HobBe: 201_U_09

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Mid Fidelity Prototype (Hamed)

Link to Balsamiq prototype

Tasks

1. Users should be able to create and set up their accounts.

An account would contain a user's name, email, and password, while setup would include the roles they are looking for and events they're interested in. We want the user to be able to do this so they can be discoverable on the platform, and so they will find relevant results for meeting people their venture needs at events of mutual interest. This supports founders' ability to find team members with common interests and potentially leads to better team chemistry/fit. The feature that supports this task is the login/sign up flow. This flow is made up of the initial login screen along with a series of screens supporting account sign up and onboarding.

2. Users should be able to discover and find events.

An example of this would be a user looking for video gaming events; we would like this user to find local activities where he/she can play video games with potential team members. We want them to be able to complete this task so the user can find people with whom they share interests. We chose this task to meet the requirement of promoting team chemistry and opportunities for working together face-to-face. Assessing team fit comes across informally through how people interact during the hobby; for example, measuring sportsmanship in a pick-up basketball game or teamwork in a multiplayer video game could be good indicators of how well potential team members would work together towards a common goal. The feature that supports this task is the event browsing flow. This flow is made up of the overall hobby category screen and the hobby

events page. This feature supports this task well because all of the event details are easily accessible to and viewable by users, making discovery extremely simple.

3. Users should be able to manage the guest list of their event based on attendees' resumes.

We want users to be able to do this so that they can choose who they want to meet based on their qualifications. This meets the requirement of filtering for qualified candidates. A subtask of this task could be viewing the profile associated with each candidate attending the event. The feature that supports this task is the guest list management flow. This flow allows a user to proceed through the process of removing a guest from an event that they are the owner of (that they created).

4. Users should be able to view the resume of candidates attending an event.

Founders need to have proof of candidates' skills and experience when assessing their fit; we chose this to meet our requirement of showcasing a variety of skills. A related subtask of adding a resume would be adding a short bio. The feature that supports this task is the resume viewing modal. This modal gives the user the opportunity to browse a candidate's resume without ever leaving the application.

5. Users should be able to find events where attendees are people with specific skill sets that they are actively recruiting for.

We want to be able to do this in relation to our persona's goal to find candidates that are qualified for the roles he/she is actively hiring for.

All of these tasks are related sequentially. A founder can create an account and set up her preferences for events and candidates, from which she can view relevant upcoming local events and attendees. The event detail page is where founders can track the guest list of their events, find people in specific roles, and view their resumes. The feature that supports this task is the role specification required upon sign up. By asking users what role they are and what types of roles they are seeking to connect with, our design gives users the ability to disseminate who may be of particular interest while networking.

Design decisions

Changes you made to the design based on feedback you received from users in G3. If you did not make any changes based on user feedback, explain why.

Design Decision: We included an image/icon with each hobby in order to help the user quickly decide. Icons/images will help the user to quickly find the hobby they are interested in participating in. Or, if the user does not yet have an idea in mind, these images/icons will help him/her think of some ideas for a new hobby to add to the application.

Alternatives Considered: We also considered not including an image and just having a list with hobbies in text. The reason we decided against this was during our user testing, the users seemed to appreciate receiving information visually.

Design Decision: We ordered the upcoming events in chronological order with the closest event at the top of the list. We decided upon this organizational structure because our users want to save time and follow a sensible hierarchy as they browse down the feed. We found during our

testing that user's preferred having items listed sequentially, so that they could find dates that work for them.

Alternatives Considered: We also considered listing the events based off geographic proximity. We decided against this as our persona is a busy college student, and it was important to make sure that each event could fit in their busy lifestyle.While location was somewhat important, we decided the priority should be date, followed by location which would also be listed on the menu.

Design Decisions: Since this is a mobile application, we wanted to reduce the number of "clicks" it would take to carry out an action. Thus, we decided that the upload interface should automatically close upon selection of a file.

Alternatives Considered: We also considered an confirmation button when the user uploads a resume or a picture. Since we wanted to reduce the number of clicks, but also maintain the sense of security that comes with confirmation, we reached a design compromise. Users would upload additional information, which would automatically close upon selection of a file. However, none of these changes would be made until the user presses a final confirmation button on the settings page.

Design Decision: We designed the save button on the settings screen to return to the home screen. This is so that our design communicates to the user that their requested changes were successfully made.

Alternatives Considered: We also considered returning the user to their current screen and displaying a text that confirmed their changes. We decided against this because our persona values time, and by moving them back to the home screen it allows them to complete the rest of their app actions quicker.

Design Decision: We placed the "edit attendees" button in the top right corner since most mobile applications follow this layout. Thus, users new to our application will feel more comfortable/familiar with using the application the first time.

Alternatives Considered: We considered using a right-to-left “swipe” motion to enable attendee deletion, however we thought that this might be a difficult motion to demonstrate via Balsamiq.

Note to the above: When discussing the heuristic evaluation as a group (next section), we discovered that this was a potential error recovery issue and a potential error prevention issue. Thus, this was changed upon InVision implementation.

Design Decision: We chose to implement the attendee removal functionality as “x” bubbles because they allow the user to delete multiple attendees at a time which may be useful when attendee lists get particularly long.

Alternatives Considered: We also considered an option where attendees have to be removed one by one, this did not feel ideal for our persona. The ability to quickly and dynamically make changes to an event seemed important for our user’s goals.

Note to the above: When discussing the heuristic evaluation as a group (next section), we discovered that this was a potential error recovery issue and a potential error prevention issue. Thus, this was changed upon InVision implementation.

Design Decision: We chose to implement the resume viewer as a modal rather than in a separate application (browser) because we believe our target users will want to quickly browse through several resumes. By using a modal, the user can quickly skim a resume, close it, and then move on to the next candidate’s resume.

Alternatives Considered: We also considered redirecting the user to the browser, but decided against it because we believe our target users will want to quickly browse through several resumes.

Design Decision: Homescreen has sign up/sign in buttons. Made these different colors so the user can easily differentiate between the two options, and not go through the sign up process again if they already have an account.

Alternatives Considered: We also considered creating a new screen just dedicated to signing up/logging in. This is actually something we decided to change after discussing and testing, with the change reflected in our Invision prototype.

Note to above section: Upon actually designing in InVision, we realized that certain elements wouldn't fit or mesh, and thus had to change them.

Changes based on user feedback in G3

1. Homescreen has sign up/sign in buttons. Made these different colors so the user can easily differentiate between the two options, and not go through the sign up process again if they already have an account.
2. Settings page updated to show different colors based on which position the user selected/selects. Green indicates that the role is an active role the user is seeking, while white indicates the user is not interested in that role.
3. Include functionality for changing or switching profile picture or profile icons. The user clicks the profile picture icon to change their icon.
4. More feedback screens, animations, and emphasis. Animations are hard to include in this Balsamiq version, but we plan to include these in the final version of the design.
5. Fixed back button on event description page so the user is able to go back to the event list screen. Now when a user is on an event page they can press the left arrow on the top left of the screen to go back a page.

Manifestation Decisions

We decided to use Balsamiq for our prototype. We thought Balsamiq would provide the right balance in a middle resolution prototype, allowing us to balance depth of use, with scrappiness. We wanted the users to feel as though they were actually using our app, without having the sense of permanence of a higher fidelity solution, so that we are able to gather more complete and transparent feedback. We also decided to limit the scope of the Balsamiq prototype to the ability of the user to complete the 5 tasks listed above, so that we are able to gather feedback on the most important use cases of our end user, while still having enough tasks that it feels like a complete solution.

Filtering Decisions

1. The ability to create an account is limited due to the text input capabilities of our Balsamiq software. We decided to instead show the flow that would happen on the sign up/sign in screen by providing a default persona. The sign in/sign up screen is also not differentiated since we though sign up was the more important screen to capture, while sign in just takes the user to the homescreen to replicate the expected output of the user. Further, many modern smartphones can recognize a user's sign in information based on their device information, therefore we didn't think it would violate our persona's expectations to take them simply to the homescreen from the sign in button.
2. With regards to content we provide a complete walkthrough for the running path of the activity selection. This was so that the user can explore all our app's functionality, while also keeping the design low cost so as to collect feedback and update the app.

3. The complete functionality expected to complete the 5 tasks of our persona are included. This includes creating an account, updating the user's profile settings, joining an activity for a category they enjoy, creating a new event for an existing category, and creating a new category.

In coming up with our filtering decisions we created a horizontal prototype that shows the user the breath of our app's functions. With regards to our running category the app prototype than becomes a T shaped prototype so that the user can also explore the depth of our functionality.

Heuristic Evaluation

We employed Nielsen heuristics for our evaluation, since they are the most commonly-used general principles for interaction design and standard in the industry. Because our Balsamiq prototype was medium-fidelity, we wanted our evaluation to focus on interaction with the UI elements and content we included, to assess how usable our prototype is and how well it helps our target user achieve his tasks.

Location	**Problem Description**	**Severity**	**Violated Heuristic**	**Suggested Solution**	**Change?**
Entire App	It is difficult for the user to determine which page they are currently on.	Major	Visibility of system status	Display navigation bar at bottom of screen.	Yes
Login/ Sign Up Screen	Users can continue to the next step even if inputs aren't filled in.	Major	Error Prevention	Gray out button if required inputs are left empty.	Yes

Login/ Sign Up Screen	The system only asks for the user's password once, so it's easy for them to misenter it, leading to frustration down the line when they try to log back in.	Minor	Error Prevention	Ask user to confirm password with additional input field.	Yes
Login/ Sign Up Screen	There is no way for the user to select their desired role from the sign up screen.	Minor	Consistency	Added onboarding for user to input their role and desired roles.	Yes
Settings /Profile Page	Save button takes the user back to the homescreen. It has no verification that the new changes were actually saved.	Major	Visibility of system status	Allow the user to confirm or discard changes on the profile edit page.	Yes
Settings/ Profile Page	The user is unable to log out of their account.	Major	User control and freedom	Add a logout button to profile page.	Yes
Settings/ Profile Page	No opportunity to edit personal information.	Major	User in control	Add edit button to profile page.	Yes
Settings/ Profile Page	It is unclear which role the user has. It isn't clear what role the user selected since it displays all roles.	Cosmetic	Aesthetic & Minimalist Design	Add role to the profile page based on input from the onboarding.	Yes
Hobby Category Page	The page prompts users to "select a hobby to get started", but gives them the option to add a new category. They refer to	Cosmetic	Consistency and standards	Change wording of hobby page to “categories” and include a “+” button for	Yes

	the same thing, so users might be confused by wording.			adding a category.	
Events Page	Relevant information such as the name of the event or the category selected is not surfaced.	Minor	Visibility of System Status	Have category name display above list of events.	Yes
Events Page	It should be made explicitly clear to users in what order information is presented.	Minor	Visibility of system status	Ensure that all events display information in a consistent format.	Yes
Event Detail Page (All)	The back button returns users from the Event Detail page to Hobbies, even though the entry point was the Events page (requires additional step to get back to the list of events).	Major	Flexibility and efficiency of use	Provide an exit from an event's detail page back to the home / all events page.	Yes
Event Detail Page (Appel + Arts Quad)	Once a user clicks "Join", there is no feedback to let the user know they have successfully added themselves to the event (they are redirected to the Event page).	Major	Visibility of system status	Change coloring and text of "join" button to demonstrate that user has successfully added themselves to the attendee list.	Yes
Event Detail Page (Appel + Arts Quad)	Users cannot "unjoin" an event, e.g. once they click join, they cannot remove	Major	Error Recovery	Allow users to click "joined" button to	Yes

	themselves from the event.			cancel their registration on the attendee list.	
Event Detail Page (Commons)	If a user accidentally removes an attendee, they cannot discard their changes, i.e. they can only save changes, even if the change was a mistake.	Major	Error Recovery	Provide an option for users to cancel actions when editing their own event.	Yes
Event Detail Page (Commons)	The user cannot delete an event they have created, only edit the event attendees.	Major	Error Recovery	Allow a user to delete an event they've created when viewing its page.	Yes
Event Detail Page (Jogging)	The touch target-area for editing participants is too small. It is easy to accidentally delete the wrong person.	Minor	Error Prevention	Change "minus" signs to a swipeable menu that gives a "remove" option	Yes
Event Detail Page (Jogging)	No confirmation for deleting a participant. Too easy to accidentally delete the wrong person.	Minor	Error Prevention	Change "minus" signs to a swipeable menu so that the action must be deliberate.	Yes
New Event Page	The user should know that their event was successfully created; taking the user back to the events page does not make this immediately clear.	Minor	Visibility of system status	Take user to event details page once event is successfully created.	Yes

New Category Page	Category creation asks the user for a description, but this is not displayed anywhere on the Event Details page (only name, image, and attendees are shown).	Minor	Visibility of system status	Show description on event details page.	Yes
New Event Page & New Category Page	If a user accidentally taps to create a new event/category, they cannot cancel this action and instead have to go through the entire flow of creating them, then deleting it.	Major	User control and freedom	Add ‘x’ and ‘back’ buttons to cancel action on dialogue.	Yes
New Event Page & New Category Page	The Create button is enabled even when the user hasn't filled out the required fields.	Major	Error Prevention	Gray out button when fields are not filled out.	Yes

High-Fidelity Prototype

YouTube Link to Video Animation of InVision Prototype

Link to InVision Prototype

Tasks:

1. Create and Set Up an Account
2. Browse Events in a Category that Interests You

3. Manage Your Event's Attendee List
4. View the Resume of an Attendee You're Interested In
5. Join an Event that Interests You, with Attendees You're Looking For

This InVision prototype was made based on changes synthesized from the **heuristic evaluation**, **design critique session**, and **filtering/manifestation decisions** for prototyping.

From the **heuristic evaluation**, some major changes we made included adding a **tab bar** for navigation across the Home, Discover, and Profile pages, since previously it was difficult for a user to know where they were in the app. For error prevention and recovery, we disabled actions such as signing up until all **required input fields** were filled, and added a **confirm password** field in case a user made a typo. When viewing events, we made changes to improve visibility of system status and error prevention with the **join button**, which changes to convey that a user has successfully joined an event and can be unclicked in case a user decides to no longer attend an event. Upon completion of event creation, there is appropriate feedback by directing users to the **page for their newly-created event**, which they can then **edit or delete**. Destructive actions such as removing an attendee are made deliberate by **two-step interactions** such as swiping and tapping to delete an attendee. We also included **back and close** actions across all pages so that users would not get stuck in a dead end and be redirected in a sensible manner (e.g. from an event detail page back to the all events / home page), and allow the user to **log out** from their Profile page. A user see their role displayed in their Profile and edit their information.

From the **design critique session**, we decided to add an **onboarding flow** for users to add 1) what role they are, 2) what roles they're looking to meet, and 3) what event categories they're interested in, so that their experience in the app would be more personally-relevant and fit with their goals of finding people in specific roles (e.g. a founder looking for developers and designers) at events where they share a mutual interest. In the metadata for each event cell, we also include a **preview** of what roles of people are attending (e.g. 5 designers, 7 developers) so that a founder (e.g. our persona Max) looking to specifically recruit designers can select events where he can meet the right people for his team.

In regards to **filtering** and **manifestation** decisions, we prototyped enough to convey the primary interactions and functionality of the app while completing main tasks, with a fairly high level of accuracy (e.g. making the copy seem realistic, having clean colors and typography). We went for breadth (horizontal) to show the basic mechanics of our app (e.g. primary tasks), but also depth (vertical) to simulate realistically how it would feel for a user to go through those tasks. We prototyped the account creation and onboarding experience, for example, to simulate how it would feel using our app for the first time. The Home, Discover, and Profile pages are mostly fleshed out in that interactive elements of the pages are functional. Since we are working in **high fidelity**, we wanted our prototype to be as close to product as could be feasible with InVision, since we wanted feedback from users not only for interaction, but visual. Our prototype is fairly higher resolution, since the software prototyping tools we used (Sketch and InVision) allow for representing a prototype very closely to what the actual desired experience for our user would be when interacting with the product.

Usability Testing

Evaluation Goals: (Constantin will Finish)

1. Test the effectiveness of the prototype.
2. Find design problems that need to be fixed.
3. Test the quality/usefulness of information that users can capture from screens.
4. Test the degree to which first-time users can figure out functionality.
5. Determine users' emotional and behavioral responses.

Metrics:

Metric	Description	How to measure	Units
Error rate	The degree to which the interaction is smooth or involves making mistakes along the way toward completing the task.	Ability to recover from errors: whether the user is able to recover from an error and go back to completing the task.	Count
Efficiency	The degree to which a user can interact efficiently with the system	Task completion time	Seconds
Effectiveness (success rate)	The degree to which a user can successfully achieve their goals in using the system	Ability to complete a task	Yes/No
Emotional Response/ Engagement	Emergent feelings being fostered through the interaction between the user and the system	Observation: The observer describes changes in the user's observable emotional expressions through the interaction with different design elements. Think-aloud method: the user describes	N/A

		how they are feeling during the interaction.	

Intended Participants:

Our intended participant group is made up of college-age individuals who are looking to recruit team members for their entrepreneurial venture and are interested in networking at events centered around a common hobby (a less traditional recruitment process). Though our design solution targets both job seekers and recruiters, we have focused on the recruiter segment for this entire group assignment and thus will continue to do so for testing consistency. We chose this participant group for three reasons. First, college-age students typically enjoy participating in hobby-based activities. Second, many college-age students have great ideas but lack the team and resources needed to make them a reality. Finally, we are targeting individuals with demonstrated need for building out their team, since this will ensure that their exhibited behaviors and emotions are realistic.

We are seeking to recruit 4 to 5 individuals for our session, which we believe is an optimal number to accomplish our evaluation goals and identify trends in our testing results. We plan to recruit our participants two ways. First, we will ask members of our own social circles for any connections to student founders of organizations or ventures. Second, we plan to reach out in eHub, via flyers and in-person, to find individuals who are entrepreneurial-minded and either have a startup in place or ideas for a venture.

Expected Time & Location of Evaluation Sessions:

The timing of our evaluation sessions will heavily depend on participant availability, though we anticipate that many of our sessions will take place in the evening since this is typically when college students are free. We plan to conduct the evaluation sessions in the reservable conference rooms in the Collegetown eHub location. This location will be optimal for older students who live off-campus in Collegetown. Additionally, since eHub is dedicated to entrepreneurship, we believe that it will provide a "real world" environment for our design solution. If our participants are underclassmen and are located on North Campus (which is much further away from the Collegetown eHub location), we will offer to give them a ride to eHub.

Evaluation Tasks:

1. Create and Set Up Account
    a. **How/Why:** Upon opening the application, the user must either create an account or log in. We chose this task because it is the first point of contact with the user. Additionally, account creation and set up (onboarding) is important for the networking portion of this solution, and to make the feed more personally-relevant for users.
    b. **Happy Path:**
        i. User is presented with "splash screen", selects "sign up" button.
        ii. User enters first name, last name, email address, and a password. User confirms password entry again, then clicks "sign up".

iii. Onboarding begins. Next screen shows, user selects “role”. Clicks “next” button.

iv. Next screen shows, user selects what roles he/she wants to connect with. Clicks “next” button.

v. Next screen shows, user selects 3 categories they are interested in from the available options. Clicks “finish” button.

c. **Instructions to Participant:** Please open the application and create an account to the best of your ability. If you get stuck, try your best to figure out how to proceed.

d. **Instructions to Notetaker:** Time how long it takes for the participant to complete this task. Also take note of their emotional response/changes in their expressions while completing the task. This measures the metrics of efficiency and emotional engagement.

2. Browse Events in a Category that Interests You

a. How/Why: We chose this task because users need to be able to discover hobby categories and events that interest them, otherwise they may be deterred from using our solution and will not experience the networking benefits from finding people who share a common interest.

b. Happy Path:

i. User is presented with “home” screen, selects “discover” from tab bar.

ii. Category screen shows, user selects a category of interest to them.

iii. User browses list of upcoming events for that category.

c. **Instructions to Participant:** Please open the application, find the list of categories for hobbies, select the Art category, and look through the list of available events. If you get stuck, try your best to figure out how to proceed.

d. **Instructions to Notetaker:** Using the metric of effectiveness, see if the participant is able to complete the task. Also take note of any expressions the participant may have when browsing the list of available events, and browsing the application in general.

3. Manage Your Event Guest List

a. **How/Why:** If they choose to do so, users that create their own hobby events should be able to manage the participant list based on attendees' uploaded resumes. We want them to be able to do this so that if they have a private event, they can choose who they want to meet based on their qualifications.

b. **Happy Path:**

i. User starts on home screen and selects "+" button to create a new event.

ii. User enters event information and clicks "create event".

iii. User is brought to event details screen, user selects "edit" button.

iv. User scrolls down to attendee list.

v. User clicks on attendee that they want to remove, card slides to left and “remove” button displays.

vi. User clicks “remove” button and attendee is removed from event guest list.

vii. User clicks “save” button and returns to event details screen.

c. **Instructions to Participant:** Please open the application and create a new event. Once the event is created, remove Brianna Lane from the attendee list. If you get stuck, try your best to figure out how to proceed.

d. **Instructions to Notetaker:** By managing event guest list we want to see if the participant is able to recover from errors easily. Using the metric of error rate, count the amount of times a user is able to recover from errors. We also want this to be efficient, so time how long the participant takes to remove someone from the guest list.

Additional Scripts:

Hello. You are being asked to take part in a research study to test how well you can complete tasks in a new application called HobBe. Information taken during this study will aid the researchers in determining design flaws that this app may contain.

Your responses will be kept secure. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a password-protected file; only

the researchers will have access to the records. If we record the interview, we will destroy the audio after it has been transcribed and/or taken note of, which we anticipate will be within two months of its taping.

Taking part in this study is completely voluntary. You may skip any tasks that you do not want to complete. If you decide not to take part or skip some of the tasks, it will not affect your current or future relationship with Cornell University. If you decide to take part, you are free to withdraw at any time.

The researchers conducting this study are Constantin Miranda, Hamed Rabah, Michael Huang, and Ben Boston. Please feel free to ask any questions you have now.

If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) at 607-255-5138 or access their website at http://www.irb.cornell.edu. You may also report your concerns or complaints anonymously through Ethicspoint (www.hotline.cornell.edu) or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study. _____

Closing Statement

Thank you for participating in this study. Your feedback was very helpful for us to determine the possible frustrations of using this application.

Materials Checklist:

1. Pen or Pencil
2. Notebook
3. Laptop Computer with High Fidelity Prototype
4. Mobile Phone (for audio recording of usability testing)
5. Printouts: Session protocol, informed consent form/script, task instructions for participants & observers.

Ethical Issues:

- People may not want it to be known whether or not they are looking to join a new venture.
- Another ethical issue is personal information. In order to sign up a user has to put their name, and email, and create a password. Also the app will contain a place for their resume information. Maybe they won't want everyone to have full access to this type of information.

Team Contribution

For G4, we split up each of the major parts to work on individually. We decided on this strategy since some parts were better suited to one person completing them. After the bulk of the

work was completed, we came together as a group to discuss whether we agreed with the draft implementation and made suggestions for improvements. Hamed tackled the Balsamiq prototype and organized the write-up for part one. Michael focused on creating all of the mockups for the InVision prototype in Sketch and added interactivity. Ben and Constantin worked on the usability testing plan and helped complete the write ups for the other sections. The entire group worked on the heuristic evaluation table since combining our I4 documents proved to be quite complex and required a considerable amount of debate.