UX/UI Design And Usability Study

cs4500, Team 42
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Introduction

Spoiled Tomatillos is a movie database website that combines social media and preference-based recommendations. This is still in development and at this time consists only of a set of use cases and a set of wireframes of potential User Interfaces.

During the study, participants interacted with 3 tasks that mimicked interactions that end users and administrative users would go through when experiencing the app. We hypothesized that users would be able to complete each of the tasks at hand with little to no difficulty, in 30 seconds or less. Our methodology consisted of conducting an interview with 5 subjects where we gave a high-level explanation of the task they were supposed to complete, and then we took qualitative and quantitative measurements of their ability to follow through with the tasks through a survey. We chose not to provide any guidance as the users worked their way through the task to gain insight into pain points and resolutions. We asked the users to talk through their experiences and give feedback about good and bad elements of the project. We then compiled the data and are presenting it in this paper with discussion.
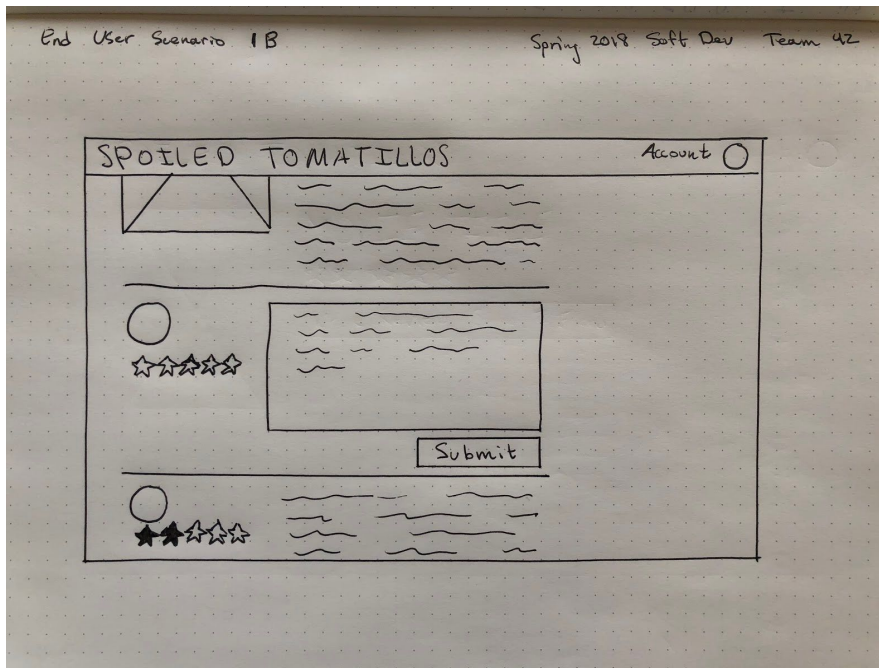
The purpose of this study is to gain insight into how our assumptions about user interaction with our application translate into real human interactions.
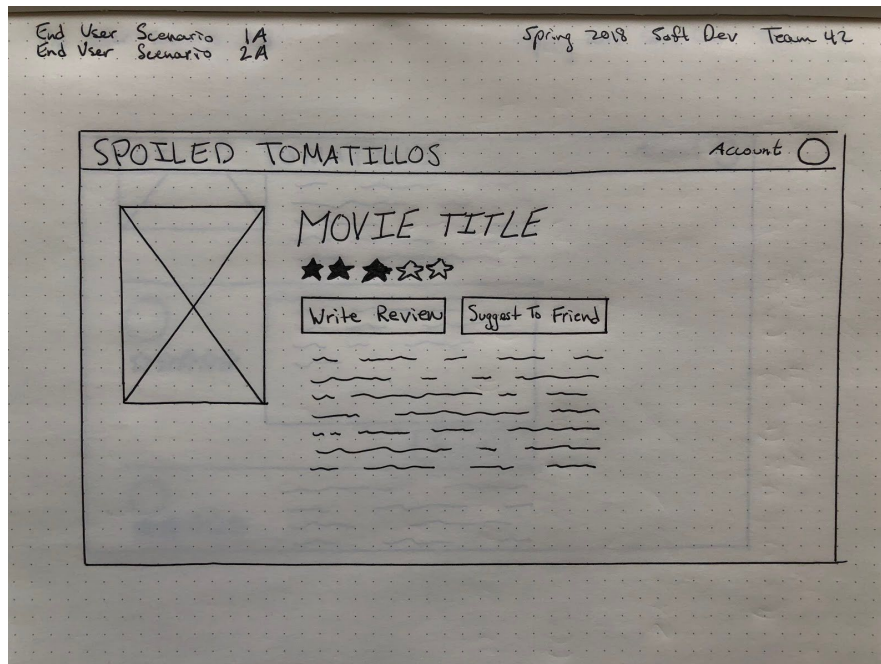
Paper/Rapid Prototypes
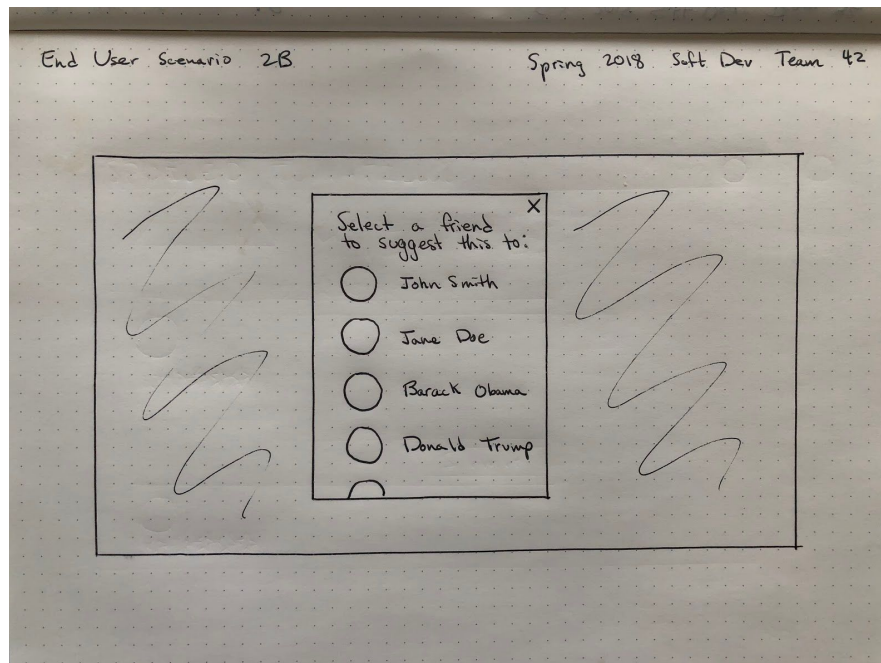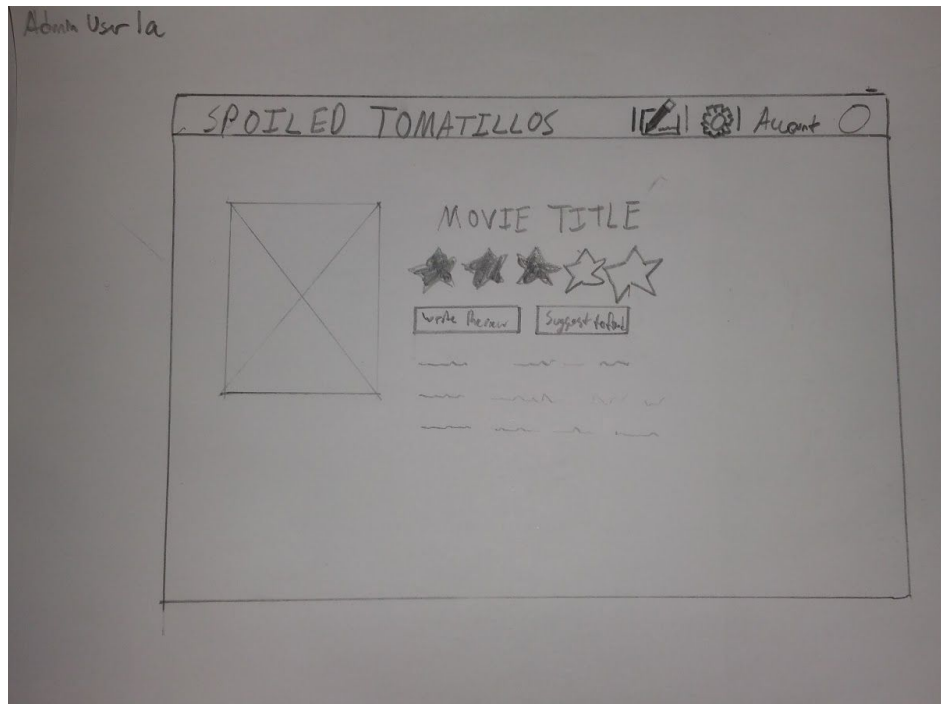
Task 1a (End User)
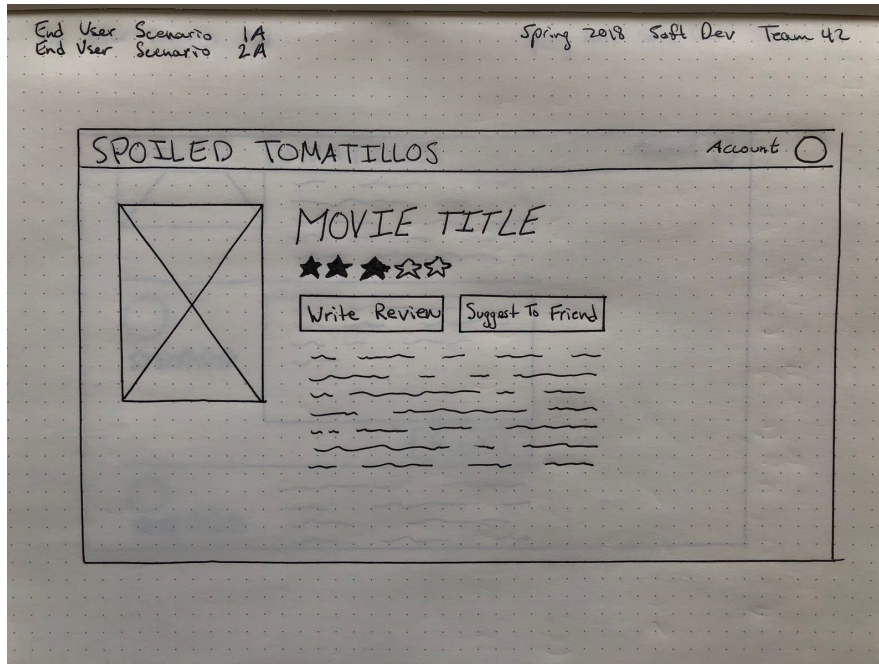
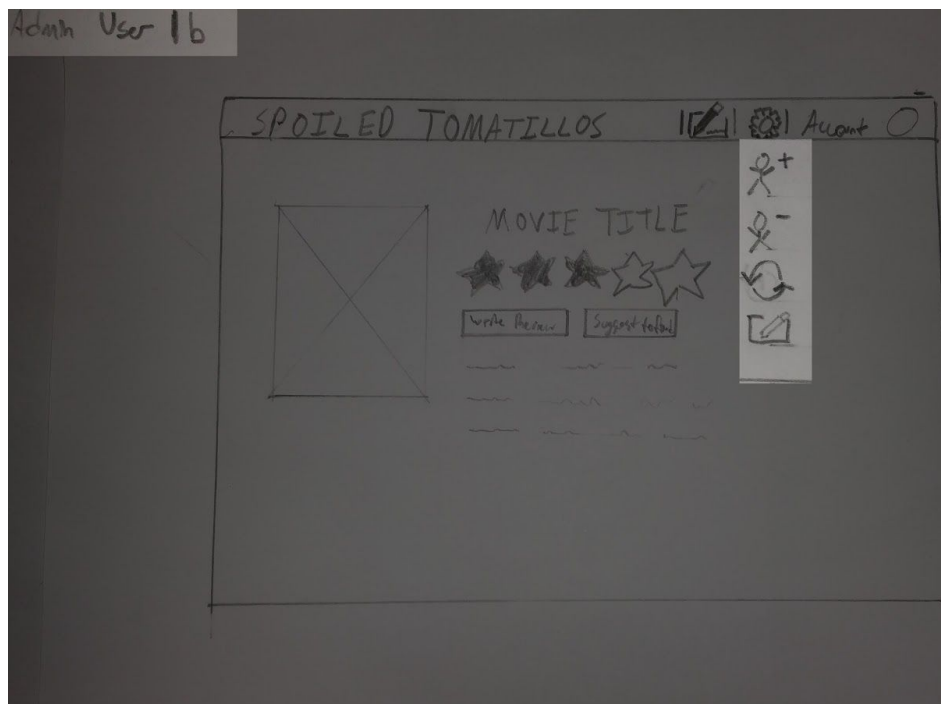## Task 1b (End User)

Task 2a (End User)

Task 2b (End User)

Task 3a (Admin User)

Task 3b (Admin User)

Task 3c (Admin User)
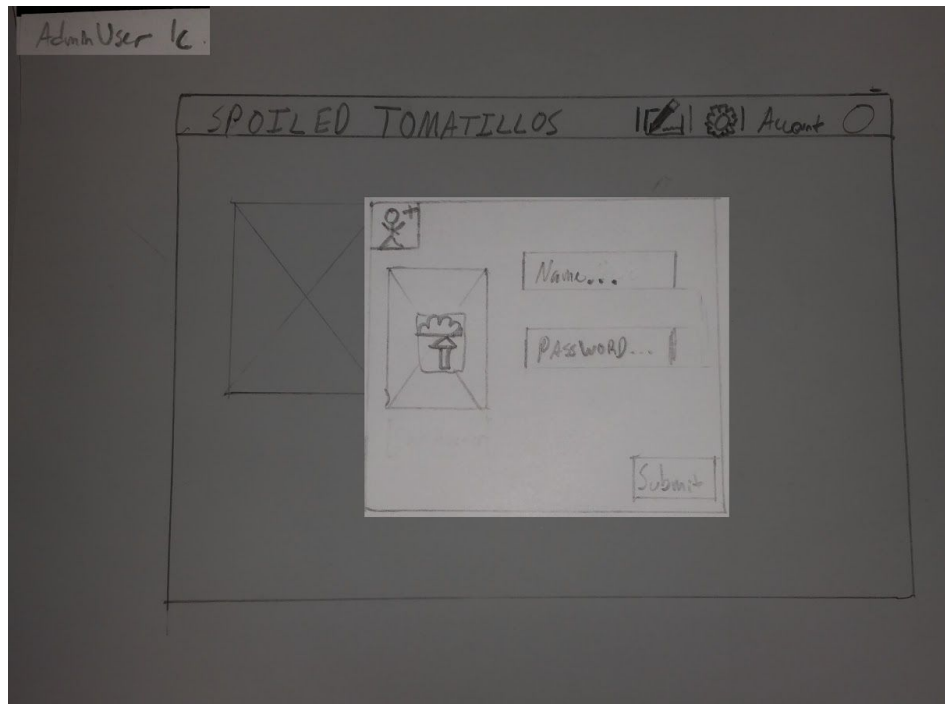
Participants

We collected the following data on our participants. This and all data in the assignment can also be found in the form of a spreadsheet here: [https://github.ccs.neu.edu/CS4500/team-42-spring18/blob/master/usability/raw-survey-results/raw-data.xlsx]

Gender
5 responses

Female	3 (60%)
Male	2 (40%)
Other	0 (0%)

Age
5 responses

21	22	23
1 (20%)	2 (40%)	2 (40%)
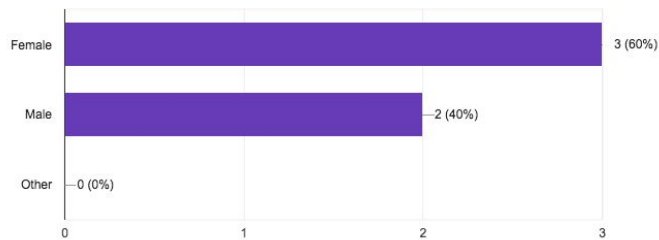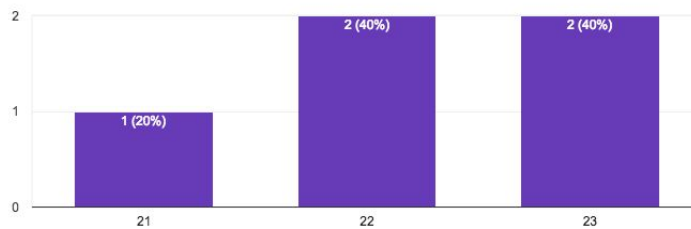
Education Level
5 responses

- Some High School
- High School Grad
- Some College — 60%
- College Grad — 20%
- Graduate school (Masters) — 20%
- Graduate school (PhD)
- Other
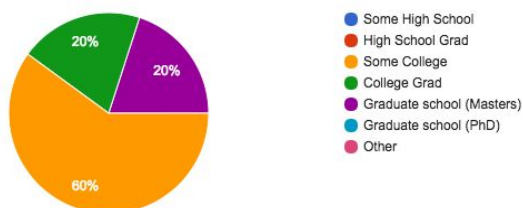
What Major?

5 responses

Physical Therapy
Biochem
Civil Engineering
Computer Engineering
Public Relations

Technical Competency

5 responses
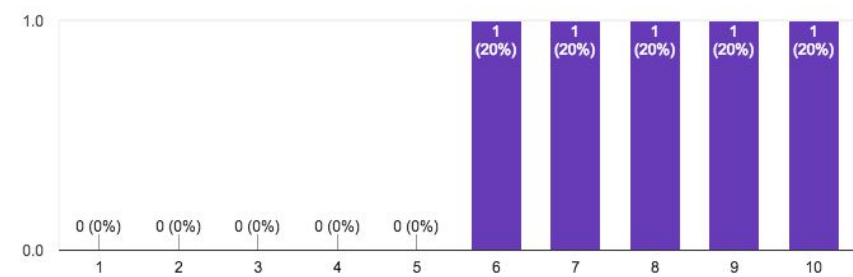
Do you have prior experience with this product?

5 responses

Tasks

Volunteers in the usability study were asked to complete three tasks: two as an end user, and one as an admin user. Before completing tasks, each volunteer was asked to think aloud, so their thought process could be understood and/or recorded.

1. Review a movie

Volunteers were first told that they were logged in as an end ('regular') user. They were shown prototype 1a, a movie's information page. They were then asked to post a review sharing their thoughts about the movie.
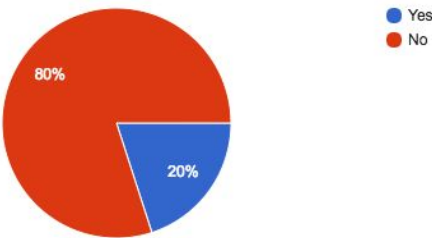
After pressing the 'Write Review' button on the prototype, the volunteers were shown prototype 1b, which is a scrolled down view of the movie's information page with a form for entering a movie review. Volunteers were asked to describe what they thought the sections of the prototype represented, and to explain what was going on on the page in general.

Volunteers were then expected to click a star rating, enter some text for their review, and press the 'Submit' button.

2. Prod friend

Second, volunteers were told that they were logged in as the same end user from task 1. They were shown prototype 2a (the same prototype as 1a), and told that they wanted to share this movie with a friend. They were first expected to press the 'Suggest to Friend' button.

Once the 'Suggest to Friend' button was pressed, they were shown prototype 2b, which is a modal with a list of friends on Spoiled Tomatillos. They were expected to select one friend, which would send the recommendation.

3. Add user account

Finally, volunteers were switched to the context of an admin user. They were informed that they were now an administrator for the Spoiled Tomatillos website, and asked to create an end user account for someone else. They were shown prototype 3a, which is similar to prototypes 1a and 2a, but with added icons in the navbar for administrative purposes.

Upon selecting the gear icon in the navbar, volunteers were shown prototype 3b, which layered a drop down menu under the gear. From this menu, volunteers were expected to select the icon of a person with a plus sign to add a new user. This would bring them to prototype 3c, a modal for creating a new user account.

The 'Create User' modal has form field for an image upload, name, and password. Volunteers were expected to fill out each field with some information, and press the 'Submit' button to create the new user account.

Measurements

Because our hypothesis included a time element, we decided to measure the amount of time it took the interviewees to complete each task. We did so by timing them from start to completion and reporting it.

Amount of Time User Took to Complete Task		
Task 1	*Task 2*	*Task 3*
25% 75%	66.7% 33.3%	20% 20% 20% 40%
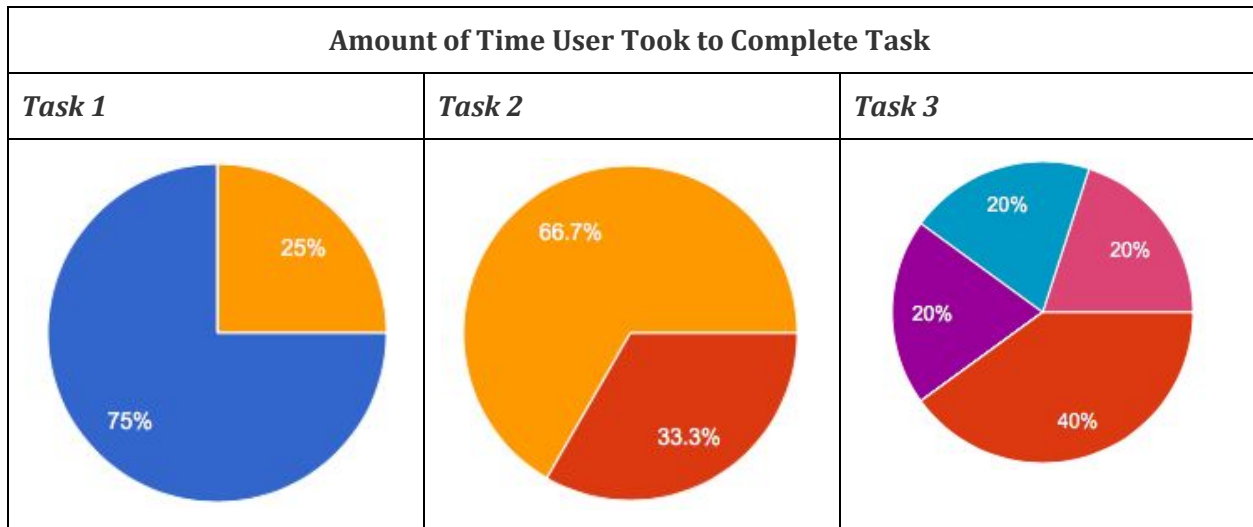
Key:

- 🔵 less than 30 seconds
- 🔴 less than a minute
- 🟠 less than 2 minutes
- 🟢 less than 3 minutes
- 🟣 less than 4 minutes
- 🔵 less than 5 minutes
- 🔴 more than 5 minutes

We also asked the users to rank how much they enjoyed each task to get a sense of their likes and dislikes. This is a qualitative measurement based on their perception.

User's Enjoyment of the Task (0 = no enjoyment, 5 = lots of enjoyment)		
Task 1	*Task 2*	*Task 3*
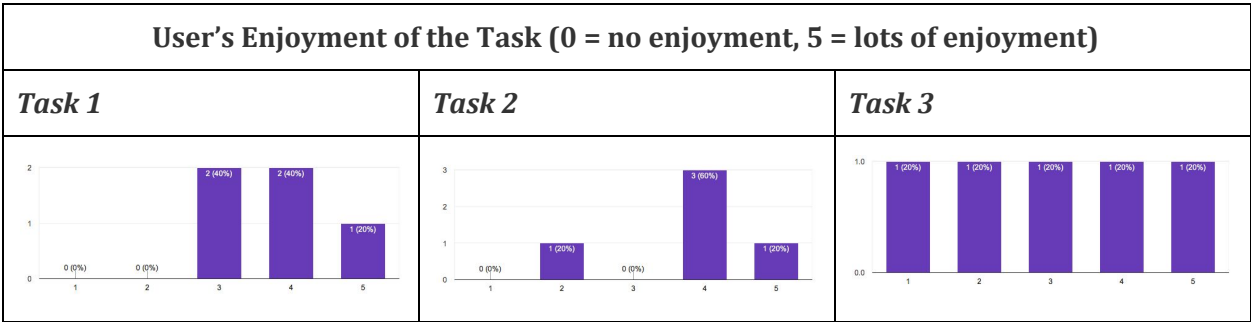
We can compare this against our perception of how well they did after observation. This is a qualitative measurement based on our perception.

Interviewer's Perception of User's Ability (0 = struggled, 5 = breezed through)		
Task 1	*Task 2*	*Task 3*
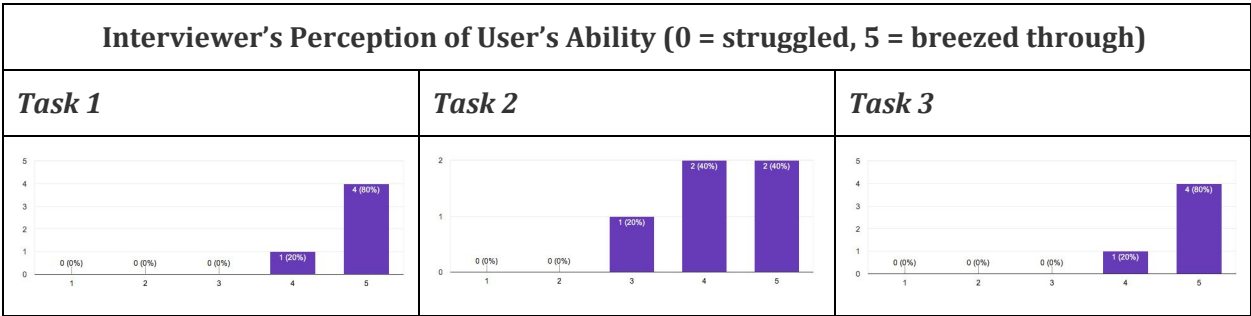
We finally determined which sorts of experiences are most popular by asking which tasks they enjoyed most.
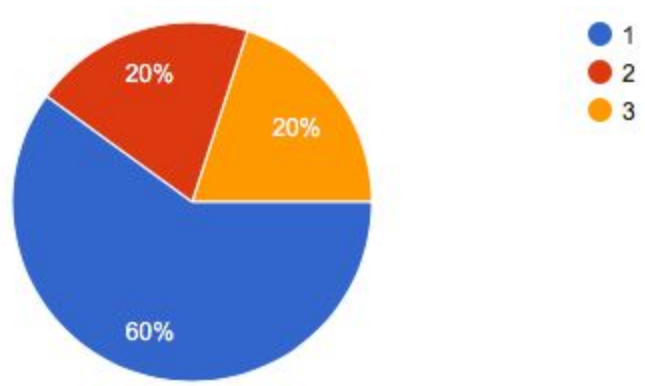
Test Results

During the interviews we recorded the interviewees' audible comments about the mocks. These are the responses for first viewing a movie then writing a movie review.

Task 1a

- Do I have to scroll down? Is this the same screen scrolled down? I think i would write in this box and then submit. Is that circle supposed to be me? why doesn't it say Adrianne?
- No issues whatsoever. The participate made no mistakes or hesitations in understanding the interface.
- He doesn't like the name. Lots of questions about how the social media part - how, who, what where. Went directly to the write review area. Saw the ratings area as a direct name. Account should be a dropdown menu - expected. Expects account to be account name / user. Movie picture recognized. Thought the lines on the page were top comments / keywords etc. Expects a view-more button or something on the bottom of the page.
- Understood generally what everything was, wondering if clicking stars links to more review, can you click movie title for description?

Task 1b

- It's scrolled down from the other screen. I think that box is where the review goes. I think the circle is supposed to be a picture of me but there is no writing next to it so I don't know. I think the lower box is someone else's review. I can't edit it because there is no box around it.
  I think that the stars are my personal ranking, not the review for the movie because it is below my picture and not near the review box
- top part is movie review, dropped down to recent reviews + my blurb
- The user understood all three sections of part B. The user understood where their profile photo would be, where they would provide a rating, and where they would write a review.
- Icon is a picture of user. Click on number of stars to review it. Box is text he's already written. After looking at part B - thinks part A block of text is description of the movie. Submit button easy to see - use.
- The circle means the profile picture, clicking it would lead back to a user profile, the box is a form to submit, stars are clickable to fill in, one at a time.

These are the responses for prodding a friend with a movie recommendation.

Task 2a

- Clicked easily to the suggest screen.
  Do I have to click one of these? Who do I pick? Ok I guess Jane Doe. Now what? Can I select multiple? Where is the next button? I give up.
  I would want to X out because I didn't want to accidentally send it and I didn't see a next

button. Or maybe I would select multiple users and scroll down all the way to the bottom and hopefully there would be a send or next button down there.
- "how does it know my friends???"

- User thinks they can select more than one friend. Believes they should be able to scroll, but notices no scroll bar. User wants the overlay.
  Assumes there will be a submit button. User is worried about mis-clicking. User would like to be able to say something -- a personalized message -- "some exposition".
- No vocalization - Clicked directly on the suggest a friend - went to the modal - swiped up. Selected jane doe on button.
- Thinks the names are multi-select with a button for send at the end. i.e not a click picture and send scenario. Not sure how the message to the friends get sent(email? notification? profile required?). How did our site get this friend info?

These are the responses for, as an administrator, adding a user account.
Task 3
- You want me to delete it? I would press the settings button (gear)
  Quickly chose the person minus
  I don't know what that is. I don't want to add them as a friend? I don't know how to delete it? Is this my name and password. If I click that button does it back it up to the cloud and take it off the internet? my bet would be the cloud button. Can I go back to the other screen? I don't like this screen can I go back and press another button?
  [After some guidance]
  If I put in my user name and password in and hit submit I would expect to go to another screen to confirm that I should delete. I don't know what the person+ button is for.
- user completed the task with ease, but did not understand the flow or symbols
- User was unsure whether to use the cog or the editing note, but decided on the note. On part B, user was confused by the lack of interface... expected more page to be loaded. User was correct about the first three icons, but confused about why the editing note appeared a second time. User understood part C well. Suspected clicking "submit" would return them to part B where the newly created user would appear.
- Asked why can I make a user account - "so I can make fake accounts?" - Found cog wheel - dropdown selected add person - modal popped up - typed in name - dragged + dropped avatar picture - added password - clicked submit
- Saw the pencil as edit page, Gear meant settings, Account would be used to manage accounts. Not clear if its all accounts or just mine. Clicking on the setting icon shows, add person, delete person, reload(maybe save changes)?, and edit? The last part of the form,

show creating a user, add name password and upload photo then submit. There is no way to confirm password, nowhere to put email address to associate with account.

We also asked the interviewees to answer a few specific questions after completing the tasks. First, we asked what the interviewees enjoyed to acknowledge which parts of the experience were positive.

Task 1

- the whole thing
- the name
- I really liked when the interviewer gave me positive feedback and cookies when I answered questions
- He expects everything to be what he thinks it is because it is setup like any other movie viewing site.
- Like general layout.

Task 2

- the names of friends
- ease of suggest a friend button
- It was an interesting thought experiment on how previous web page design influences my personal expectations for pages.
- Intuitive
- If the names are multiselect would have enjoyed. Would prefer friends not to have to have a profile. Would be cool and enjoyable to send a notification email.

Task 3

- trying to figure out the answer like a puzzle
- that i was admin
- Nothing
- Drag and drop avatar picture feature
- nothing

We then asked for difficulties and frustrations in order to see which design choices we should revisit. Here are the responses:

Task 1

- Weather or not it was just the same screen scrolled down
- selecting the star
- Nothing

- Name of product
- The second page is not 100% clear, tell me if I can fill in the stars with a message.

Task 2
- that there was not next button
- difficult: didn't know I had an account, freaked out as to how they knew my friends, what if i wanted to send to my friend that's not my friend on the website? link to other social medias, also I want to send a message in addition to the review
- Interviewer seemed rather spiteful this round. I think he was upset that I rated him a 4/5 for the initial round.
- Couldn't physically scroll down the page
- Unclear messaging. Not super clear on how it works.

Task 3
- the button with the cloud on it, where did the delete button was
- how am i making an account for somebody on my account?
- Did not see the point in the core concept. Why would a company that appears to thrive on exponentially adding users require an admin to manually create new users. Other than that there were several aspects of the interface that I did not fully comprehend, like the note vs the cog.
- Also a subtract person button.
- unclear messaging. I don't understand how the account works without an email. Would not have expected the gear to be where I go to manage users. Though not sure that the other icons worked for that either.

We also asked for additional comments relating to the entire experience in order to get final, overarching opinions not specific to any individual task.
Task 1
- none
- nothing too unique (annoying) - why go here?
- If the pictures and images and links, that would be enjoyable

Task 1
- "I didn't get to add a comment to the music review?"

Task 3

- "I'm logged in as admin, and for some reason I have the ability to make an account, where I have the ability to enter a sensitive password for somebody else. What I think should be happening is that I am just of knowledge on this website and it says "Create an Account" and I help them with that, instead of linking them to our account. I don't think admin should be making accounts. This was really confusing"

Discussion

The end-user interface for task 1 was received well by the majority of the volunteers. In each study, the participants were quickly able to run through the task. There appeared to be no discernable issue across all interviewees. Issues that were discovered related to response from the UI. Selecting stars was not seen as intuitive enough. There should be some form of response to hovering over the stars. The interface overall however was considered very helpful and intuitive. With 75% completing in under 30 seconds, this can be viewed as primarily successful. More pictures and links would be enjoyable.

Task 2 was mostly well received by the interviewees. Participants were able to complete the task in under two minutes and there were few errors in execution. Interviewees were concerned with the social media aspect of this task. Questions such as "how does it know my friends" suggest users are looking for integration with other platforms such as facebook or twitter. The users assumed that more than one friend could be selected. Users were unsure how the suggestion was sent to their friends and how they would be notified themselves. A descriptive notification system should be added to address these concerns. The users were looking for submit buttons and were worried about misclicks. By adding a dedicated button for submission, the problem can be avoided. It is interesting to note that one user tried to swipe up on the friend modal. The modal should have a scroll feature that is clearly viewable. Other confusing issues include that there was not a next button and sending direct movie links to outside parties.

Task 3 had several issues that need to be addressed. Users were unsure how to access the administrative tasks. The cog wheel was eventually recognized but not easily recognized initially. One interviewee tried the edit icon initially and after finding the edit icon again in the dropdown after clicking the cog wheel was quite confused why the edit button existed again. It is clear that there should only be one edit button on the webpage for editing users/entries. Overall, symbols were an issue. Users did not entirely understand the add/delete user icons. Users were confused as to why an admin user might want to create a user account. The reset button was mis-identified as a reload button. The reset button should be changed into a more helpful icon, maybe with a tooltip type popup on hover. The user liked the drag/drop feature on the avatar icon but were not enthused at how much of a puzzle it seemed to become. Overall user comments were primarily on the core concept of adding a user as an administrator. This task seemed to be one where the volunteers were suspect of why an admin would even need to add a user account. The user account not having an email field was also seen as a problem. A field for adding a user email should be added. Adding a user as a task entirely might need to be reconsidered.

It is clear from the study that the user interface needs further work done. Adding more descriptive fields, tooltips, and more recognizable icons would be useful in improving user experience. The core idea of an admin user adding users to the system should be reviewed as a use case to discard in the future on the admin interface. The user interface will be developed using the feedback in this document to better allow for usability of the final product.