

Instagator: Simple Group Travel

1. Introduction

Team Members

Amanda M. (Designer and Developer)

Dennis E. (Product Manager and User Testing)

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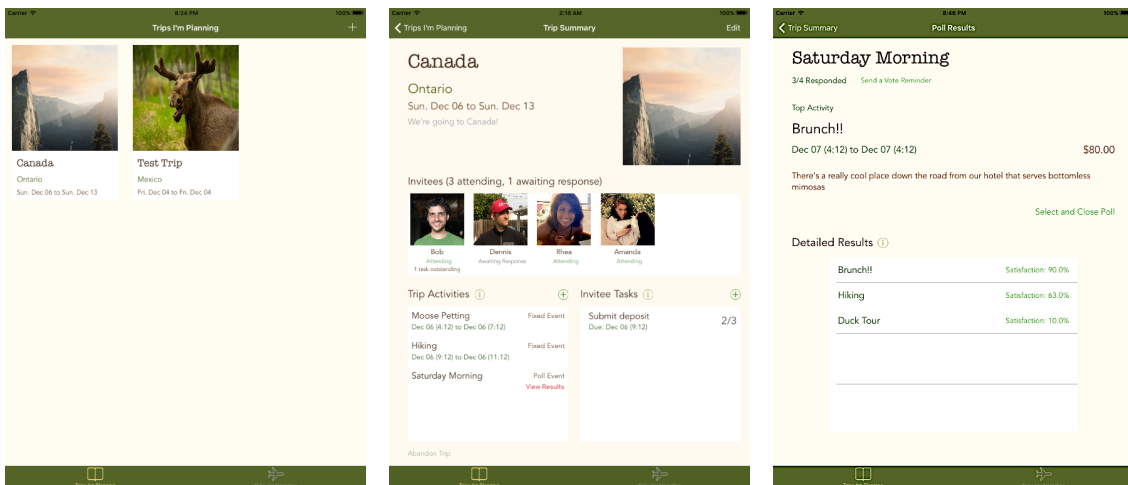
Tanner G. (Developer)

Value Proposition

Instagator takes the agony out of group trip planning by helping trip planners (instigators) manage end-to-end logistics and involve trip participants in the planning process so they become more invested in its outcome.

2. Problem and Solution Overview

Our need-finding exercises revealed that those who plan group trips struggle to track others down, split payments, and weigh the input of participants when decision making, particularly if members of the group are geographically dispersed. Email, the conventional means for managing such logistics, simply doesn't do the trick. Instagator's mission is to eliminate the hassles of group trip planning by both centralizing trip logistics and seamlessly engaging participants in the trip planning process. The app streamlines trip planning by helping planners to manage guest responses, task completion, and activities, while involving trip participants in the planning process so they become more invested in its outcome.



Final Prototype Preview

3. Tasks & Final Interface Scenarios

- A. Simple: Trip participant responds to trip activity polls (simple) [Appendix Fig 3](#)
 - a. In order to help trip participants become more involved in building an itinerary, trip participants can easily view poll activities and respond via a stack-ranking poll interface.
 - b. Purpose: We chose this task in order to illustrate the multi-user functionality of Instagator. By showing the participant side of poll responses, we are able to fully display the behavioral change component that comes with a two-way collaboration process for choosing an activity when a few possibilities exist.
- B. Trip coordinator creates a new trip and invites guests (medium) - [Appendix Fig 3](#)
 - a. Instagator provides a simple system so the planner can spend more time making informed booking decisions versus parsing through texts and emails to keep track of who's coming and whose response has changed.
 - b. Purpose: This task is central to starting a new trip, and allows us to display how simplified the process is under Instagator. This gets into the core use cases: organizing everyone's information, pulling together trip details, and creating participant engagement through polls and reminders.
- C. Trip planner solicits and acts upon group input on activities (complex) - [Appendix Fig 3](#)
 - a. Instagator allows a planner to create a poll when deciding between a few options. Once poll responses are collected, Instagator takes the pain out of finding the optimal set of activities by automatically computing the path of least resistance.
 - b. Purpose: Creating and interpreting poll results are critical parts of helping planners seek out input and evaluate preferences. Using polls to get input helps reduce pressure on a trip planner, especially when results are interpreted for him.

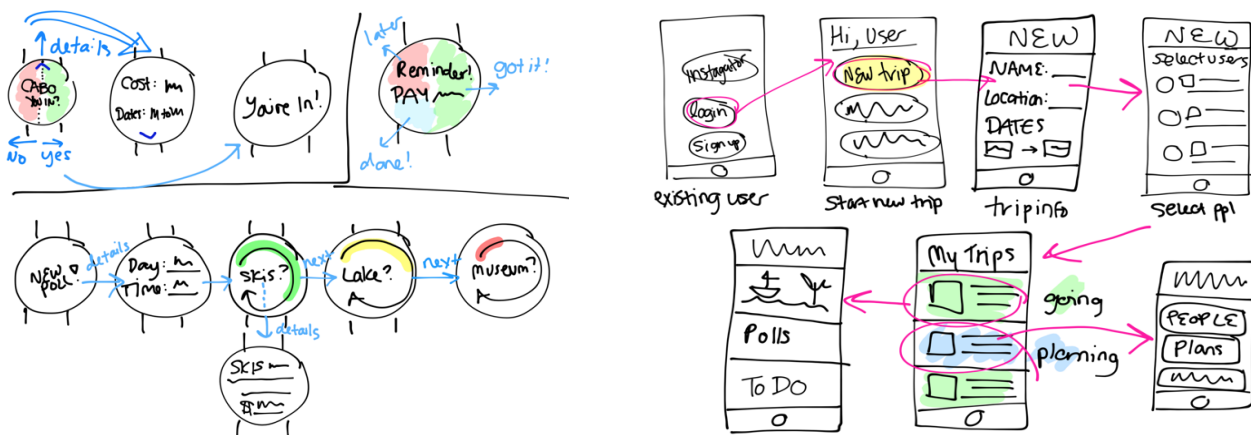
As a side note, task management was previously our third task, but it was replaced by task A for the reason outlined above. Task management does still exist in the final prototype in a fully-functional form, but task A was selected as a replacement to place more focus on the perspective of trip participants.

4. Design Evolution

We began our design with early sketches testing a number of interface mechanisms. We brainstormed with phones, wearables, and tablets as three different mobile interfaces. After a quick review, we decided that the phone application was less interesting than the wearables and iPad interfaces, so we focused on those two.

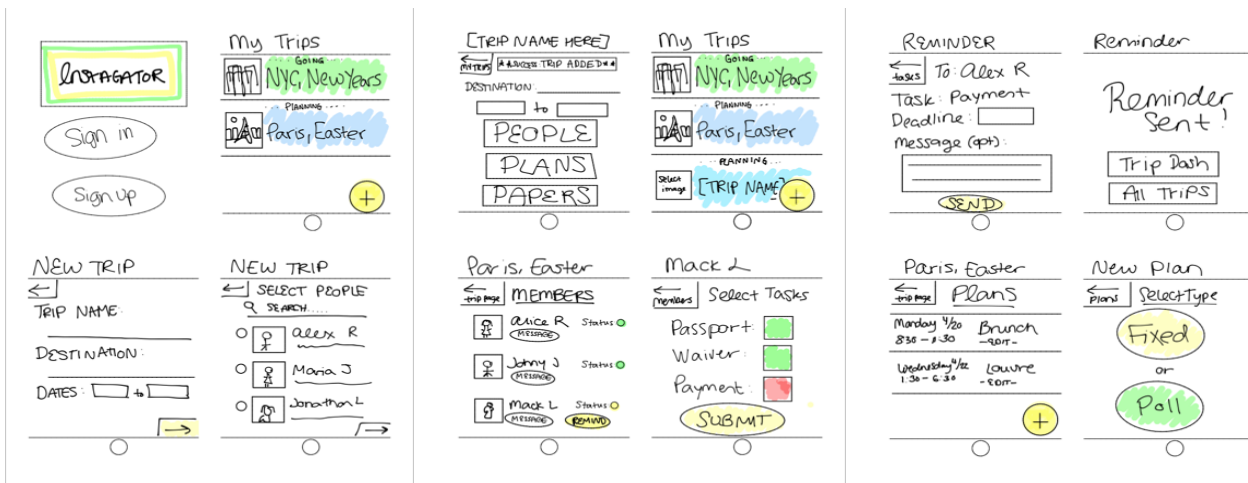


Brainstorm Sketches



Platform Brainstorms: Watch (left) and Tablet (right)

Ultimately, we decided to move forward with the tablet interface and began developing our first full user interface. Because our intent was to simplify travel and centralize information, the increased real estate of a tablet made it an obvious choice.



Low-fi Prototype Screenshots

Testing the low-fi prototype revealed that our design was largely successful at onboarding users and guiding them through their tasks, but there were a number of concerns that were surfaced, as summarized in the table below.

<p>Spoken: Positive</p> <ul style="list-style-type: none"> • App adds value to users • Users were happy with overall flow • Comfort with UI 	<p>Spoken: Critical</p> <ul style="list-style-type: none"> • Some confusing buttons • No way to save a trip pre-invite • Function titles weren't clear
<p>Observed: Postive</p> <ul style="list-style-type: none"> • Overall task time was low, repeat steps improved • Completion was 100% • Recovery was intuitive 	<p>Observed: Critical</p> <ul style="list-style-type: none"> • Lack of understanding with poll results • Long process for messaging • Desire for more poll types

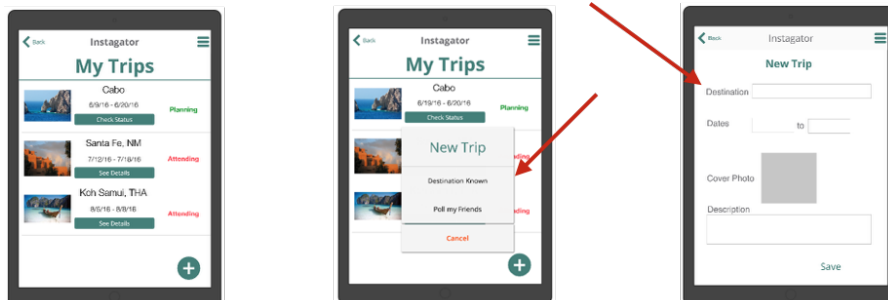
Low-Fi Prototype Testing Feedback Overview

Responding to this feedback, the team focused on some key areas when moving to a Medium Fidelity prototype:

1. Adding new poll types: bringing in destination polls (later removed as a feature)

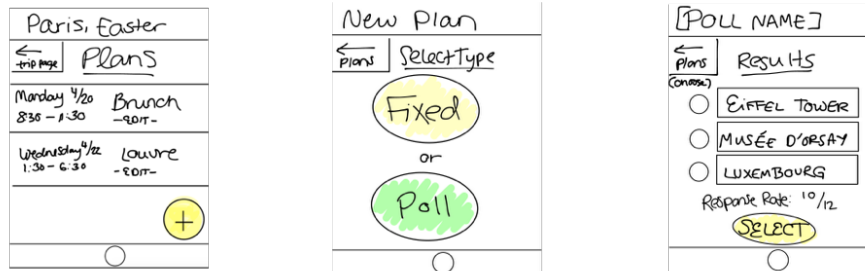


"What if we don't know where we want to go?"

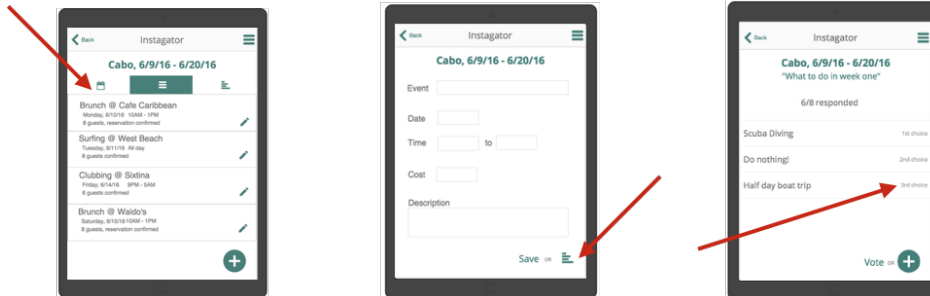


Start a Trip: Adding a Destination Poll

2. Improving the activity and poll creation process

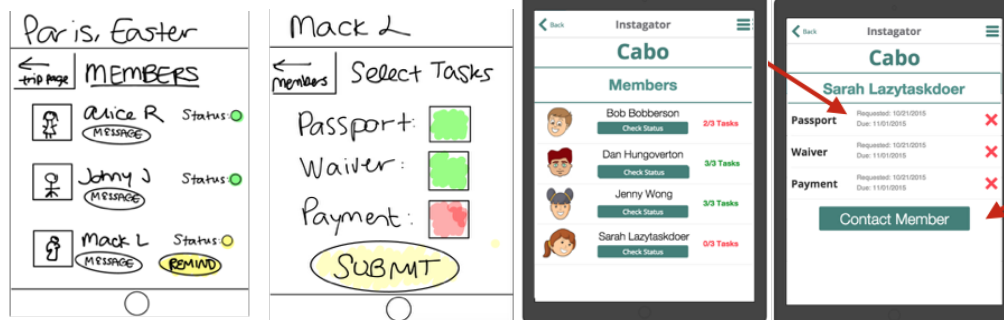


“Fixed or Poll is confusing. What does that mean?”



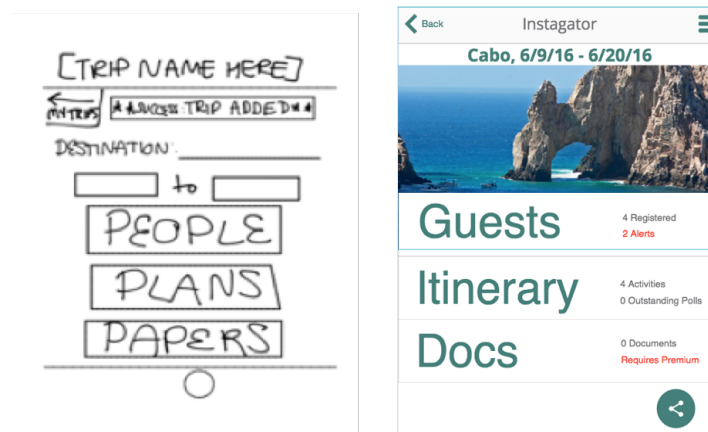
Updated Activity Creation Flow

3. Improving aesthetics and simplifying processes



Cleaner Layouts

Additionally, we attempted to keep some of the aspects that were positively received, such as the dashboard homepage layout.



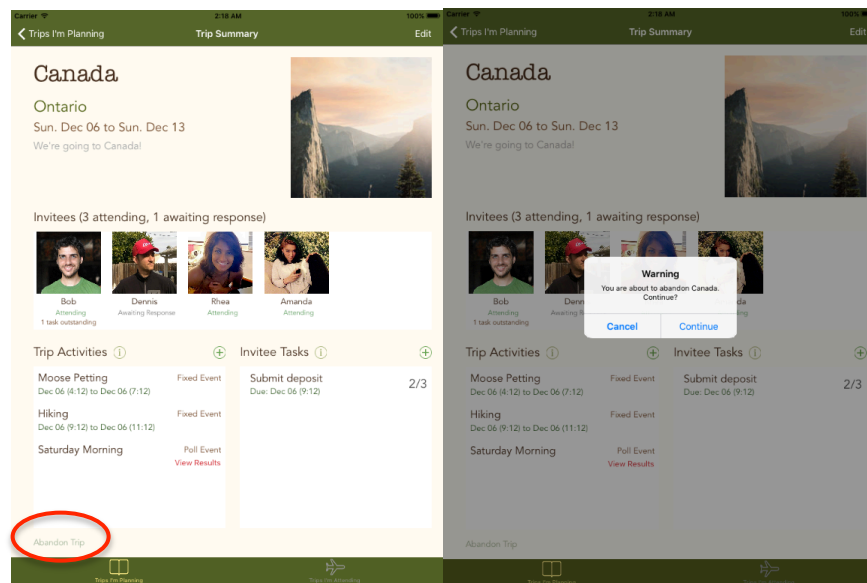
Dashboard Homepage Layout

5. Major Usability Problems Addressed for Final Prototype

Moving into the final prototype, we took care to address feedback from the heuristic evaluation from the medium-fi prototype.

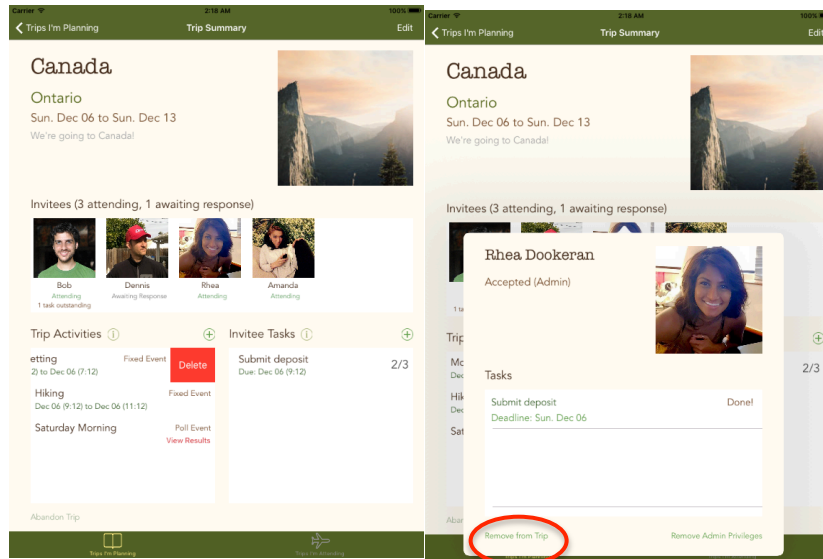
Level-3 Violations

- [H2-3 Use Control and Freedom] [Severity 3][Found by: D]
 - There is no way to abandon a trip. Users might want to abandon a trip, and they should have the ability to delete a trip.
 - Solution: Leaving out trip deletion was an obvious oversight. On the final prototype, trip homepages now include a button to abandon a trip.



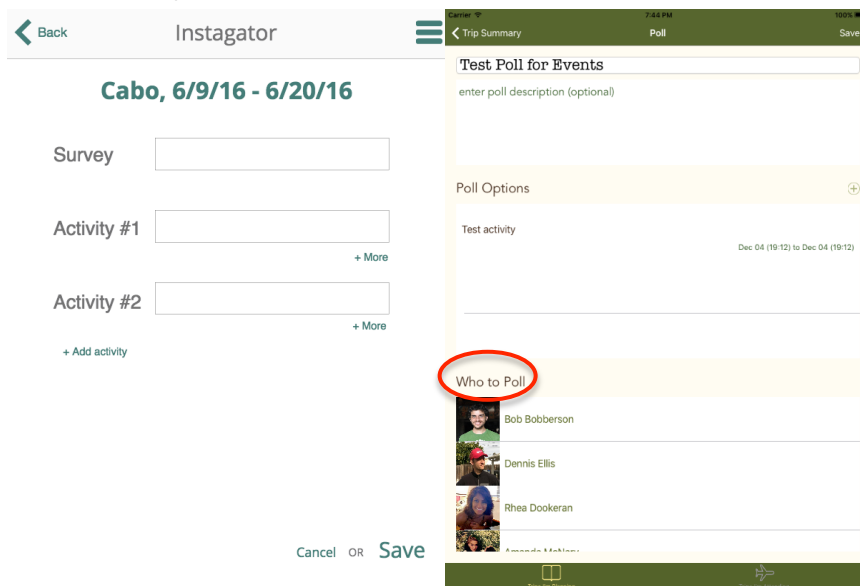
Hi-Fi Prototype: Trip abandonment process, with confirmation

- [H2-3 User control and freedom] [Severity 3][Found by: C]
 - There doesn't seem to currently be a way to delete an itinerary item.
 - Solution: Again, deletion was an obvious oversight that we needed to include. In "trip activities" section of dashboard, we added an option to remove items via swiping left, consistent with iOS convention. It is also possible to remove members from trips, delete trips, and delete tasks.



Hi-Fi Prototype: Deletion of activities by swiping left, and removing members from trip

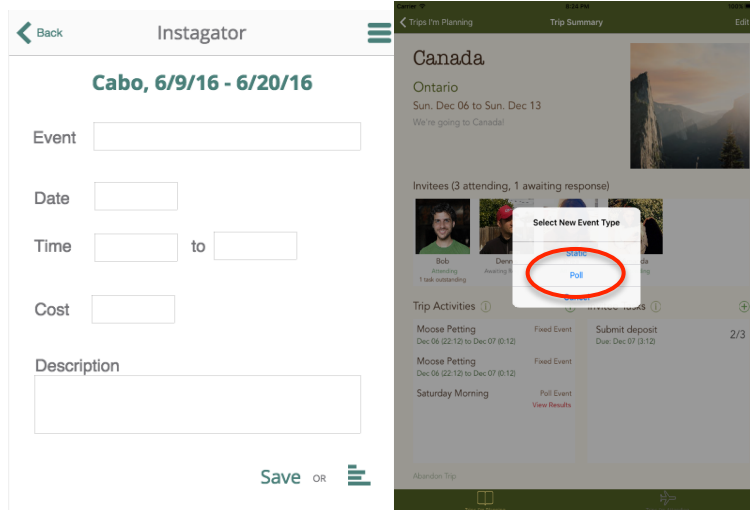
- [H2-6 Recognition rather than recall] [Severity 3][Found by: C]
 - Users can't see a list of the friends that are being polled when you click on poll my friends after adding a new trip. This requires them to remember what friends are already on the app, which might require them to navigate around a bit or else to try and remember whom they've added.
 - Solution: We originally didn't imagine not wanting everyone's input for polls, but it did seem like a feasible possibility. We added the option to select from current trip members when creating activity polls. "Who to Poll" can also be changed after a poll has been created.



Creating a New Poll: Option to select members to poll listed on poll creation page

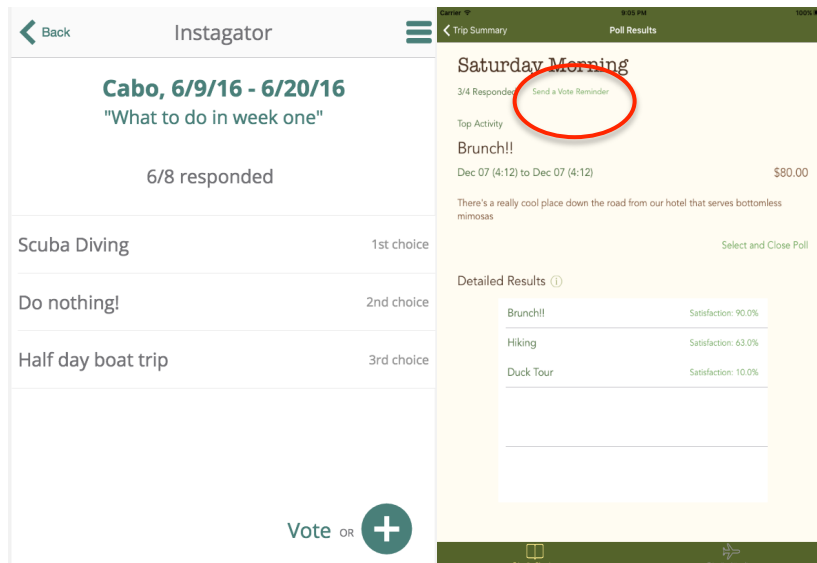
- [H2-6 Recognition Rather than Recall] [Severity 3][Found by: A, B, C, D]

- It's unclear to me whether the button of the sideways bar chart clearly conveys that the option is for a poll.
- Solution: While we didn't agree as a group that this error was severity 3, we did fix it by replacing the icon with the text "Poll".



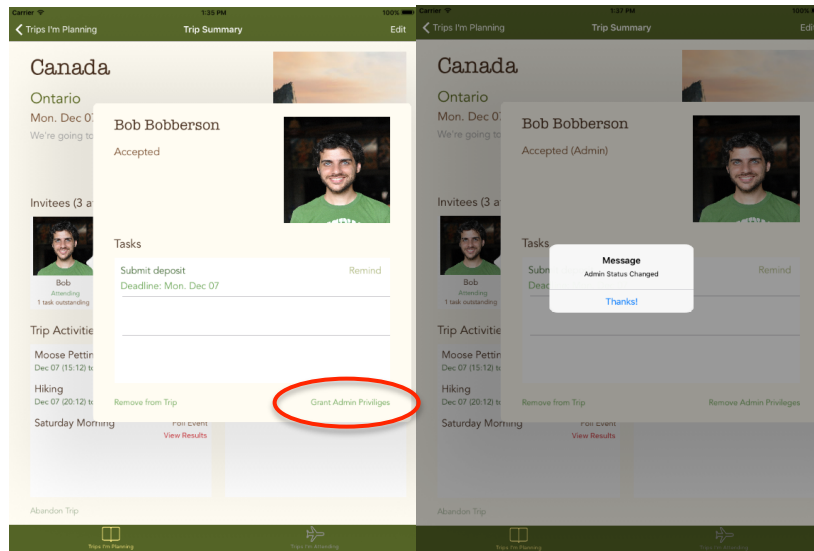
Evolution of Creating a Poll versus Fixed Activity: Icon to Text

- [H2-7 Flexibility and efficiency of use] [Severity 3][Found by: C, D]
 - Users have no way of getting people to respond to polls or reminding them to respond except through the contact screen.
 - Solution: Reminders seemed like an extension of our goal to more easily involve trip participants. We added the option for a planner to quickly remind users that they have open polls and need to respond. Task reminders also exist in the final product.



Evolution of Poll Results from Med-fi to Hi-Fi, with Option to Send a Reminder

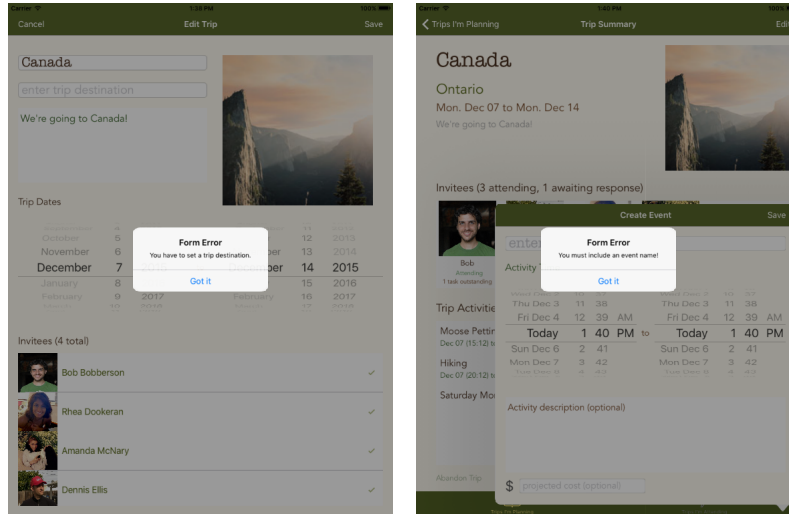
- [H2-2 Match Between System and the Real World] [Severity 3][Found by: A]
 - Is it the case that there is only 1 planner on a trip, or will multiple people be delegating different tasks?
 - Solution: Delegating responsibilities seemed like another way to engage participants We decided to add the ability for the planner to delegate admin rights to guests. Instead of granting rights for certain activities, we decided that it would be a first-step approach to grant rights for all planning actions.



Granting admin rights to a trip participant

Level-4 Violations

- [H2-5 Error Prevention] [Severity 4][Found by: A]
 - Right now everything seems to be dummy data, but “breaking” some functionality is still possible. Users can send messages with no content, which is probably not a feature you would like for them to be able to do.
 - Solution: This violation was a direct result of the med-fi prototyping tools and was naturally fixed through our development process. Alerts are sent for missing or incorrect required fields.



Form Error Alerts

Violations Not Addressed:

- [H2-3. User control and freedom] [Severity 3][Found by: B, A, D]
 - Problem: On the New Trip Poll screen, there is only the option for the trip organizer to add locales to the survey, but no option to allow for invited friends to add to the options. Users may want to contribute their destinations to a trip they have been invited to but have no visible way of doing that.
 - Rationale for not fixing: While this could be an interesting feature, we felt it out of scope for our final project. We instead see Instagator as a tool intended for after the destination and trip dates for a trip have been set.

Additional Features Included

1. Task creation, editing, reminders, and deletion
2. Activity editing once created
3. Viewing individual member pages; removing members from trips
4. Completing tasks via swiping
5. Info/help buttons on several pages
6. Error checking alerts

6. Prototype Implementation

We used XCode and Git/Github in order to build out a native iPhone application. These tools made it easy to receive guidance and help from friends with previous iOS experience (shout out to Aaron Acosta) and were much easier than starting completely from scratch. We did find it a bit difficult to work on storyboards concurrently, even with GitHub. Additionally, we

struggled with changing theme colors in the process because we weren't sure how to implement styling sheets, analogous to CSS.

We used Wizard of Oz techniques for notifications. Because we did not have a full user base, we could not actually send push notifications to other users. We also included a preset poll results page with a "satisfaction" metric, which would normally be computed internally by an algorithm, but we instead set these manually. We hard-coded all of the initial data: friends, a dummy trip for attendance, a dummy trip for planning, sample tasks, and sample activities, both fixed and poll. That being said, it is possible in the final prototype to create new trips, tasks, polls, and activities.

While we've fleshed out most of the necessary features for Instagator to be a viable product, we'd still like to add full tools for people to plan trips and delegate responsibilities. We can delegate "admin privileges" within the trip planner dashboard, but we haven't fully outlined what that mean or look like within the app. We also have not integrated Venmo for payments or Facebook for signing up, integrations that we would ultimately like to include in Instagator.

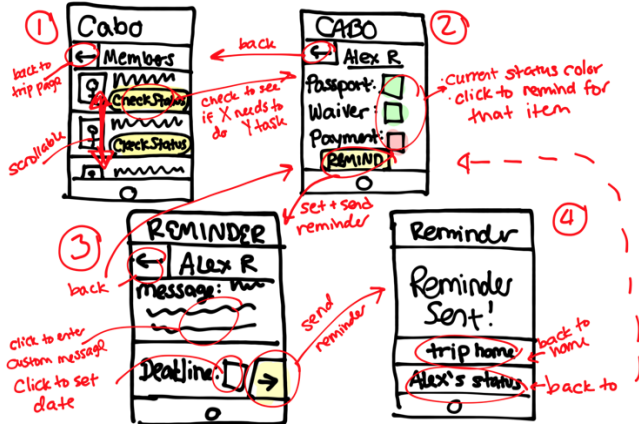
7. Summary

Our need finding showed us that planning a group trip is both physically and mentally taxing. Instagator attempts to alleviate this stress by centralizing trip logistics, engaging trip participants, and providing a mechanism for collecting and aggregating participant feedback. We chose to develop for the iPad platform since it provided the best ability to centralize information, while still taking a mobile form. In addition, developing for iPad allowed us to take a simplified, dashboard-like design. Feedback from the various stages of the design process allowed us to iteratively improve both the aesthetics and process flow of our main features. Much improvement was made from the lo-fi to med-fi stages, and a heuristic evaluation provided valuable feedback as we moved into the final hi-fi prototype stage. Even in its incomplete form, our final prototype does begin to provide the intended benefit of Instagator: Simple Group Travel.

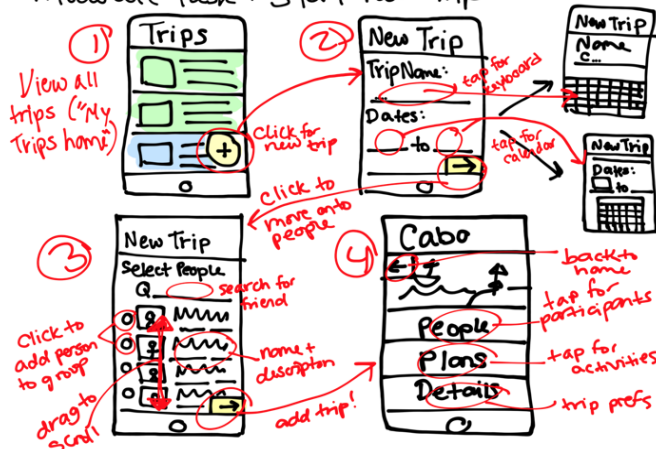
Appendix

Lo Fi Storyboards

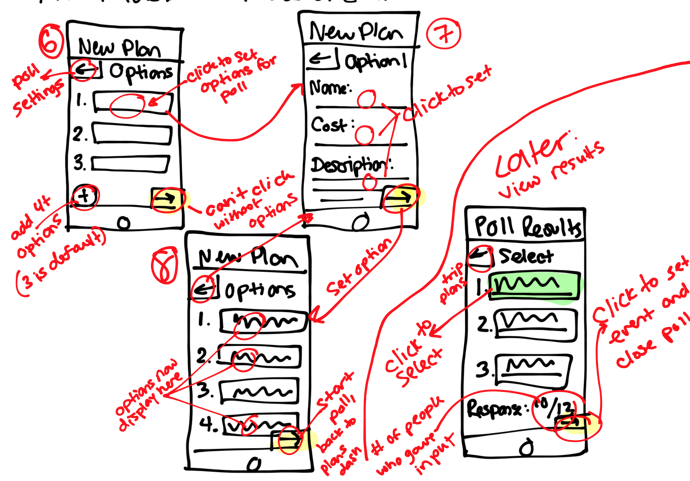
Easy task: Send Reminders



Moderate Task: Start new trip

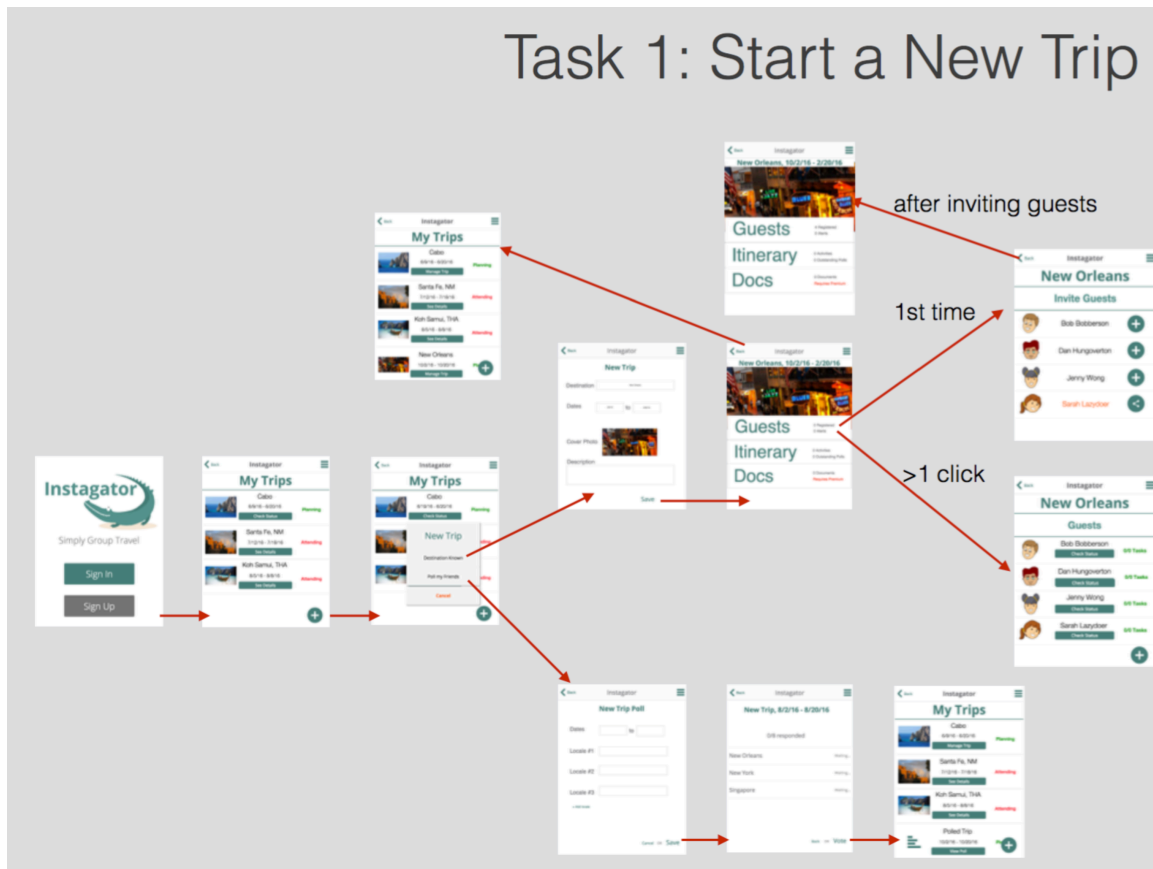


Hard Task: Poll Friends on Events

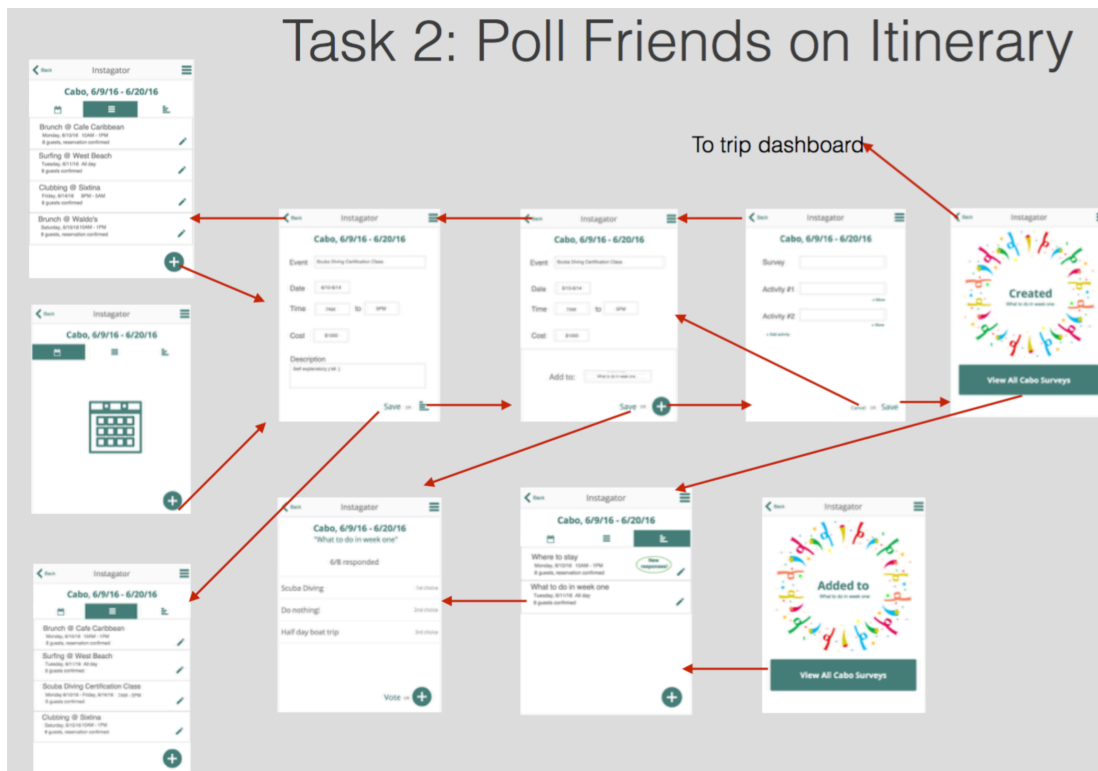


Medium Fidelity Task Storyboards

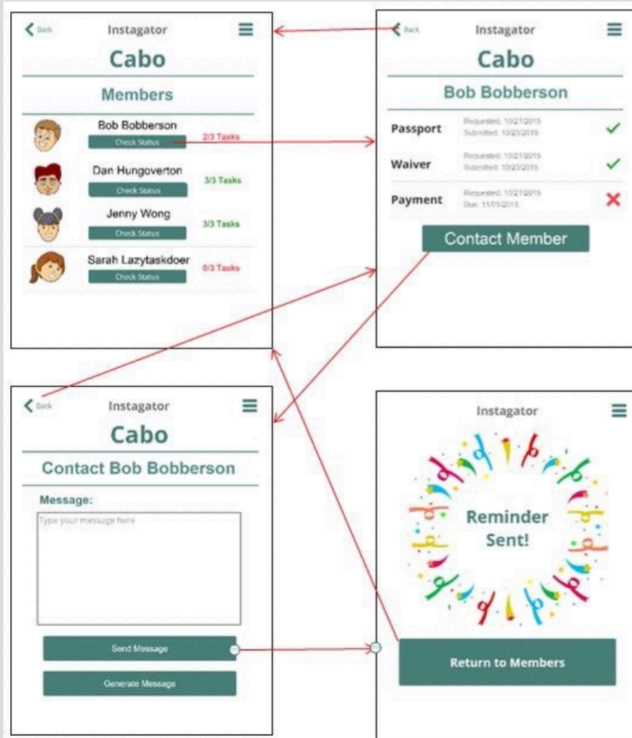
Task 1: Start a New Trip



Task 2: Poll Friends on Itinerary

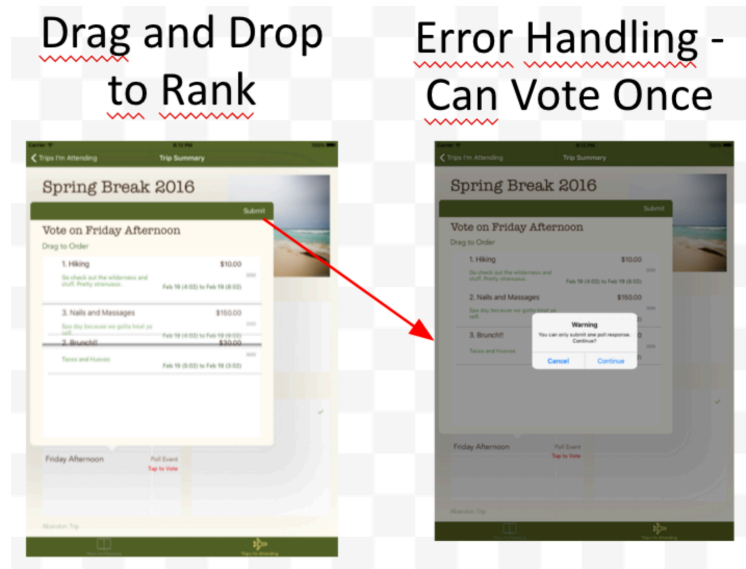
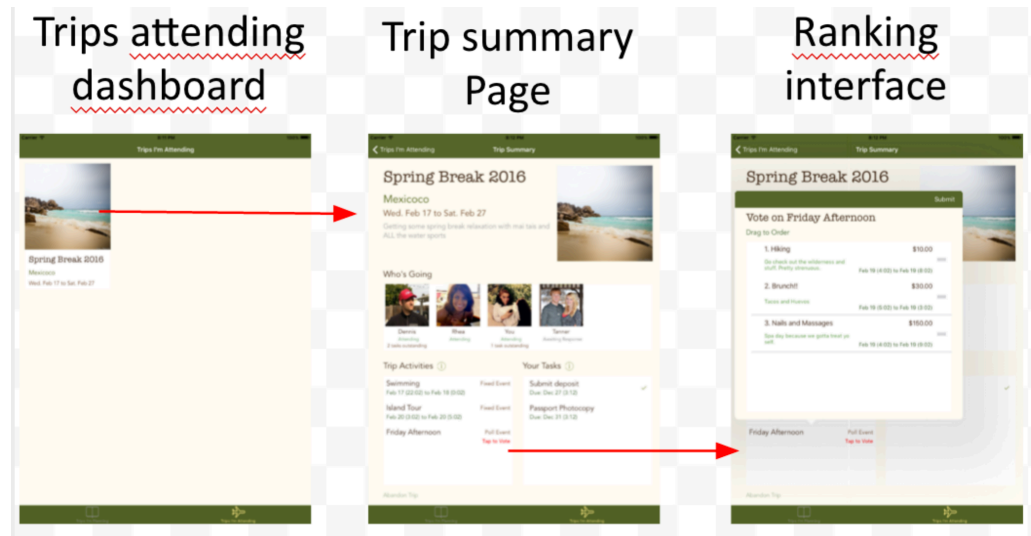


Task 3: Send To Do Reminders

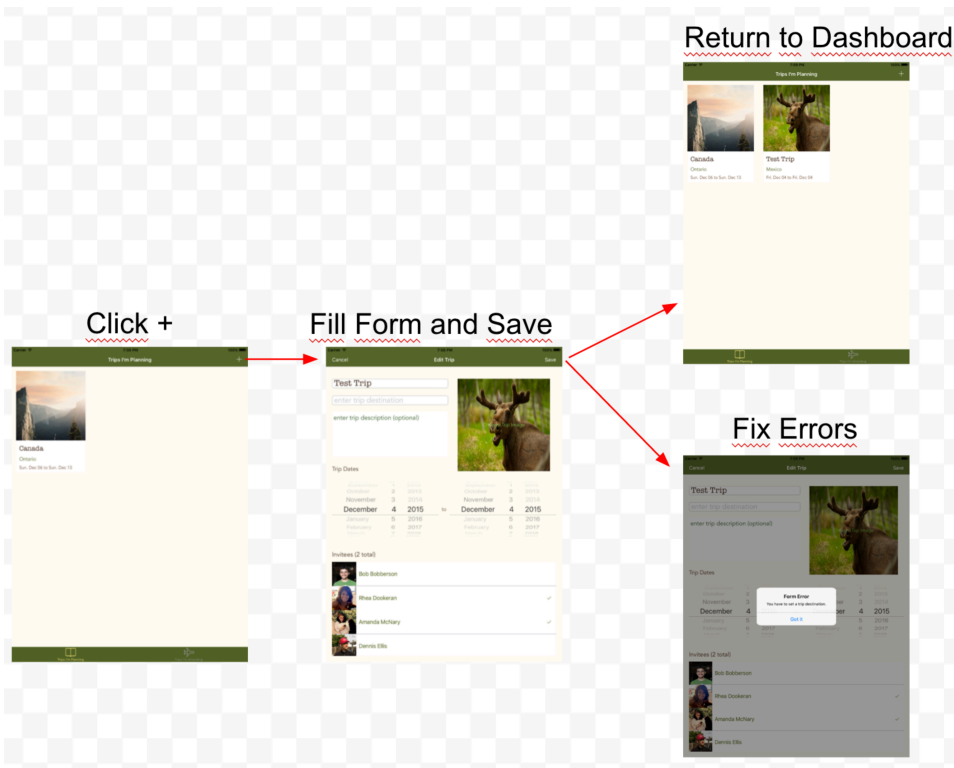


High Fidelity Task Storyboards

Participant responds to trip planner's requests and surveys (simple)

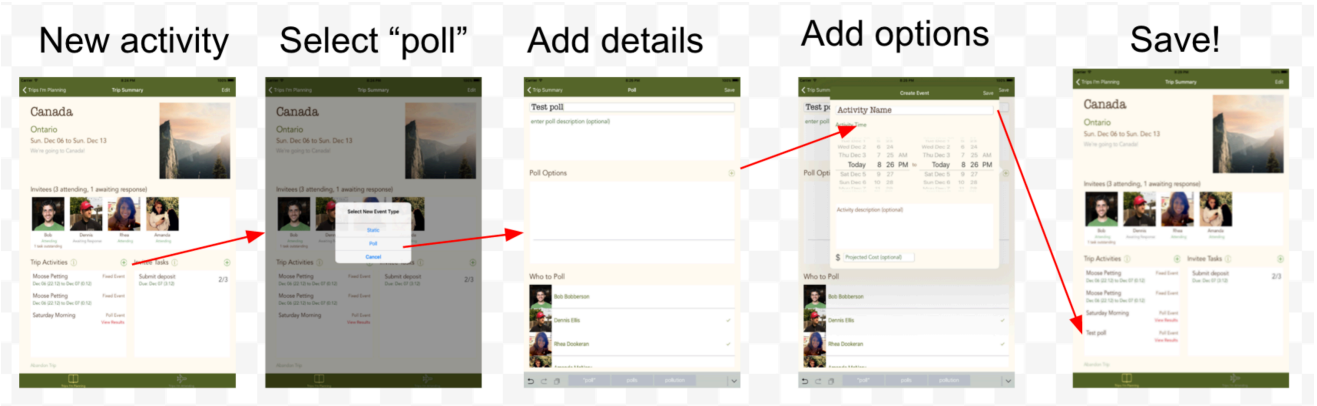


Trip coordinator creates a new trip and invites guests (medium)

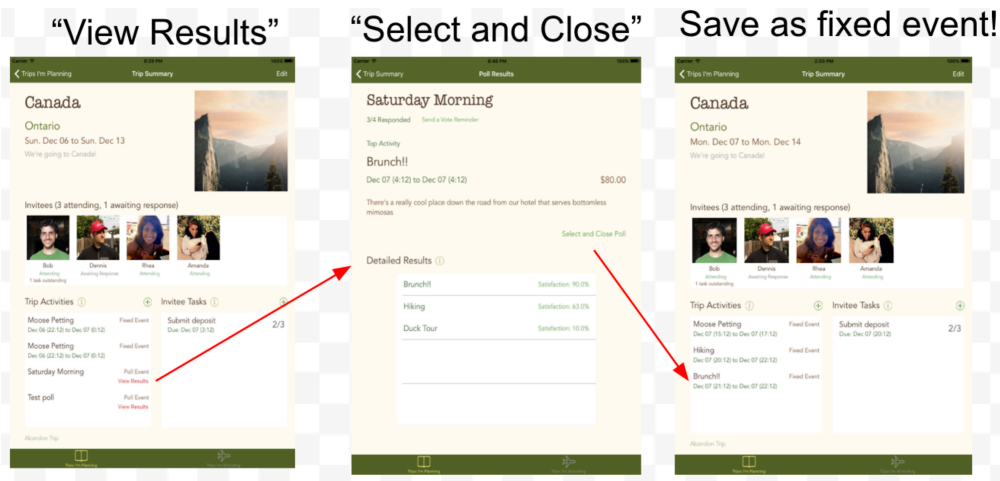


Trip planner creates polls and acts on results (complex)

a) Create Poll:

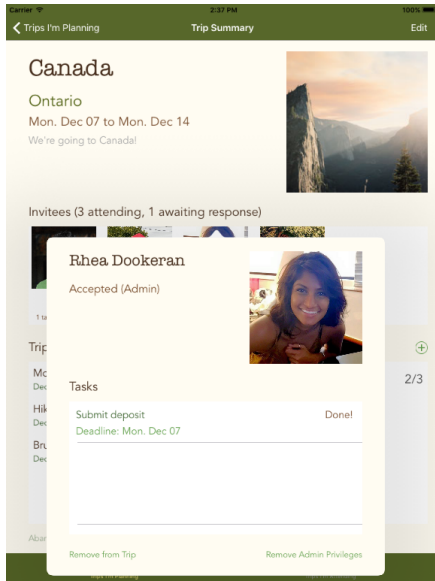


b) Act on Results:

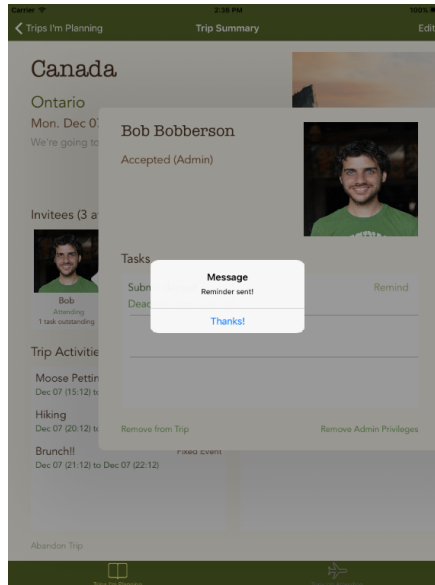
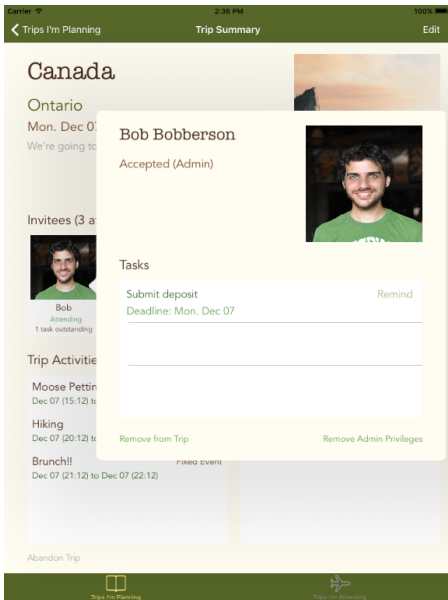


Additional Screenshots/Features

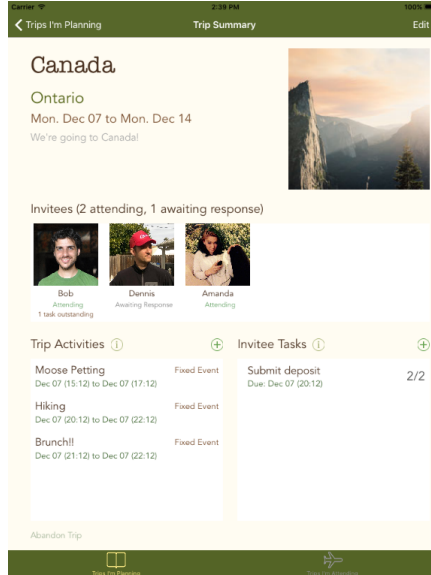
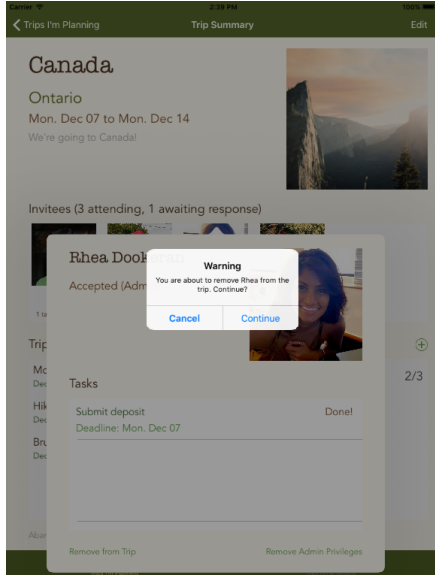
Member Page (with or without Admin)



Reminders



Removing Members from Trip



Task Creation/Deletion

