



# MUSE

## HIGH-FI PROTOTYPE

CS 147 ART AND CULTURE

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## VALUE PROPOSITION

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Inspire others. Inspire yourself.

## PROBLEM & SOLUTION

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Art has the potential to be a great outlet for personal expression, but many people feel discouraged or excluded from participating. In our research about the perception of art, we found three recurring sentiments.

### I'm not creative.

Low confidence in one's ability to make "good" art

### I don't get art.

Confusion with certain art pieces and disconnection with the artist

### I'm not interested in art.

Lack of engagement in the diversity of various art forms and genres

Muse challenges these sentiments by reframing art and its creation as a story to cultivate a collaborative art community. In our needfinding, we found that people connect with art when they have an understanding of the story of its creation or the context in which it was created. We were intrigued by the concept of art as a medium for storytelling and decided to explore this space.

Muse is a platform that encourages users to tell stories by uploading a piece of art and inviting fellow Muse members to tell "what happens next" by uploading subsequent pieces of art. These collective stories are what we call *strips*--akin to comic strips--and each contribution by a user is called a *panel*.

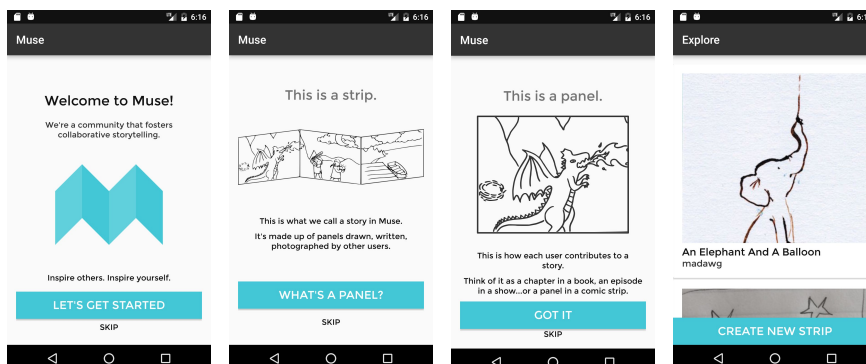


Figure 1. Muse high-fi prototype onboarding.

# TASKS

## TASK 1: INVITE SOMEONE TO A STRIP (SIMPLE)

Invite a peer to build off your ideas.

Audience members often feel disconnected from artists when viewing their work, but we hope giving users the power to invite artists to contribute to personal strips will build a connection. We want to encourage these positive interactions to share creativity. This allows users to 1) reach out to other artists whose art they might admire and 2) maintain relationships with artists they've previously interacted with.

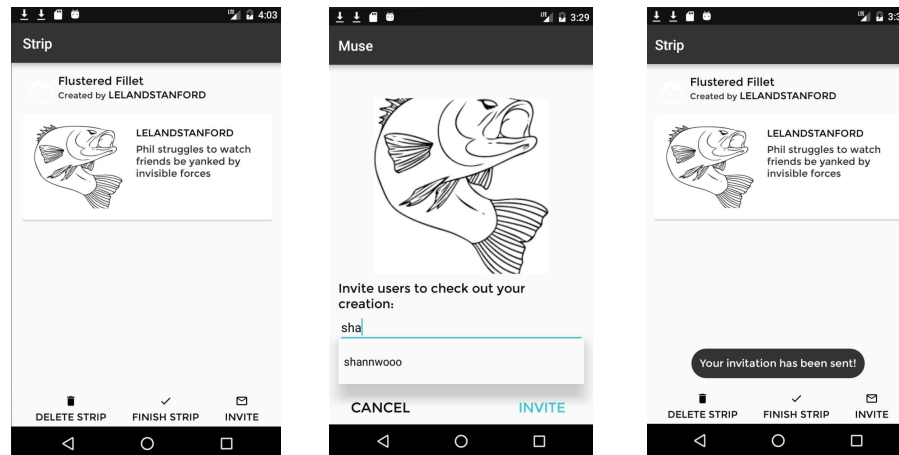


Figure 2. Invite someone to a strip

## TASK 2: CREATE A STRIP (MEDIUM)

Upload a visual piece of art to start a new strip of art.

People often have difficulty relating to art. Muse helps people engage directly with art and inspire art that interests them. Users create strips to express their creativity and start a story centered around a topic, medium, or theme of their choice and contribute their strip to a pool of other unique strips. We want users to initiate stories and inspire others to contribute through this process.

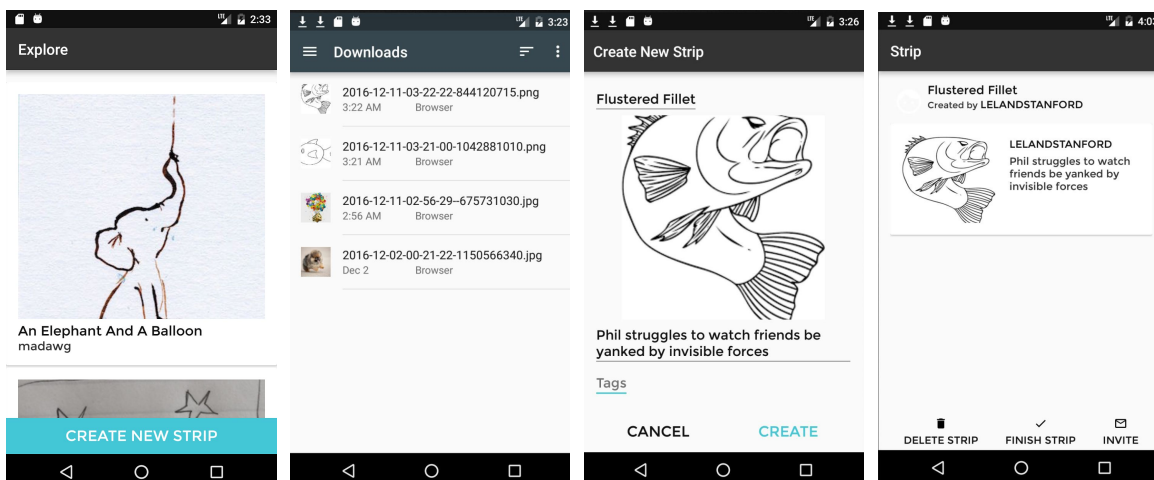


Figure 3. Create a strip

### TASK 3: CONTRIBUTE TO A STRIP (COMPLEX)

Explore other strips of art and add your own art to one that inspires you.

People often feel discouraged when they lack good ideas or the skills to create “good quality” art. Even seasoned artists we interviewed expressed frustration with creative standstill and artist's block. Contributing to another person's strip lowers the barrier to entry. Novice artists can collaborate to make contributing less intimidating and proficient artists are challenged to explore new sources of inspiration. Adding to a strip makes art engaging and accessible by framing art creation as collaborative storytelling.

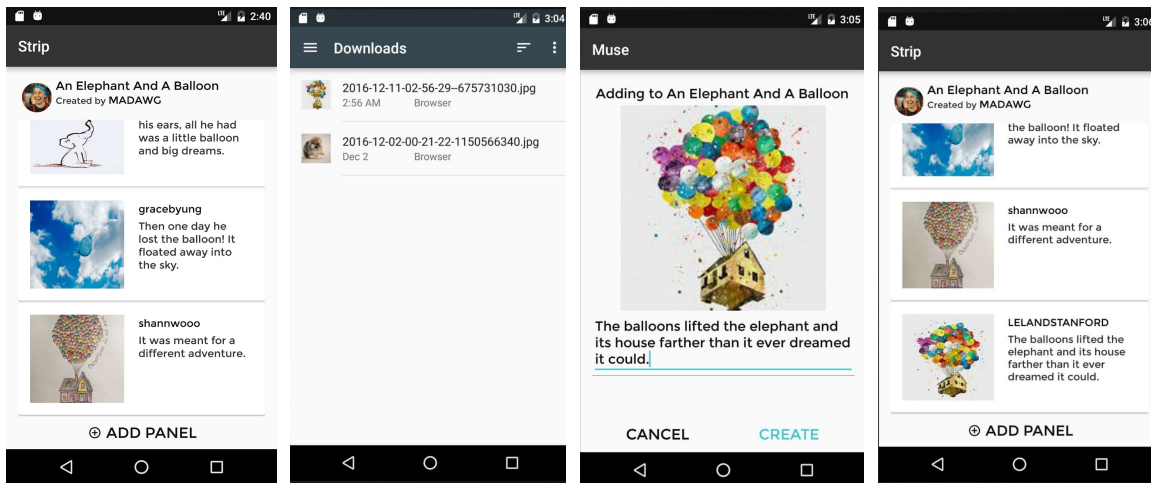


Figure 4. Contribute to a strip

## DESIGN EVOLUTION

### NEED FINDING

We explored art and accessibility, so we pursued a diverse group of interviewees with a range of ages, genders, races, and artistic backgrounds. One person we interviewed said that they felt “hurt [and] sad” that friends rarely take the time to enjoy their photographs. An older couple we interviewed defined art through quality--for example, they believed "abstract art is kindergarten art"--but one said they felt connected to art when they were able to paint their own design in a pottery workshop. The last person we interviewed felt that her “common eye” was very different from an artist’s “expansive vision.”



Figure 5. Three of our interviewees Steven, Jeff and Amanda, and Andrea



between the non-artists and artists. Our low-fi prototype had "screens" made of printer paper and pop-ups made of post-its. We tested our prototype with three participants found at the Cantor Arts Center and were surprised to find many of our assumptions proven wrong. One participant felt that the app was "sacrilegious" and "gimmicky." Other users navigated the entire app before accomplishing a task. Users were confused by "Share an Idea" and only interpreted it as a way to share polished works of art. Overall, our app was too idealistic and commission-based for professional artists. While our results were discouraging, we were motivated to start brainstorming again.

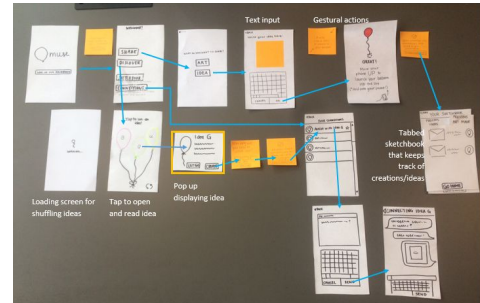
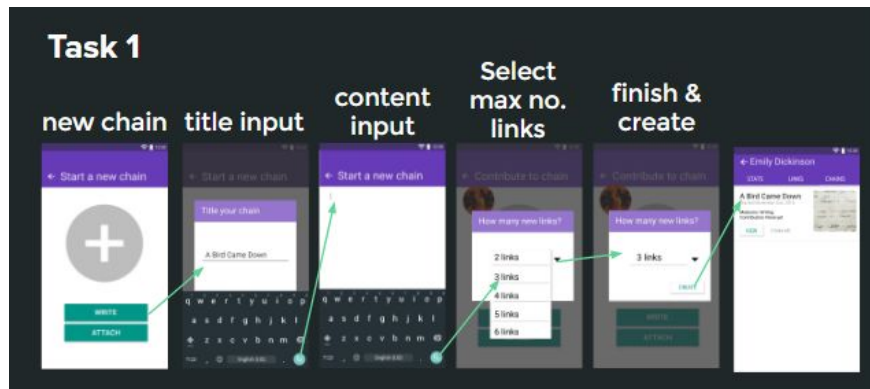


Figure 8. Low-fi prototype

### MEDIUM FIDELITY PROTOTYPE

After brainstorming, we refocused our concept and centered our medium-fi prototype around *inspiration* using [Figma](#) & [Marvel](#). At this point, Muse connects users through *chains* where each user can add a *link* in the form of a piece of art. Each link is inspired by the link before it. Instead of the confusing skeuomorphic balloons from our low-fi prototype, we followed Google's Material design principles for a more traditional app interface. Since we knew we would develop on Android, we used intuitive Android elements like the Action Bar at the top.





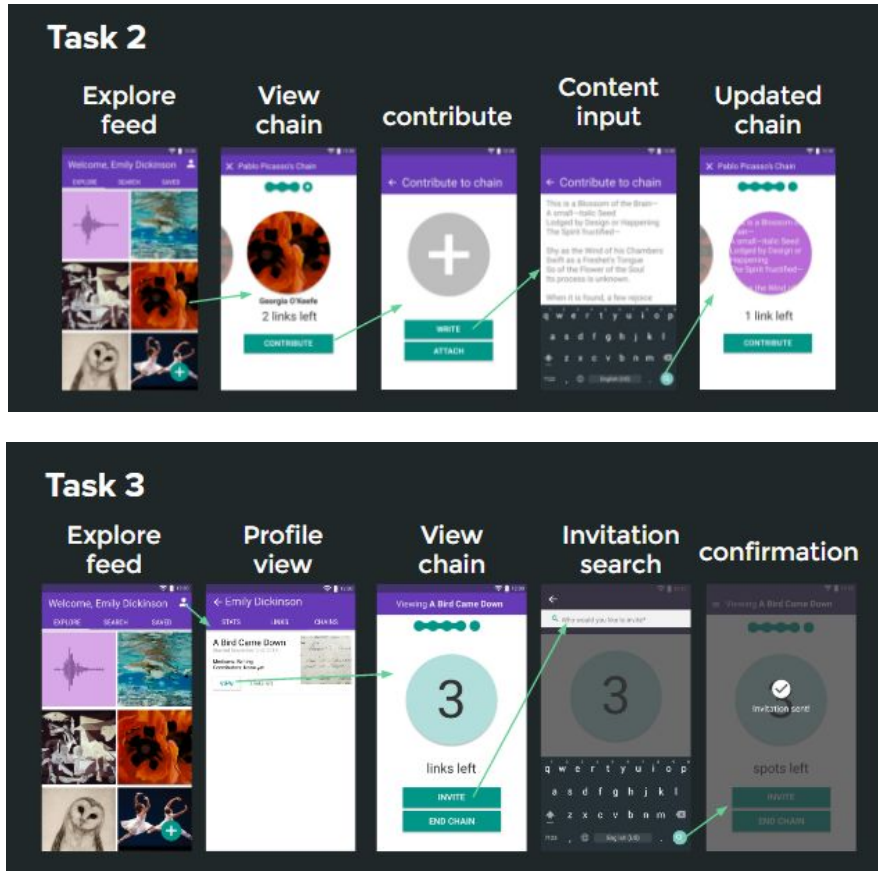


Figure 9. Medium-fi prototype

## HIGH FIDELITY PROTOTYPE

Our final major design change involved reframing “chains” of art as “strips” of art, similar to comic strips. We felt the app needed a conceptual shift to encourage not only collaboration, but cohesion. We decided that a stronger emphasis on stories would guide users to actively build off of each other’s ideas and balance the “randomness” of art that was recurring pain point for users. We also moved to a black and white color scheme with one accent color to emphasize the art in the visual experience.

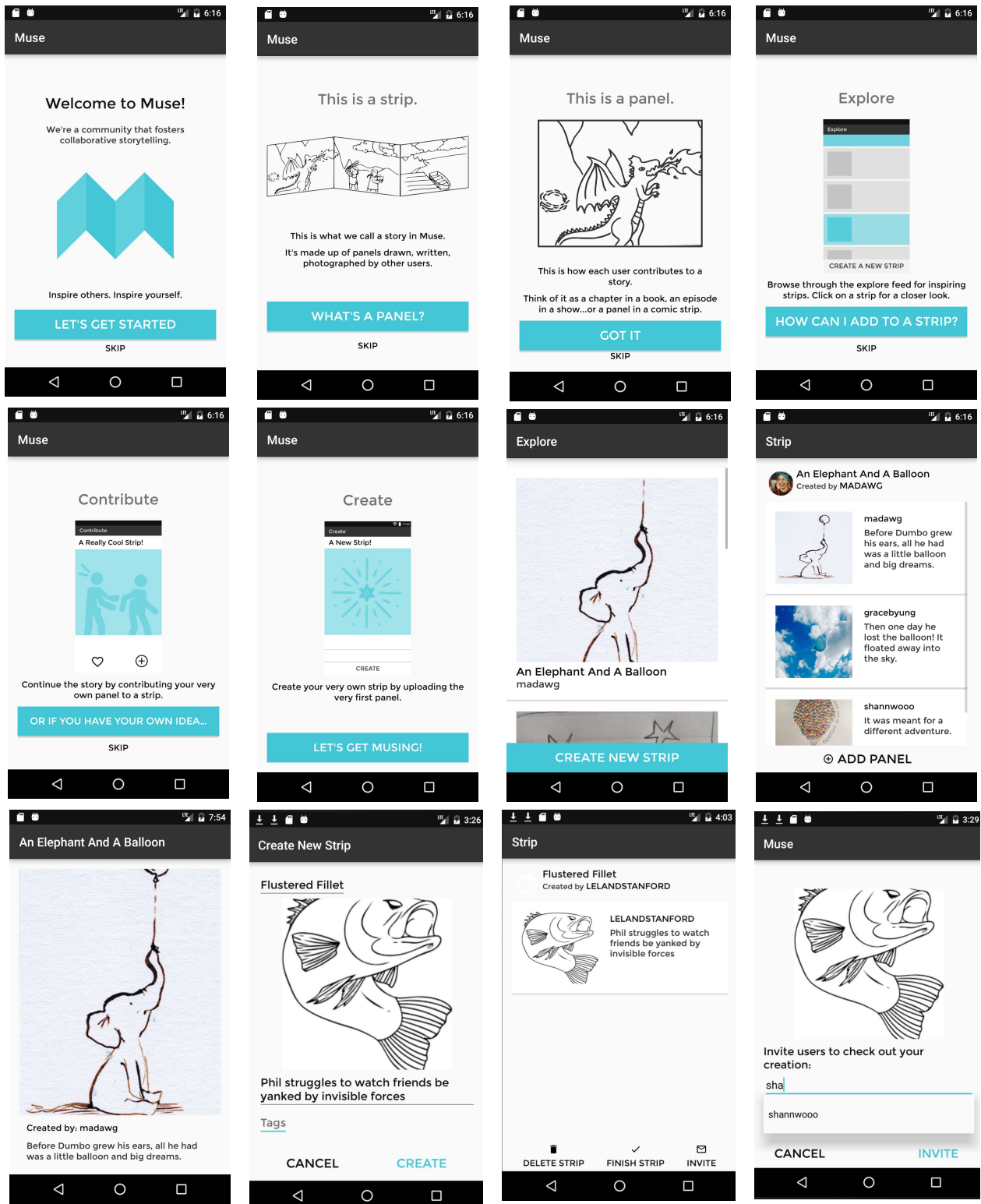


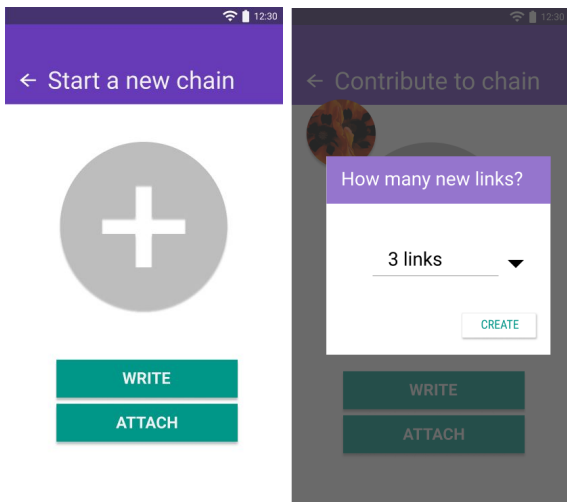

Figure 10. High-fi prototype. Onboarding (1-6), Explore strips (7), Scrolling panel view (8), Swiping panel view (9), Create strip (10), View created strips (11), Invite (12)

# MAJOR USABILITY PROBLEMS

## 1. [H2-3: User control and freedom] [Found by A] 4

"There is also no way for the user to stop the process of creating a new chain once they have clicked on "write". In addition to adding an enter button under the line where one enters the chain title, you should also consider adding a "delete" or "discard" button right next to the "enter" button, so users can halt their creation of a new chain if they so desire."

This violation was very significant. We had included "Back" arrows in some of the screens involved in the "Create a Chain" task flow, but they were mistaken for arrows taking users back to a previous step in the creation process, not a way to cancel. Some screens lacked "cancel" or "back" buttons completely, such as the screen in which users select the maximum number of links in their new chain. Our hi-fi prototype includes an easily visible *Cancel* button for users to exit out of creating a new strip. This button is also present when adding a panel to a strip.

Med-Fi	High-Fi
	
Screens for starting a new chain and setting max number of links. Back buttons are unclear exit routes.	Clear option to cancel creating a new strip.

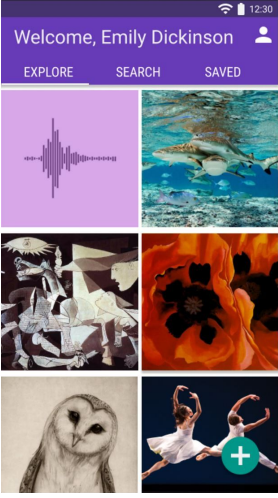

## 2. [H2-2: Match Sys & World] [Found by A and B] 3

"On the main page, there is a "saved" button in the upper right hand corner whose purpose I don't know. I am assuming that you can save chains somehow to your own page, but don't know how to do this and where in the app you would be able to save anything. If it were a page for saved chains, you should probably title it "Saved Chains", and also implement save buttons so that users can actually save



chains."

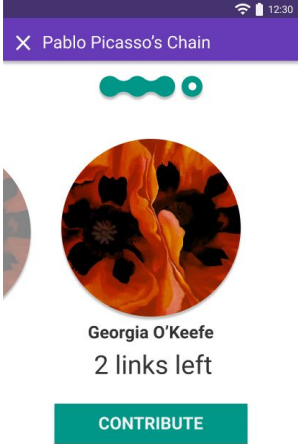
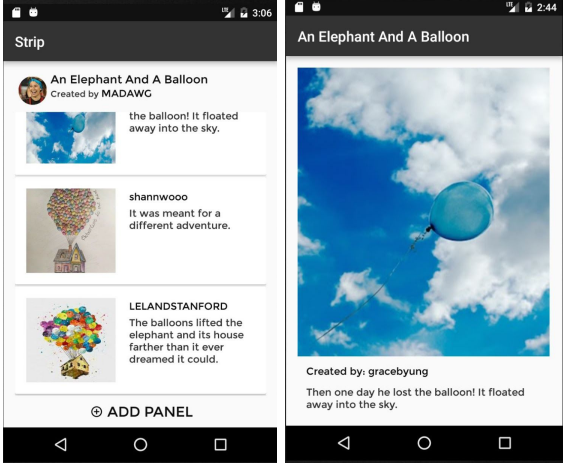
"Saving" chains was meant for users to save a spot on a chain they wanted to contribute to. We ended up pivoting this idea to favorites in our high-fi design, however time limitations kept us from implementing it. We would have loved to give our feed tabs and help users filter through ongoing strips and finished ones, but allowing users to favorite or save strips was an extraneous feature that we had to sacrifice in our final implementation.

Med-Fi	High-Fi
 The Med-Fi mobile app home screen features a purple header with the text "Welcome, Emily Dickinson" and a user profile icon. Below the header are three tabs: "EXPLORE", "SEARCH", and "SAVED". The main content area is a 2x3 grid of six panels. The top-left panel is purple with a white audio waveform. The top-right panel shows a blue and white abstract image. The middle-left panel shows a white and black abstract image. The middle-right panel shows a large orange flower. The bottom-left panel shows a white owl. The bottom-right panel shows a ballerina in a blue tutu with a green plus sign in the bottom right corner.	 The High-Fi mobile app explore screen has a black header with the text "Explore". The main content area shows a large drawing of an elephant with a balloon in its trunk. Below the drawing is the text "An Elephant And A Balloon" and the username "madawg". Below this is another drawing of three stars. At the bottom of the screen is a blue button with the text "CREATE NEW STRIP".
<p>The home screen let users view chains they saved. "Saving" was unclear terminology.</p>	<p>We did not implement our "Favorites" feature but did display strips in order of creation, most recent at the top.</p>

### 3. [H2-1: Visibility of system status] [Found by A and B] 3

*"Once you click on the link you can explore on the main page, I am confused why there is a headline that says "Pablo Picasso's Chain" and in the center of the page it says Georgia O'Keefe and says the number of links underneath Georgia O'Keefe. This leads part of me to believe it is a Pablo Picasso Chain, and part of me to think it's actually a chain entitle Georgia O'Keefe."*

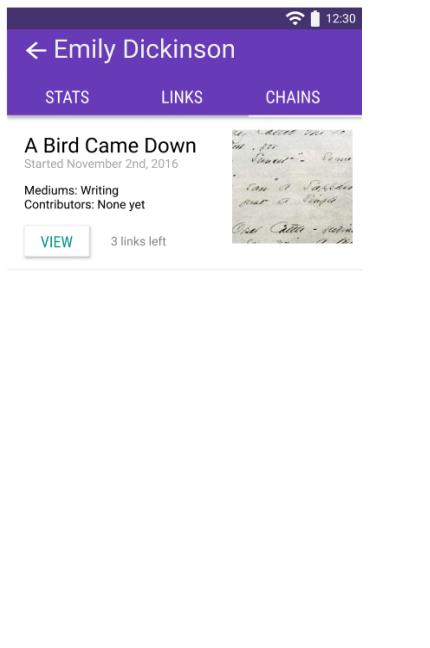
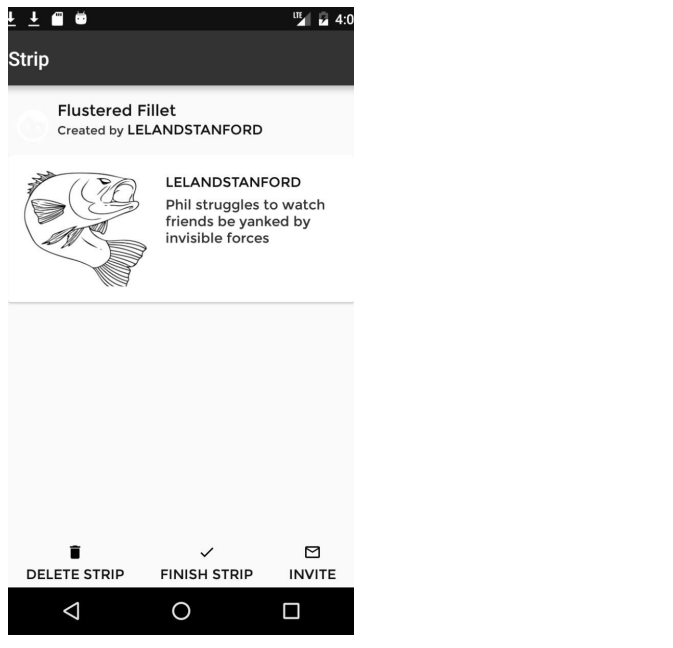
This was a challenge we faced in redesigning our high-fi prototype: how would we best discern between each panel and show the difference between the strips's owner and the panel's owner? We created two different views for strips and panels; on the strip view, we show the username of the strip's owner and indicate that the strip is created by that user. We also implemented a swipe view for viewing individual panels in succession, and in this screen, we indicated the creator of the *panel* under each panel.

Med-Fi	High-Fi
	
<p>Difference between ownership status of Pablo Picasso vs. Georgia O'Keefe is unclear, especially since they're both in positions of importance (the ActionBar versus the center of the screen)</p>	<p>The left view is the Strip View, which indicates the owner of the strip at the top, with each panel displayed below. The right image is of the swiping panel view, where each panel says who it is created by underneath.</p>

4. [H2-2: Match Sys & World] and [H2-3: User control and freedom] [Found by A] 4  
*"For the "write" page that appears when you contribute, you should also have a button that users can click to finish their writing or discard their contribution. Right now, you can only finish when you press the enter button the keyboard, but I think there should be buttons in the upper right hand corner that are "finish"/ "save" and "discard.""*

On our high-fi prototype strip view screen, we included buttons that allow the owner of that strip to delete or finish the strip. This gives the owner of a strip much more control.

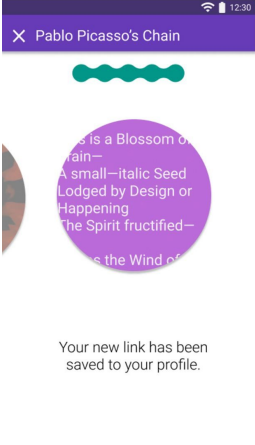
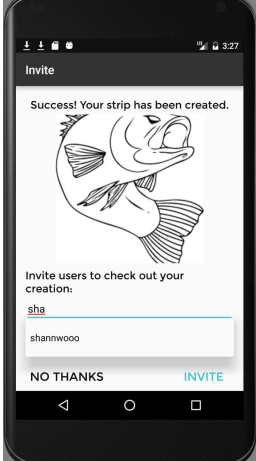
Med-Fi	High-Fi
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<p>Owners of chains only have the ability to view, but not delete, chains.</p>	<p>Redesigned screen for viewing a strip offers options such as deleting a strip, finishing a strip and preventing more additions of panels, and inviting users.</p>

## 5. [H2-1: Visibility of Status] [Found by A] 3

*"I am confused by the screen that immediately pops up once the user is done contributing to the initial chain. Is the user given the opportunity to contribute to another chain? If so, I think it would be better if after having a pop up confirming to the user that they have contributed, there should be another pop up asking the user if they want to contribute to another random chain. If they want to, they should be redirected to the John Lennon chain. If not, they should be directed back to the main page."*

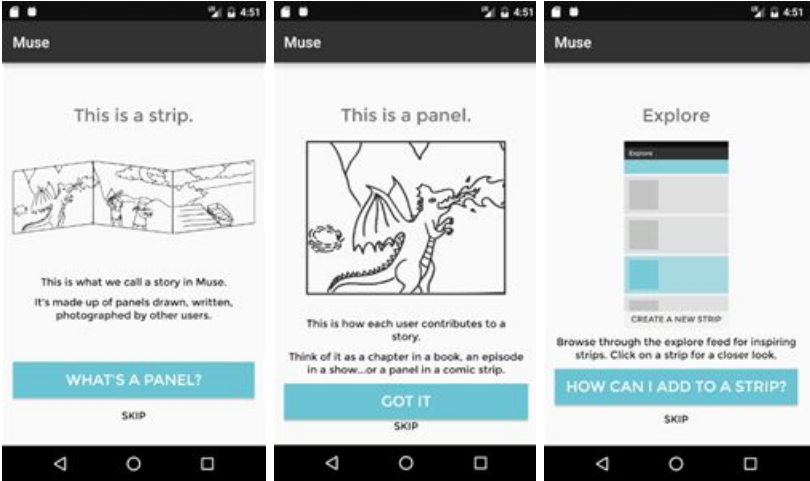
To help the user confirm that their strip has been created, we reorganized our task flow so that one screen delivers both a confirmation message of successful creation and the opportunity to invite other users to their strip. We also arranged the Explore feed to display newly created strips at the top. For the users contributing to an existing chain, we decided not to implement any pop-ups asking them if they want to contribute again. We instead take them back to the screen displaying all panels of a strip, and from there, they may navigate back to the explore feed.

Med-Fi	High-Fi
	
<p>View once the user adds a link. The text stating that the link has been saved is not as actionable as a pop-up.</p>	<p>Redesigned to have both a confirmation of a strip creation at the top, and the option to invite people to add a panel right there.</p>

**6. [H2-10. Help and documentation] [Found by B] 3**

*"In general, there is no "help" or documentation about how to go about the app. A suggested fix would be to add a "help" screen accessible through the home menu at least."*

We included onboarding screens at the beginning of the app that help orient a new user; these screens explain the differences between strips and panels. They also walk through the primary features of the app.

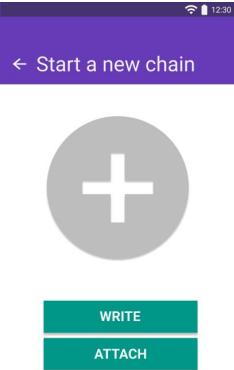
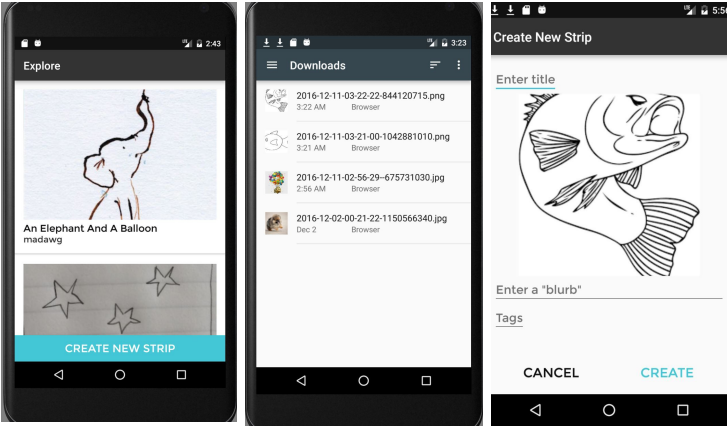
Med-Fi	High-Fi
<p>N/A</p>	

	First three onboarding screens. Offers a basic introduction to Muse.
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**7. [H2-4. Consistency and standard] [Found by B] 3**

*"In general, the "write" or "attach" options seem vague and open as to whether the chains created are based off of original work or sharing someone else's work. In the display of a chain, there should be something that clarifies whether the link is the poster's original work or someone else's that they're sharing."*

Our high fidelity prototype limits the type of media that can be contributed to visual art, meaning users can only upload images or text. We revised our task flow to take users straight to the camera roll instead of including buttons that specify the type of media that the users are contributing. This also led to one fewer step in the task flow for users.

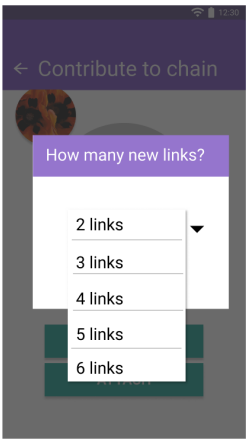
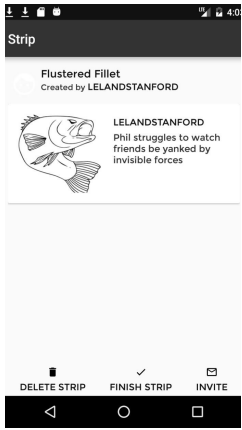
Med-Fi	High-Fi
	
<p>"Write" and "attach" felt confusing.</p>	<p>We have changed to let the "Create New Strip" take the user directly to their gallery.</p>

**8. [H2-3. User control and freedom] [Found by B] 4**

*"Users don't have a way to edit their chains once created if they choose the wrong number of links or want to change something. When a user is looking at their chains, there could be an "edit" button next to the "view" button to give them control of the chain they created"*

We decided to remove the sub-task of specifying the maximum number of links. It did not fit the unbounded storytelling theme and complicated our task. However, the strip's owner has the ability to end the strip at any time, which we believe is a sufficient substitution.



Med-Fi	High-Fi
	
<p>Setting a limit on the number of contributions felt too controlling.</p>	<p>Creators of a strip can “Finish strip” at any point to prevent any future panels being added to it.</p>

## HIGH-FI PROTOTYPE IMPLEMENTATION

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### TOOLS

To implement our high-fi prototype, we built an Android mobile application using the Android Studio IDE to build and test our app. Android Studio has a built-in emulator, which was very slow. Android development was cumbersome for implementing the user interface; the default designs are far from our ideal visual design for Muse, and it took many lines of code and extra files in XML and Java to customize designs into something that resembled the UI we designed in Figma. We tested on both a Samsung Amp Prime device and a Nexus 5S, which was much more realistic. To create images for our onboarding process, we drew examples of panels and strips, scanned them, and then vectorized them with Inkscape. Inkscape was easy and efficient to use.

### WIZARD OF OZ

We did not use any Wizard of Oz techniques. We were able to have the prototype upload images directly from the phone's image gallery.

### HARD-CODED DATA

Our users and strips in the Explore feed were hardcoded into our app. Users of our prototype can go through the motions of making an account and create their own real strips and add real panels, but the content they see and interact with is static.

### FUTURE PLANS

While we have implemented the basic infrastructure for Muse, there is still a lot we wanted to add to make our app a fully fleshed out experience for users. Our high fidelity prototype currently only allows the use of visually based art--photos, drawings, literature--to create strips and panels, but we would ideally enable artists of other media to contribute their work as well. For example, several individuals asked us if we planned on allowing users to submit videos or musical recordings in the future. We think including those methods of contribution would make Muse accessible to more users.

We would also connect Muse to existing social networking platforms such as Facebook or Twitter so that users could more easily invite their friends to join the community. Our "invite" screen could allow users to invite people to join Muse through other platforms, such as Tumblr, Facebook, or Instagram.

Other individuals had novel ideas for the applicability of Muse. One judge at the project fair suggested that our app could be modified for children, as elementary school students could greatly benefit from a storytelling tool. Muse could be a good platform for a collaborative storytelling exercise in the classroom.

Another judge mentioned that Muse could act as a good icebreaker or team-building experience for businesses. We never imagined that Muse might be applicable to the workplace, but we were glad to hear that our app could potentially be used in many different settings.

## SUMMARY

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Our team believes in the power of storytelling through art. We sought to improve accessibility to art in everyday spaces, and after many interviews and identifying many problems with art accessibility in the status quo, we wanted to build an infrastructure that highlights every user's potential to be a source of inspiration for others. Our need finding led to sketches and low-fidelity prototyping, as well as substantial pivots when user testing exposed major problems in our concept. We took this feedback and our new ideas--the concept behind Muse as it is presently--and created a medium-fidelity prototype using Figma and Marvel. Other studio members completed a heuristic evaluation on our prototype, and we used their comments and suggestions to improve our interface for the high-fidelity prototype. Overall, we feel Muse has great potential to be a platform for communication between users with an inclination to challenge themselves creatively and engage with new artistic perspectives.