (HH:MM).	<p>Motivation: High, he wants his itinerary to reflect these information.</p> <p>Knowledge: High, he knows what (MMDDYY), start time, (HH:MM), end time means</p>	<p>Problem: The start time and end time is supposed to be in 24 hour format, but Brian might not be aware of this fact.</p> <p>Solution: Give users the option to pick between 24 hour format, or AM/PM. Then, they will know which format to enter the time and also be able to use a format that they like.</p>
11. He types in 10/13/23 for the date and 13:00 and 15:00.	<p>Motivation: High, he wants his itinerary to reflect these information</p> <p>Knowledge: High, he is just inputting values into corresponding boxes and pressing a well labeled button to add it</p>	<p>Problem: He might accidentally input an invalid date/time</p> <p>Solution: Perform error check for the date and time when he tries to add it in step 12</p>

<p>12. He now presses the bottom ADD button</p>	<p>Motivation: High, he wants his itinerary to reflect these information</p> <p>Knowledge: High, he is just pressing a well labeled button to add it</p>	
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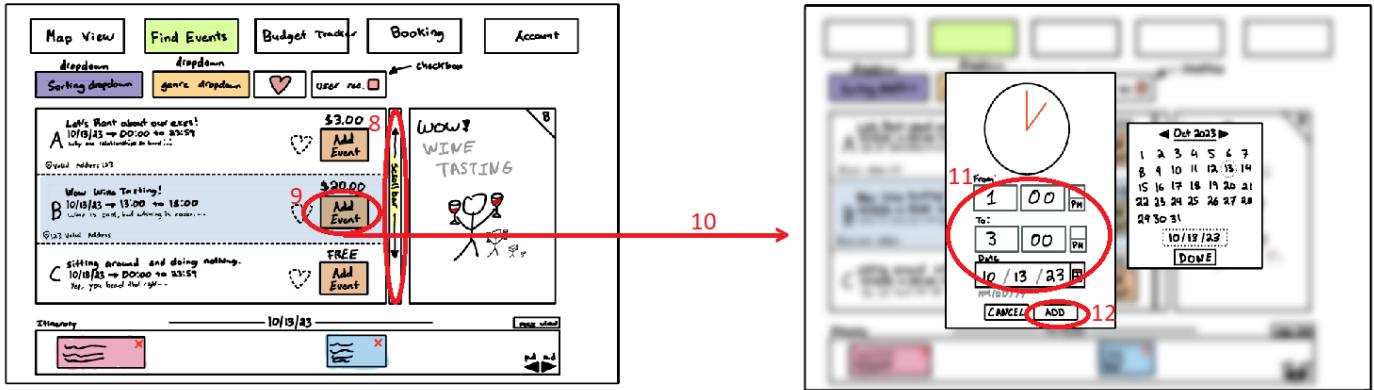


Figure 6.1.2

Problems:

- Button to login is labeled 'Account' instead of 'Login', which can be confusing to some as they may think 'Account' is for listing account details.
- Sign in (for users already with an account) and registering section is side by side on the same page. This can be confusing for users who are not familiar with the difference between sign in and register.
- Users can insert a wrong password/username.
- Users are unable to undo the removal of events.
- The map in the 'Map View' only shows drop pins for events in the itinerary, but users might think that they can search for new events to add to the itinerary through looking at the drop pins on the map.
- Users can get frustrated with many events that don't interest them/have trouble navigating through the events.
- The start time and end time is supposed to be in 24 hour format, but users might not be aware of this fact.
- Users might accidentally input an invalid date/time.

Successes:

- Motivation to login in order to be able to edit his personal itinerary.

- Clear and knowledgeable for Brian to remove event and to find the window for finding events.
- Unambiguous and clear process to add event to itinerary, including the steps to enter in event from time, event to time, and date.

The major design problems exposed from this walkthrough that needs to be corrected include making the filter system clear and obvious. Users may scroll through a seemingly random and endless list of events and be unaware that filters exist to make their search more focused. Some users will click it and discover, but others might choose not to and give up trying to set a filter they want. The design needs to be corrected to clearly indicate what filters can be selected from each dropdown and make it so the users are instantly aware of it when they enter the events window. We also have to ensure that users do not get confused when inputting the time for their event, we could do this by offering them a choice between using the 24 hour or digital clock format.

6.2. Task 2 - Viewing Itinerary Walkthrough

Figure 6.2.1 below shows the prototype diagram for steps 2-6

Task Steps	Motivated? Knowledgeable?	Comments/Solutions
1. Emily enters the ExploreWise travel planner website using her laptop.	Motivation: High motivation since Emily wants to view her itinerary by removing an event and adding in another Knowledge: High knowledge, she just needs to know the website's domain.	
2. Emily lands on the 'Map View' homepage, and moves her cursor to the top Navigation	Motivation: High motivation since Emily wants to access the itinerary she created. Knowledge: Low, no explicitly labeled button called login.	Problem: Button to login is labeled 'Account' instead of 'Login', which can be confusing to some as they may think 'Account' is for listing account details. Solution: Make the button labeled 'Login' and make it stand out in the

bar and clicks 'Account'		navigation bar.
3. Emily moves her cursor over to the first text box labeled Username, and inputs her username.	<p>Motivation: High motivation since Emily wants to login to access the itinerary she created.</p> <p>Knowledge: Low since there are two text fields labeled 'Username' on the page</p>	<p>Problem: the sign in (for users already with an account) and register section is side by side on the same page. This can be confusing for users who are not familiar with the difference between sign in and register.</p> <p>Solution: Have sign in and register on two different pages.</p>
4. Emily then moves her cursor over to the next box labeled Password, and enters her password.	<p>Motivation: High motivation since Emily can only gain access to her itinerary via her password.</p> <p>Knowledge: Low since there are two password fields on the page.</p>	Same as No. 5.
5. Emily then moves her cursor down and clicks the Login button, she is then automatically returned to the Map View	<p>Motivation: High since this is the last step to logging in.</p> <p>Knowledge: 'Login' button is clear and the only button in the area</p>	<p>Problem: She inserts a wrong password/username.</p> <p>Solution: Directed to the next page. She sees an error message saying "Invalid username or password". Emily checks her username and password and realizes she had forgotten one of them. She clicks the back button and starts over.</p>

section of the website.		
6. Emily then moves her cursor down to the itinerary list and is able to click the arrows to navigate through her itinerary.	<p>Motivation: High since her end goal is to view her itinerary</p> <p>Knowledge: High, she just has to click on the arrows to navigate through her itinerary.</p>	
7. Emily can then opt to press the max view to show all of her itinerary	<p>Motivation: High since her end goal is to view her itinerary</p> <p>Knowledge: High, she just has to click on the max view button.</p>	

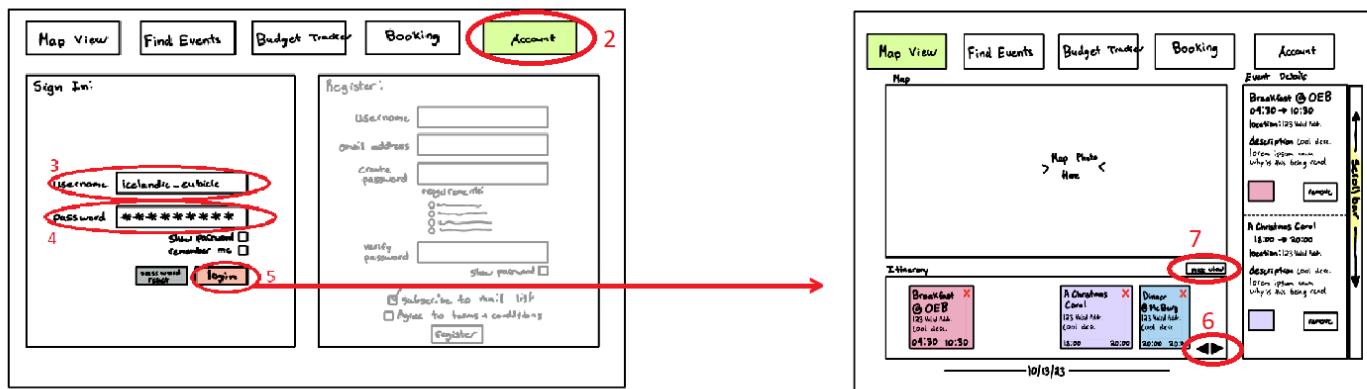


Figure 6.2.2

Problems:

- Button to login is labeled 'Account' instead of 'Login', which can be confusing to some as they may think 'Account' is for listing account details.

- Sign in (for users already with an account) and register section is side by side on the same page. This can be confusing for users who are not familiar with the difference between sign in and register.
- User may insert a wrong password/username.

Successes:

- Motivation to login in order to view her itinerary.

The major design problems exposed from this walkthrough that needs to be corrected include making the login system more intuitive for users, especially for those using the platform for the first time. They may not be able to find where to login, as they assume it will be shown to them by a button named ‘Login’, instead of what we did where we labeled the button as ‘Account’. Currently the sign in and register pages are beside each other and users can be confused on which side to fill in. We can amend this by having only the login page shown, and if users want to create a new account, have another button leading them to the sign up page, labeled as ‘Sign up’.

6.3. Task 3 - Viewing User Recommendations Walkthrough

Figure 6.3.1 below shows a prototype diagram for Steps 1-2.

Task Steps	Motivated? Knowledgeable?	Comments/Solutions
1. Enter the ExploreWise travel planner website	Motivation: High motivation since John wants to view user recommendations, which he has to open the travel planner to do. Knowledge: High knowledge, most computer users know how to go to a website.	
2. Click ‘Find Events’ button in navigation bar	Motivation: High motivation as John’s main goal is to find events. Knowledge: High knowledge because ‘Find Events’ is the only button on the navigation bar with the word ‘event’, so John will be able to know ‘Find Events’ is the correct button.	

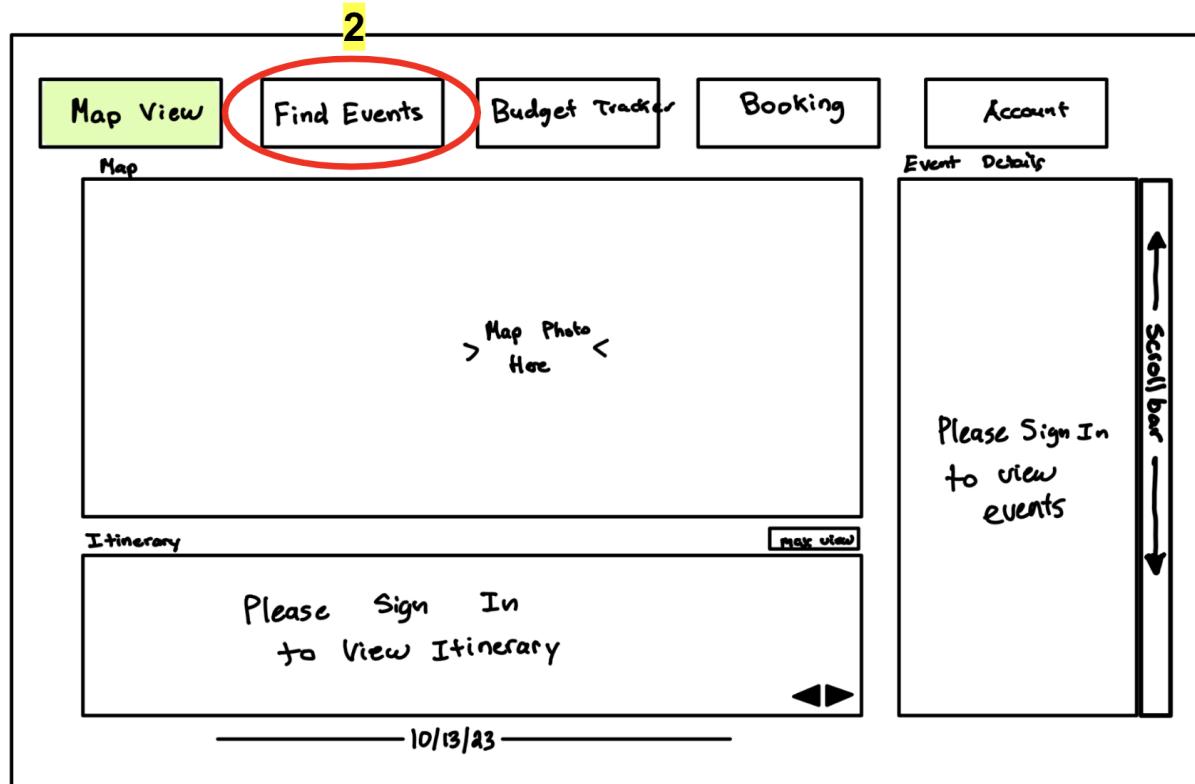


Figure 6.3.1

Figure 6.3.2 below shows prototype diagram for steps 3-11.

3. Click 'user rec.' checkbox	Motivation: High motivation as John wants to see events recommended by users. Knowledge: Medium knowledge as John may not be aware that 'rec' means recommendation.	Problem: It is unclear that 'user rec' means user recommendation. Also, John may be unaware that it is a checkbox and click on the words instead of the checkbox. Solution: Label the checkbox as 'Click to see USER RECOMMENDATIONS', and make it so even if you click the words, the checkbox is checked.
4. Click the 'genre'	Motivation: High motivation, John wants to only search through kid-friendly events.	Problem: Without actually clicking the dropdown buttons and seeing what is in

<p>dropdown' button</p>	<p>Knowledge: Low knowledge as it is initially unclear that 'genre dropdown' will lead to an option for kid-friendly.</p>	<p>the dropdown, John might not know that an option for kid-friendly events is under the 'genre dropdown'.</p> <p>Solution: Clearly state with a description that explains the sorting and genre dropdowns.</p>
<p>5. Click 'kid friendly' option from the dropdown menu</p>	<p>Motivation: High as John wants to search for kid-friendly events.</p> <p>Knowledge: High, in the options for genre dropdown, 'kid-friendly' is the first option that shows up and is clearly what John wants.</p>	
<p>6. Scroll through events displayed on the main window</p>	<p>Motivation: High motivation as John's main motivation was to look through user recommended kid-friendly events.</p> <p>Knowledge: Medium as it is clear that the main window is where events are listed. However, John has no way of knowing that his filter applications were successful and the main window does in fact show the type of events he wants.</p>	<p>Problem: John has no way of knowing which filters from the dropdown menus he has selected.</p> <p>Solution: When users select an option from either of the dropdowns, list the name of the filter that is currently being applied underneath the buttons in small font so the users can clearly see which filter is currently being applied.</p>
<p>7. Click 'Add Event' button for event titled 'Heritage Park'</p>	<p>Motivation: After setting his mind on Heritage Park as his event, he may or may not be motivated to add the event to his itinerary because John's main goal was to browse through and find an event, which doesn't necessarily mean he wanted to use the itinerary feature in the travel planner.</p>	<p>Problem: John might just want to browse through and find events instead of actually adding them to his itinerary.</p> <p>Solution: John can stop his interaction at this step and choose not to continue beyond this step. John has still achieved his main goal of searching and finding a</p>

	Knowledge: High since the ‘Add Event’ button is very big and obvious.	user recommended kid-friendly event.
8. Select from time	Motivation: Same as step 7. Knowledge: High knowledge since there is a clock interface where you can select the time by moving the clock arms, and button options for AM or PM, so there is no ambiguity in the format of the time entered.	Problem: Same as step 7. Solution: Same as step 7.
9. Select to time	Motivation: Same as step 7. Knowledge: Same as step 8.	Problem: Same as step 7. Solution: Same as step 7.
10. Select date	Motivation: Same as step 7. Knowledge: High knowledge because it will be pretty obvious to John that you click the calendar icon to select a date from the calendar pop up. No confusion with which format the date needs to be typed in because when you click the date from the calendar, the system will automatically enter in the date in the correct format.	Problem: Same as step 7. Solution: Same as step 7.
11. Press ‘ADD’ button	Motivation: Same as step 7. Knowledge: High knowledge since the ‘ADD’ button is clearly the only button on the pop up window to add the event to his itinerary.	Problem: Same as step 7. Solution: Same as step 7.

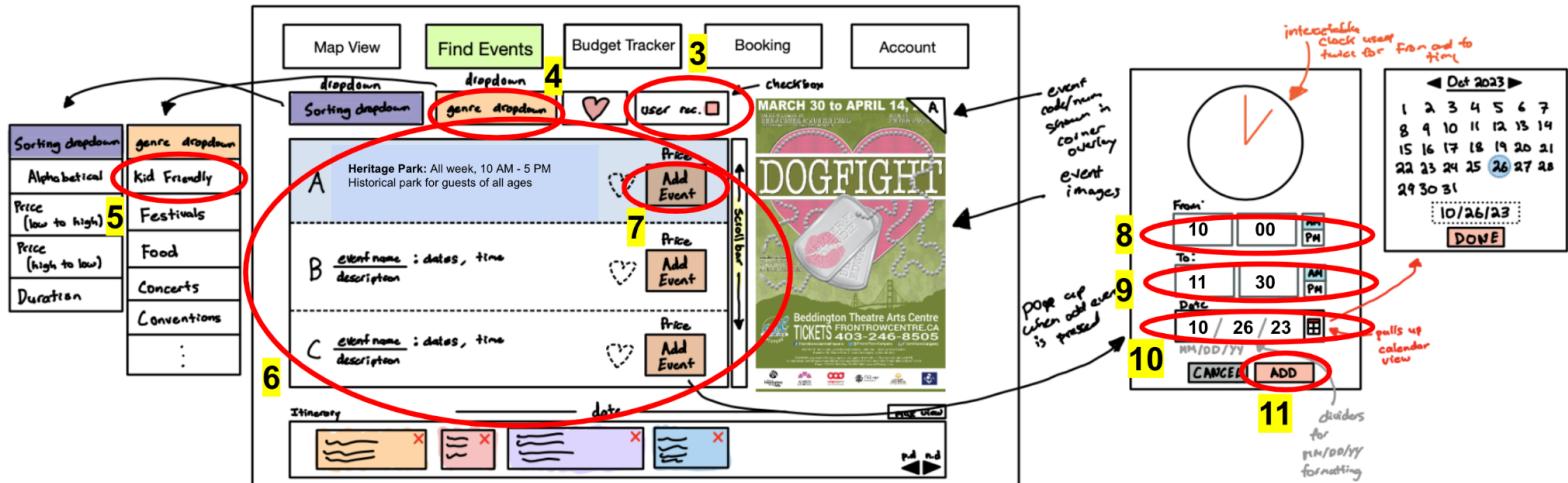


Figure 6.3.2

Problems:

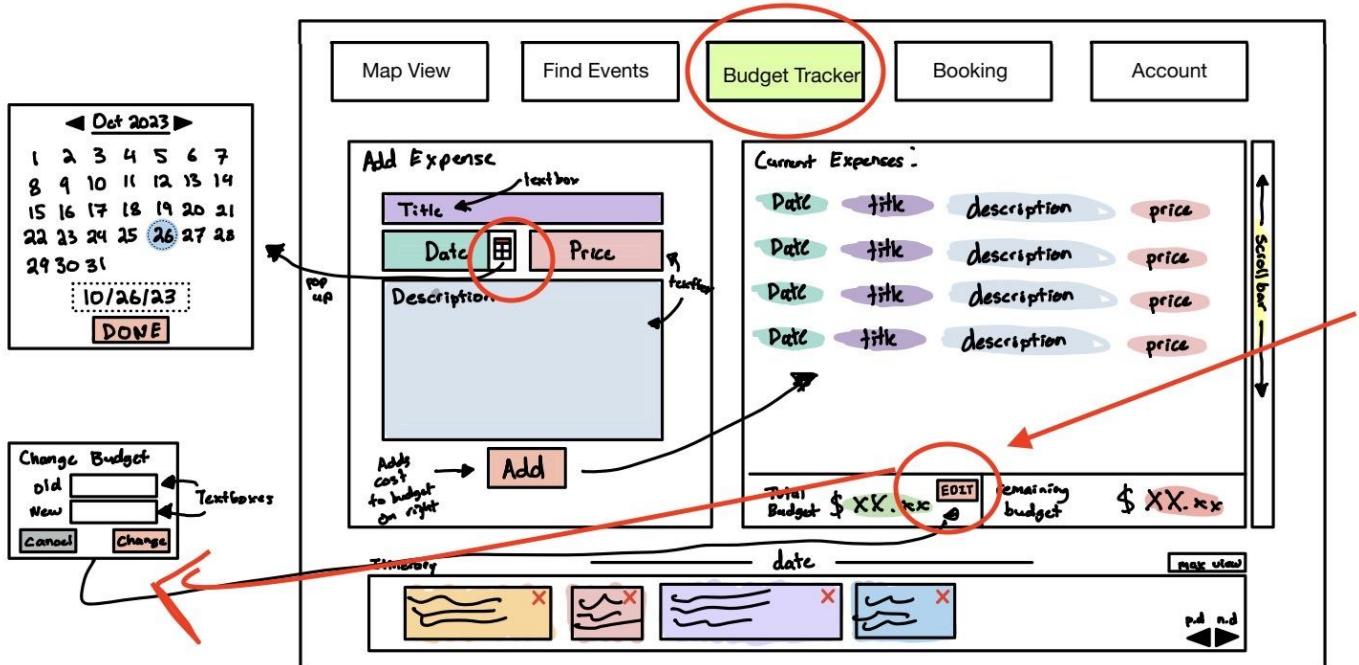
- Unclear label for user recommendation checkbox.
- Unclear indication of what the filter dropdown buttons are until they are clicked.
- No way of knowing which filters are currently selected and applied to the events being displayed.
- Lack of motivation for John to add the event he found to the itinerary when his main goal was to browse through and look for events he likes.

Successes:

- Clear and knowledgeable for John to find the window for finding events.
- Motivation to check off user recommendations and select filter for kid-friendly events.
- Unambiguous and clear process to add event to itinerary, including the steps to enter in event from time, event to time, and date.

The major design problems exposed from this walkthrough that needs to be corrected include making the filter system clear and obvious. Users may be unaware what the dropdowns for the filters are until they click it and see the drop downs. Some users will click it and discover, but others might choose not to and give up trying to set a filter they want. The design needs to be corrected to clearly indicate what filters can be selected from each dropdown and make it so the users are instantly aware of it when they enter the events window. Additionally, the label for the user recommendation checkbox needs to be corrected to ‘User Recommendation’ instead of ‘user rec.’. Although the current option saves space by cutting the word ‘recommendation’ to ‘rec.’, some users may be unaware of what ‘rec.’ means.

6.4. Task 4 - Managing Budget Tracker Walkthrough



Step	Task Description	Knowledge	Comments
1	Enter the ExploreWise travel planner website.	Motivation: High motivation since Lauryn wants to add her expenses and calculate how many activities she can cover. Knowledge: High knowledge, most computer users know how to go to a website.	
2	Navigate to the "Budget Tracker" section of the website.	Motivation: High motivation as Lauryn's goal is to calculate her expenses. Knowledge: High knowledge because 'Budget Tracker' is the only button on the navigation bar with the word 'Budget' so Lauryn will be able to know that this is the correct button.	

3	Click the 'Set Budget' textbox to set the financial limit for the trip.	<p>Motivation: High motivation as Lauryn wants to have a fixed budget for her trip and stay within that limit.</p> <p>Knowledge: High knowledge as that is the only pop up question being displayed to her, presenting a textbox where she can enter her amount.</p>	<p>Problem: The user may want to change the budget later on, perhaps increase it to a bigger value.</p> <p>Solution: Add an 'edit' button (as shown in the diagram below).</p>
4	Click the 'Create Expense' button.	<p>Motivation: High motivation, as Lauryn wants to enter her activity cost for the trip.</p> <p>Knowledge: Medium knowledge, as it is unclear which currency she should use and if she can add expenses with decimals.</p>	
5	Click the 'Title' to set a name for the expense.	<p>Motivation: Medium motivation, as Lauryn wants to calculate expenses as quickly as possible.</p> <p>Knowledge: Low knowledge, as Lauryn is unsure about how long the name can be and what the name should be.</p>	<p>Problem: The user might enter all the expense details within the Title textbox.</p> <p>Solution: Set a word limit to fix the length of the title.</p>
6	Select the date.	<p>Motivation: Low motivation, Lauryn does not necessarily care about which day she made the expense on. Hence, picking a date is unimportant work.</p> <p>Knowledge: Low knowledge, Lauryn starts inserting the date in the wrong format before she realizes that she can pick a date from the calendar.</p>	<p>Problem: The user may type the date in the wrong format.</p> <p>Solution: Pop open the calendar as soon as the user hits the 'Date' box, so they can directly pick the date instead of writing it.</p>

7	Click the 'Price' textbox.	<p>Motivation: High motivation, as Lauryn wants to keep track of each expense she makes.</p> <p>Knowledge: Medium knowledge as Lauryn is unsure if she can enter prices with decimal values and which currency she can use.</p>	<p>Problem: Same as step 6.</p> <p>Solution: Offer dropdown options to select the currency and also limit the number format to 2 decimal places.</p>
8	Enter any optional description by clicking the 'Description' box.	<p>Motivation: Low motivation, as she is only noting her costs and further explanatory info is not required.</p> <p>Knowledge: Medium knowledge as she is unsure what exactly she is supposed to write.</p>	<p>Problem: There might be nothing to add to the description, but an empty field might prevent the user from moving forward to the next steps.</p> <p>Solution: Make the field optional so that this issue is prevented.</p>
9	Click 'Add' for the "Flight" expense.	<p>Motivation: High motivation. After adding the expense details, she wants to check how much is left from her budget due to this cost.</p> <p>Knowledge: High since the 'Add' button is very big and obvious.</p>	

Problems:

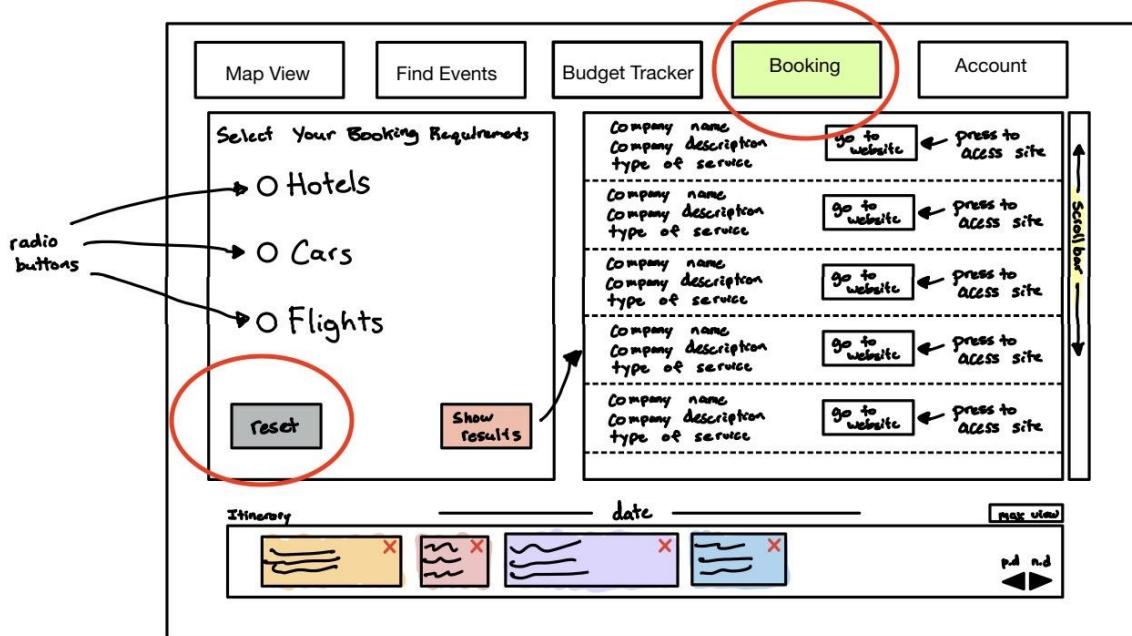
- Lack of an option to edit the initial budget after setting it, which could be needed if Lauryn decides to change her budget.
- Difficulty in understanding the currency format and the ability to add expenses with decimal values.
- Uncertainty about what to write in the optional description field, which could potentially block progress.

Successes:

- Lauryn's budget tracking experience begins with a clear goal and navigation.
- High motivation is maintained throughout the process.
- The path to the "Budget Tracker" section is logical and well-supported.

While navigation and motivation align well, some problems exist, like the lack of a budget edit option, currency format confusion, and ambiguity in data entry fields. These can be resolved by allowing budget edits, offering clear currency guidelines, setting title length limits, improving date input, clarifying currency selection, and making the description field optional. These changes will enhance usability and user satisfaction.

6.5. Task 5 - Booking Services Walkthrough



Step	Description	Motivation/Knowledge	Comments (Problems/Solutions)
1	Enter the ExploreWise travel planner website and select the 'Booking' tab.	Motivation: High motivation, Jacob is specifically looking for hotels. Knowledge: High knowledge, as there is only one tab on the screen with this title.	

2	Select the "Hotel" option as the type of accommodation.	<p>Motivation: High motivation, Jacob is specifically looking for hotels or accommodation.</p> <p>Knowledge: Same as step 1.</p>	<p>Problem: The user now changes his mind and wants to look for flights instead of hotels.</p> <p>Solution: Add a 'reset' button to restart his search process including asking for the new details.</p>
2	A pop-up appears -> Enter the travel destination as "Calgary" in the search bar and specify the check-in and check-out dates for a stay (e.g., 6 months).	<p>Motivation: High motivation, Jacob is looking for a long-term stay in Calgary.</p> <p>Knowledge: Low knowledge, as he's entering his search criteria and may not understand the formats.</p>	<p>Problem: The user may type the date in the wrong format.</p> <p>Solution: Pop open the calendar as soon as the user hits the 'Date' box, so they can directly pick the date instead of writing it.</p>
3	Click the "Show Results" or "Search" button to view a list of accommodation options in Calgary.	<p>Motivation: High motivation, Jacob wants to see available options to find the best deals from safe platforms.</p> <p>Knowledge: Medium knowledge, as he understands the basic search process.</p>	
4	Browse through the list of hotels displayed, comparing prices and reading descriptions to find the best value deal.	<p>Motivation: High motivation, Jacob is determined to find the best deal.</p> <p>Knowledge: Medium knowledge, as he knows how to compare options.</p>	<p>Problem: The user may be unaware that scrolling up and down is necessary to view more options.</p> <p>Solution: Add a scrolling bar and add an instruction to guide the user.</p>

5	Click on 'Go to website'.	<p>Motivation: High motivation, Jacob wants to ensure the quality of the stay and know further about the place.</p> <p>Knowledge: Medium knowledge, as he knows how to access detailed information, but he may not be aware that he's going to be taken to a different website from ExploreWise .</p>	<p>Problem: The user is unaware that this button takes them to a different platform.</p> <p>Solution: Add an intermittent warning screen, warning them of the transition to an external website.</p>
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Problems:

- Users may enter dates in the wrong format when specifying stay dates, causing potential confusion.
- Users might not be aware that scrolling is necessary to view more accommodation options.
- Unclear indication that clicking 'Go to website' will lead to a different platform, potentially surprising users.

Successes:

- Jacob's journey starts with clear navigation and selection of the 'Booking' tab, aligning with his motivation to find accommodation.
- He maintains high motivation throughout the process, ensuring focused searching.
- The choice of the "Hotel" option aligns with Jacob's goal, and the process is straightforward.
- Jacob effectively conducts a comparative analysis of accommodation options, with a focus on prices and descriptions.

Jacob's experience on the ExploreWise website has several positive aspects, including clear navigation, high motivation, and a logical search path. However, there are issues such as the inability to reset the search type, potential date format confusion, the need for scrolling guidance, and a lack of awareness regarding external website transitions. Addressing these issues can enhance the user experience and make the platform more user-friendly.

Appendix I - Additional + Rejected Low Fidelity Prototypes:

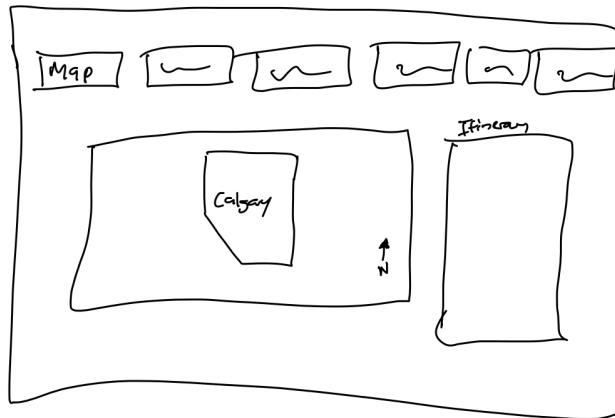


Figure AI.1: Original, V1 Sketch of Overall Design and Map Default Page | Design was the most rough draft and just to get a general feel of how the initial design would look from brainstorming: iterated on heavily to reach the final draft

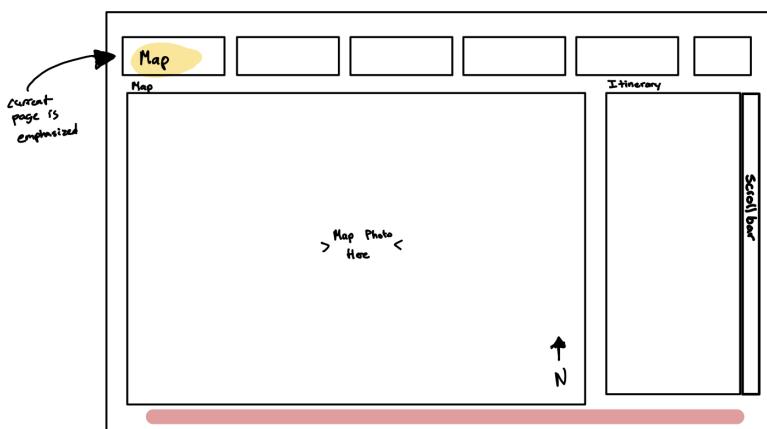


Figure AI.2: V2 Sketch, iterating on above by making design better drawn out with actual squares and sections, introduction of idea of highlighting the currently chosen page in the Nav. bar. Lacks the core bottom itinerary view which was added on later

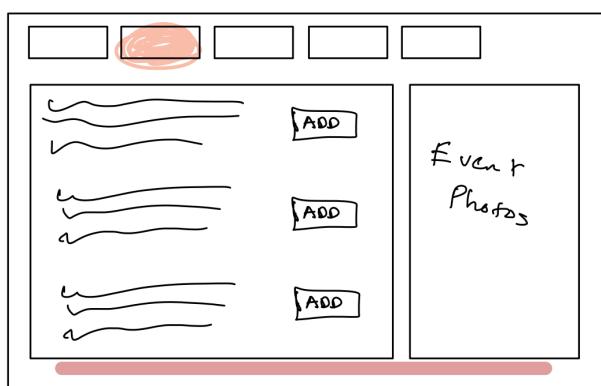


Figure AI.3: V2 Sketch of Viewing and Adding Events, lacks the drop down filter menus, the bottom bar to view the current itinerary and other stylistic edits

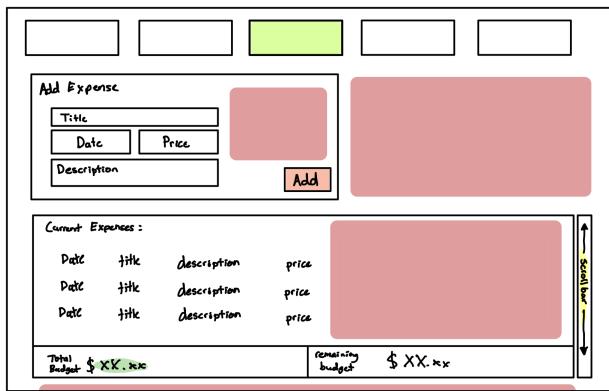


Figure AI.4: 3rd Iteration of alternate format for Budget Tracker, with a stacked approach rather than side to side. Design was abandoned due to the amount of dead space that was left by the design; less visible on the screen for more useless emptiness

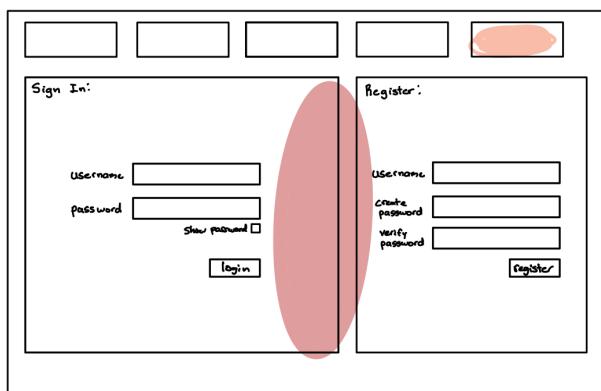


Figure AI.5: Approximately the 3rd Iteration of the Account Page, with better format and design. Design had an uneven sized Sign in and Register box, which seemed wrong after iterating later, resulting in us switching to a 50/50 split for the page in the final design

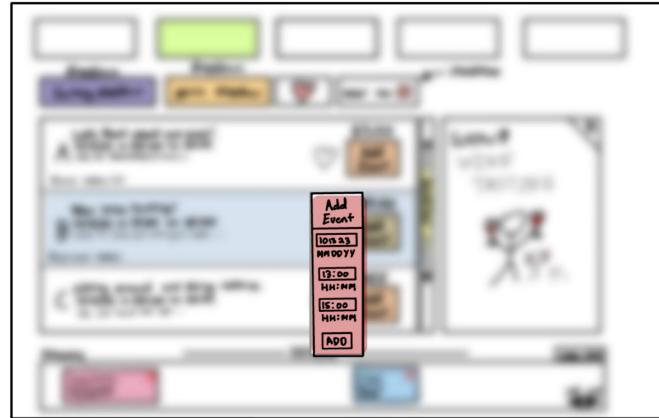


Figure AI.6: V4.b of Adding Events Tab with a not very intuitive add event pop up. Design is very depressing and not super user intuitive, replaced for a possible implementation of an interactable clock and calendar

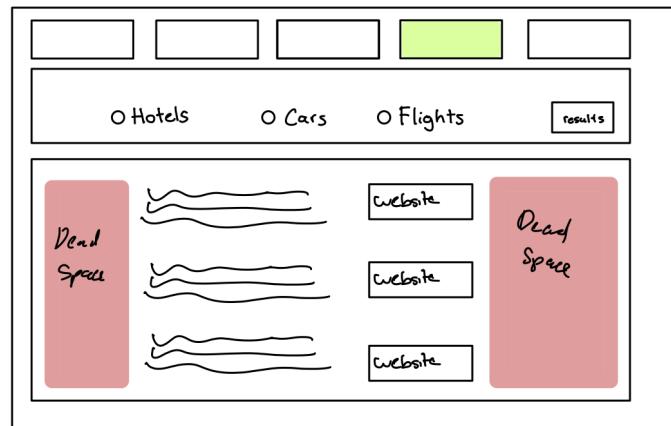


Figure AI.7: V2.b of Booking Tab, with stacking style for things rather than side by side. Resulted in excess dead space on the sides, whilst losing vertical space for additional websites, thus was scrapped

Appendix II - Additional + Rejected ExploreWise Logo and Branding Designs:



AII.1 - ExploreWise Final Prototype V2 with alternative mountain logo (scrapped as the final version has one with a road, which felt more related to travel compared to two mountains)



AII.1 - ExploreWise Alternate Outside Bounding Area, Did not Feel as Intriguing as the settled circular stripe design



AII.3 - ExploreWise Original Rough Draft Logo, Orange Colour was not as pronounced and more focused on the Navy Blue theme, eventually iterated upon constantly until final logo obtained



AII.4 - ExploreWise Alternate Logo V5, with a round diamond boundary and all orange design, felt two one dimensional and simple so was scrapped in favor of designs more closely resembling final



AII.5 - ExploreWise Alternate Initial Logo Design, with Plane instead of mountain, felt more generic and not as related to Calgary with lack of mountains, and since we are focusing on Calgary design was quickly scrapped