AR.T Deliver Report

DSN 443 | CHANELLE LAFITTE & CHANCE GALAY

Preview art in your own space before you take it home.

Project Summary

As designers and developers we would like to help artists show off their work while taking advantage of augmented reality technology, giving them a way to stand out in a more interactive way.

Description of End Product

The end product is an android app that can scan a printed image on the wall and in AR project a piece of fine art to scale over top of it and give you the option to purchase it. Our end product was a mix of Three different prototypes and programs. The first is an XD prototype where the majority of our planned features are shown and are somewhat previewed this mockup is what our final envisioning of the app will be if we had the time to complete it this semester. The second is an android app using an android core that has the main functionality of the AR capabilities, with some of our interface implemented to switch between paintings. The third is an Open CV prototype that is the building blocks for the android app and projects an image into the target.

Technology Platform

Our first prototype will be on a computer, so that will work on any computer with a webcam. Our end product, or MVP, will be on any Android phone.

Problem Definition

There is no way to currently try art in your own space before you buy it without the owner of the art, taking a risk with their painting.

Once someone purchases art, it often can not be returned.

You can not usually find places to sell fine art independently without a gallery.

The sites that do sell art online don't let you search by size and color.

AR Is still emerging, and possibilities that can be utilized are yet being explored.

Questions and Goals

Questions:

Can we create an app that can catalogue and sell fine art through augmented reality?

Can we create an app that will preview art in homes easily through AR?

Goals:

Reach out to our users for feedback on how they prefer to view art of different aspect ratios.

Develop a user interface that allows users to preview art easily throughout the app, without backtracking.

Show each art piece fairly in the user interface regardless of aspect ratio.

Make recommendations and allow the user to search through tags, color, aspect ratio/size, and artists.

Preview frames within the augmented reality of the app.

Allow users to favorite pieces within the app.

Allow users to purchase an art piece within the app.

Limits and Potential Issues

Time is an issue, with the time that we had, we could only create a laptop application an XD mockup, and the beginning of a functioning android app with UI.

The android application cannot track objects on a blank wall.

We will require a sheet of paper with a logo to anchor the painting to a location and scale the image accurately.

We may not fully program all features, but most will are prototyped, and at the very least, we will have an app that can display a 3D image on a paper on the wall.

Creating a purchasing system is currently out of our reach for our current scope. (Screens will be made)

Research Methods

Generative

Design Sprint: We are going to do the first few steps of a design sprint so that we can organize our thoughts and come up with a business model canvas, user flow, and affinity diagram. The sprint helps us narrow down the broad amount of ideas that we have coming into this project into a cohesive plan to guide us to our goal.

Precedent analysis: Using this method we wish to look at competitors apps to see what worked and see if we can incorporate that into our app. Using this method we can also identify problem points on other apps and come up with strategies to try and avoid these pitfalls and create a more well rounded app.

Summative

User testing: User testing: Using the Adobe XD we will be able to create a workable mockup with That we can give users tasks to perform. We hope to get feedback on if our interface works and makes sense. We also want to make sure that completing tasks are straightforward and easy for all the participants. It will help identify pain points in the flow for us to change or find ways users want to use the app that we never thought of.

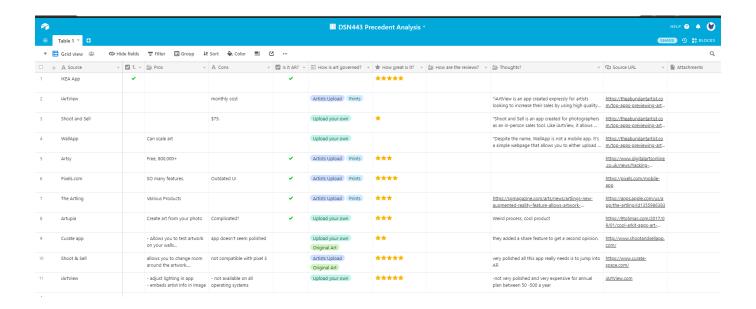
A B test: We also employed an A B test for our search function, where we asked people their thoughts on two different layouts. A looked more square and uniform like Instagram, and B was more open and tile looking like Pinterest.

Research Analysis

Design sprint: We Completed the first stages of a design sprint for our ideation, which was an affinity diagram, and business model canvas, and UI flow. It lead to solidifying the final user demographics as Artists, Art buyers, and Galleries. While the affinity diagram helped us by having all of our thoughts and questions categorized in a way that let us prioritize the critical features we wanted versus the less important ones. With all that finished, it leads us to our first draft of our UI flow.

Precedent Analysis

Using this method, we looked at competitor apps to see what worked and incorporate those ideas into our app. Using this method, we can also identify pain points on other apps and come up with strategies to try and avoid these pitfalls and create a more well-rounded app. We looked at eleven apps with similar concepts we categorized them by pros vs. cons, if it had AR functionality, how the app governed art, how the apps rating on the app store, and our final thoughts on the app.



User testing:

After we created a Working mockup, we asked participants to try and navigate a few key features within our app.

- 1. Log in and access the AR function.
- 2. Find the artist profile.
- 3. Find the featured art page.
- 4. Purchase an art piece

Seven people tested, and we found a few stand out pain-points that we addressed in our final prototype. Those pain-points being the artist page was not comfortable enough to find and often had the user lost looking for it, not knowing where to look. Second was the fact that the user wanted full banners clickable as links instead of button elements on the home page, especially when entering AR from the home screen. Lastly was the fact that most users double-clicked on the painting to find the art page rather than clicking the title. Knowing these issues, they will be addressed in the final prototype.

Test 1.

1. Enter AR mode Got lost in register Entered right away

2. Find artist page

Went to art page before artist page

3. Find art pageFound it right away4. Purchase art piece

Removed both art pieces Found way through easy

Test 2.

1. Enter AR mode Found it easily

2. Find artist page

Having trouble trying to find home Having trouble from art page

Found it but doesn't know-how

Buttons are hard

Thought profile was to go back to the user's profile and pressing image on the art page should go on her profile

Find art page Found it easy

4. Purchase art piece
Purchase was straight forward
Profile on home is rounded rectangle and
the picture is round

Test 3.

1. Enter AR mode Entered quickly

2. Find artist page

Started looking in bottom for artist page Clicking artist image to find profile Found browse by artist looking to find profile

Gave up on finding it

3. Find art page

Found right away

4. Purchase art piece

Purchase was straight forward

Test 4

1. Enter AR mode Straight forward from home

2. Find artist page

Found it straight forward

3. Find art page Clicked hamburger Looked at bottom bar Double clicked painting

4. Purchase art piece

Clicked add to cart as if he would go to cart

Test 5

1. Enter AR mode Prototyping issues Found it easy

2. Find artist page Thought it was frame

3. Find art page Hamburger menu Didn't know title

4. Purchase art piece

Was easy to find

Test 6

1. Enter AR mode Wanted to press banner for enter AR

2. Find artist page Having trouble finding Couldn't find

Find art page Having trouble finding it Didn't think they could click title

4. Purchase art piece

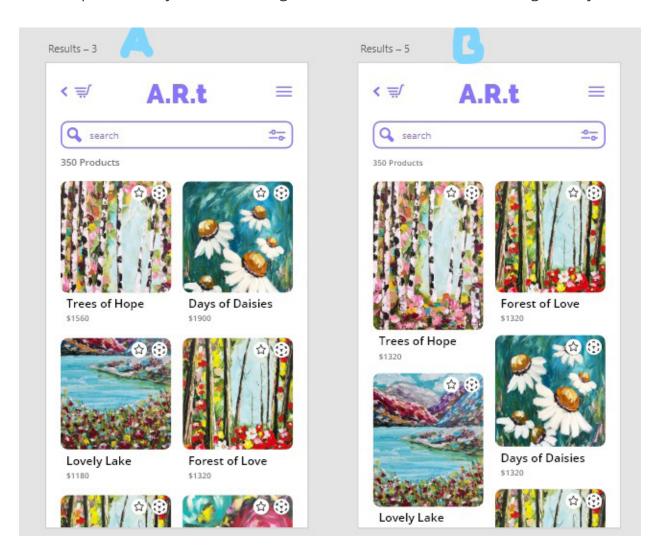
Add to cart wanted to take you to cart Walked through but was easy to comprehend

Test 7

Enter AR mode
 Clicked banner an instead of icon
 Find artist page
 Found it easily
 Find art page
 Clicked frame
 Clicked shopping cart
 Didn't know the title was clickable
 Purchase art piece
 add to cart wants to take you to cart
 Navigated it properly

A B test

The AB test was conducted over a few platforms and about 20 people where asked but in the end the pinterest style o0f browsing won over the more unified instagram style



MVP and Features List

This app will allow users to browse and preview fine art on their wall using a piece of paper, as well as the ability for any artist or gallery to upload and sell their work.

Features List

- The ability to track walls and display an image on a fixed point
- User friendly interface
- The ability to browse thumbnails within AR camera
- Ability to switch out different images to preview different art
- The ability to view the space from far away, and preview frames

Audience, Users, and Stakeholders

Artists, designers, fine artist enthusiasts, new home owners, condo builders/ designers (around the ages of 18 - 50) anyone in the age range that can competently use a smartphone. Our key is the art industry and people looking to preview their art in their homes, and decide whether it is a good fit for the space.

Fine Artists and Photographers

Demographic Profile:

They create art or take photos for a living.

Key Objective/Use Case:

They upload their art to the app, or their gallery offers the incentive and they work with them. They get more sales through the app on various works of art.

Gallery Curators

Demographic Profile:

This demographic curates and sells art for artists

Key Objective/Use Case:

Facilitate the purchase of the art once a user purchases it through the app, as well as creating curated collections of art to be purchased together.

Descriptive Title:

Art Purchasers

Demographic Profile:

Owner of space to purchase and hang art

Key Objective/Use Case:

Find alluring art through app to consider purchasing. Using AR to test how the considered art looks in their space. Purchase art that fits in their space.

Design Sprint Summary

We did the first parts of a design sprint for our ideation which was an affinity diagram, and business model canvas, as well as an experience map it was a good way to get all of or ideas and concerns out of the way and helped visualize the product we wanted moving forward.

Business Model Canvas

Key Partners:

Developers

- Needed to create and code the app as well as make the AR technology work.
- · Will provide ongoing support to technical bugs and added support

Designers

- Create a visual identity too the app
- Provide and test screens to make the interface more user friendly

Fine Artists and Photographers

needed to create and post listings for the art

Art Purchasers

Those with the means and space to want to purchase art and the main demographic using our app

Gallery Curators

Those with a surplus of art in storage that could be sold.

Key Activities:

- Holding phone up to wall to preview art.
- Searching a catalog of art to find something that fits the users style. Purchasing art that you have previewed
- Comparing different art in an AR space
- Viewing the art in a frame
- Purchasing art from the app

Key Resources:

- A camera that can utilize AR programing(Computer, Smartphone, Tablet). A collection of paintings to put on the app.
- Money to purchase art.
- An address to ship the art too
- Shipping supplies
- The anchor paper that you put on the wall

Cost Structure:

- Cost is to be determined by the seller of the art.
- An additional percentage will be taken from each purchase as a fee to run
- the site and app.
- Value Proposition:
- This product fulfills the need to preview art before buying it so that you can make an informed purchase.
- This product gives artists and galleries a new platform where the consumer can make a more informed decision.

Audience Relationship:

- We wish to build a Positive relationship with artists and galleries by creating a friendly market place that they feel comfortable selling and showcasing their art.
- For Consumers we wish to have a confident relationship that they feel comfortable buying art from our service.
- We also want them to trust our technology with previewing works effectively

Distribution Channels:

- App Store
- Word of mouth Business cards Advertisements

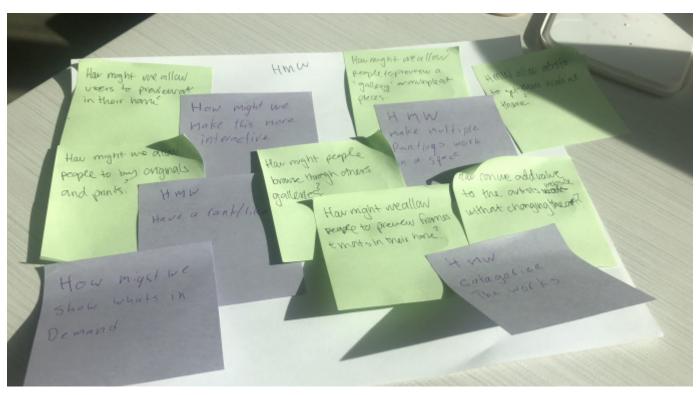
Audience Segment:

- Fine artists
- Needed to Produce art for the app and sell it to buyers.
- Will use the app to promote their art on a different platform.
- Gallery's
- They will use the app as a new way to market their artists and art piece. Needed to create listing on our app for paintings and art to purchase.
- Art customers
- Needed to purchase and try art using the app and its AR properties.
- Will use the app to make sure that art they buy will fit in the space they have with color and size.

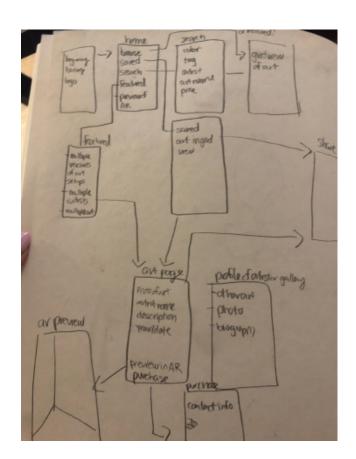
Revenue stream:

• Revenue is Subjective to the percentage of what the artist/ gallery puts as the price of the painting that is up for sale.

Affinity Diagram



UI Flow



UI Flow

https://xd.adobe.com/view/a5076dbb-b4e5-482f-5934-0ba0f11dd3a5-d336/

Hamburger Menu Home **Profile** Cart Search **Favorites** Orders Settings Art Page (5 Featured Art Pieces from different categories) **Art Details Artist Page Augmented Reality Augmented Reality** Introduction Login + Register Main Menu (Displays Featured Art) Frames **Favorites** Search (within AR) Share Add to cart **Artist Page** (Featured Artist) Preview in AR **Twitter** Instagram Facebook Email Share Website **Respective Art Pieces** Search Art Pages (results)

Product Brand

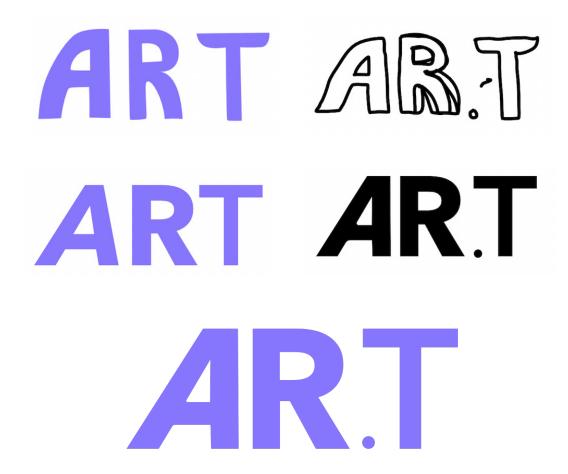
Our app is called ARt, pronounced 'Ay-Art' to sound like both 'art' and 'AR' standing for augmented reality. As our brand will likely never need to be printed, we felt safe going with an RGB based color. Our users will be printing things with our logo on it, however it will be printed in black and white vs color both to save time and because our app will pick it up easier.

The bright purple color suits our brand well, as we are not quite a prestigious gallery but more of a digital art store on your phone. Instead of the purple clashing with the paintings, it is so different that it completely disconnects from the artwork. This lets the artwork stay in the spotlight and catch the focus of the user. We also decided to keep the '.' in the logo to further differentiate ourselves from just being the word 'art' and emphasize the fact that we are using augmented reality.

Product Brand

Our app is called ARt, pronounced 'Ay-Art' to sound like both 'art' and 'AR' standing for augmented reality. As our brand will likely never need to be printed, we felt safe going with an RGB based color. Our users will be printing things with our logo on it, however it will be printed in black and white vs color both to save time and because our app will pick it up easier.

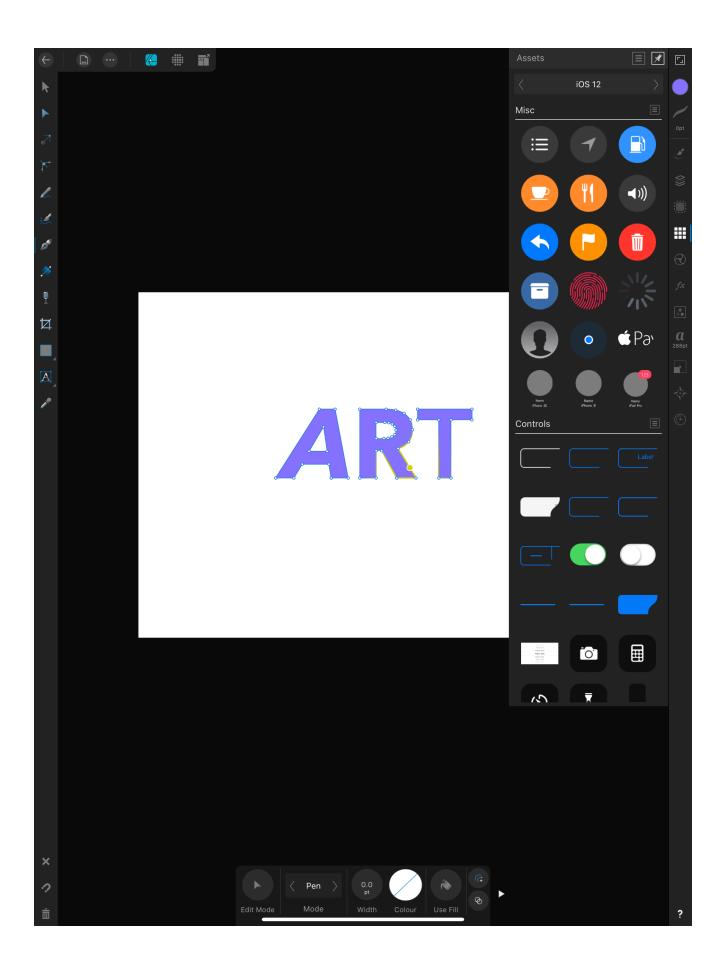
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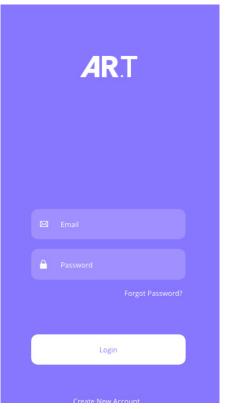


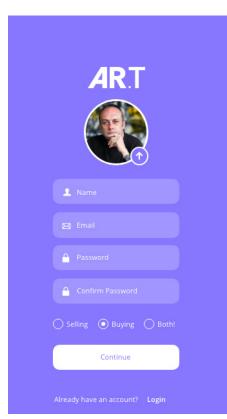


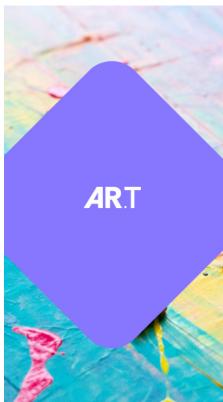


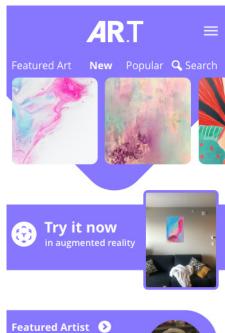
Prototype Screens and Link to Adobe XD

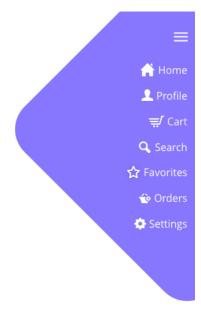






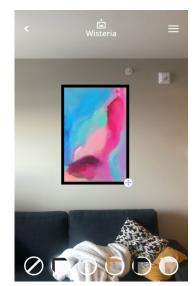




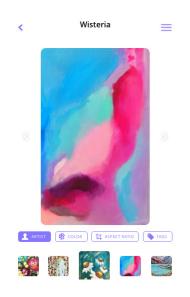


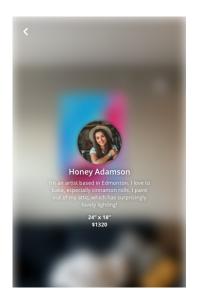






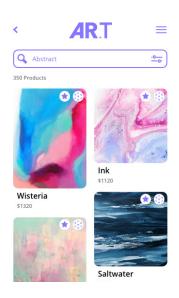


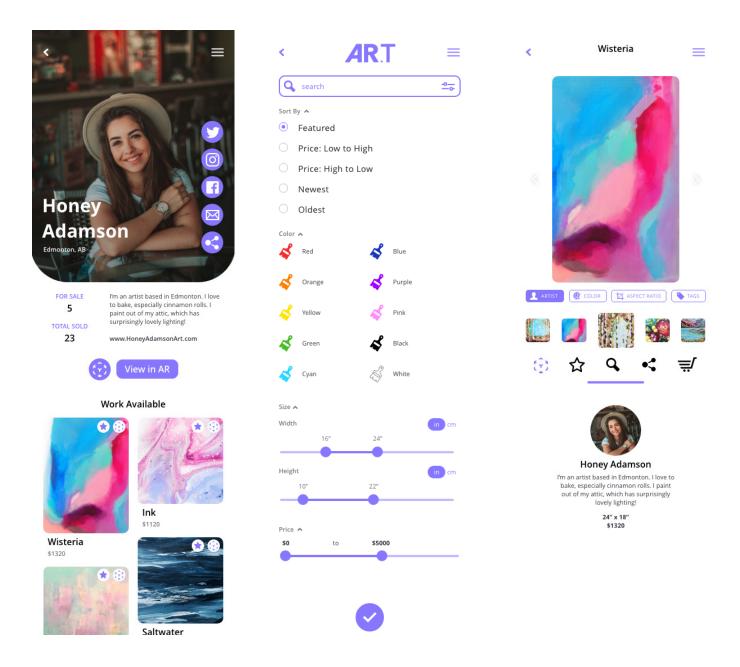












Semester Timeline

Design Students Schedule

Week 2: Submit project plan v1

Week 4: Choose MVP; Submit "Discover/Define" report

Week 4-7: Wireframe, then Prototype Solutions; Approx. 5 screens by start of October

Week 7: Submit "Develop" report, high fidelity Prototype for AR partion of app & 4 frames

forom Blender

Week 7+: Execute solution, User Testing.

Week 14: Present project

Week 15: Submit "Deliver" report; Final solution

Computer Science Groups Schedule

Week 2: Submit project plan v1

Week 4: Choose MVP; Submit "Discover/Define" report

Week 4-7: Wireframe, then Prototype Solutions; Approx. 5 screens by start of October

Week 7: Submit "Develop" report

Week 7+: Execute solution Week 14: Present project

Week 15: Submit "Deliver" report; Final solution

Bibliography

As designers and developers we would like to help artists show off their work while taking advantage of augmented reality technology, giving them a way to stand out in a more interactive way.

AR Poster Sunforma

Behance. "Surforma AR Posters." Behance, https://www.behance.net/ gallery/69802815/ Surforma-AR-Posters?tracking_source=search.

Museum experience

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Appendix

Links

https://airtable.com/tbl9klmMqT8WkGVyW/viwWzfeaZCSSxzdkv?blocks=hide https://discord.gg/w c3g86h

Project Charter

Roles + Availability

Chanelle

Designer

Outside of class, Friday - Monday.

Unavailable Mon 8-12, Tues 9-5, Wed 8-5, Thursday 12-5, Friday 8-? (flex day)

Chance

Designer

Monday, Tuesday before 5pm, Wednesday after noon to 8, Friday, Sunday.

Andre

Programmer Thursdays 9 - 11am

Anneliese

Programmer

Available Mon anytime, Tues - 8-11am & after 2pm, Wed - 8am-2pm (other than capstone meeting at noon), Thurs 8-11am, & after 2pm, Fri - after 11am

Description

Our main concept starts with a small image, or sticker, being scanned by an app, then giving the user AR screens showing up around the image. Overall, the biggest strength of our concept is to give more information from an image.

Objectives

- Create a functioning app that transposes artwork onto a space, using AR technology.
- Create an interface to go with this app.
- Create a marketing campaign to promote the use of the app.
- Platforms Discord Email Trello
- make this product.

Deliverables + Deadlines (according to course outline)

Week 2: Submit project plan v1

Week 4: Choose MVP; Submit "Discover/Define" report

Communication

Team meetings Thursdays and Mondays will keep us up to date.

Over the weekend and for other weekdays, we check in on discord and share our thoughts, ideas, where we're at.

Documentation

During meetings, if we make a decision, we record it on discord together. By Friday, we summarize deliverables, who they are assigned to, questions moving forward, and decisions.

Code repository is the school gitlas server.

Working Environment

Meeting in class.

Meeting near the classroom on Mondays and going wherever is handy after that.

Meeting from home.

Computing Science students: 8 hours a week. Design students: 8 hours a week.

Meetings

Meetings on Thursdays (available between 9-11am) Discussions on Discord, also available for voice calls. Biweekly meetings on Mondays 12:00-12:30

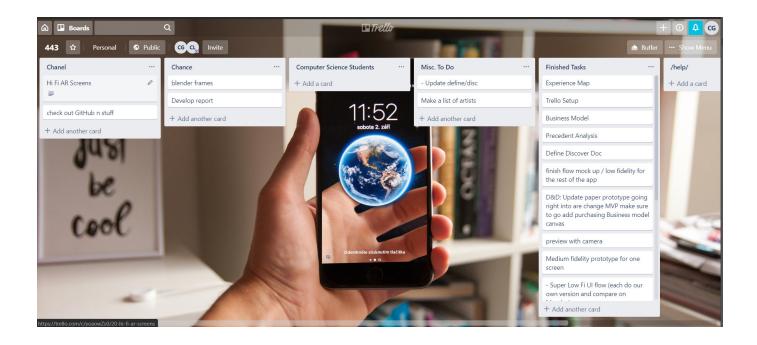
Disagreements/Concerns:

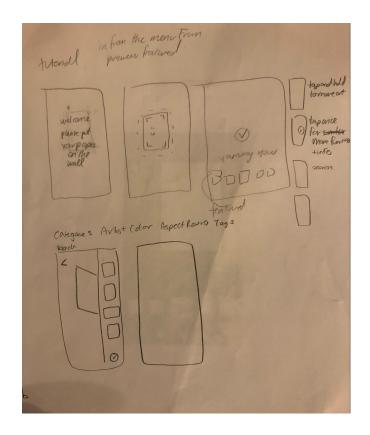
We talk it out, maybe do some research and do a strawpoll on discord lol? Everyone should be able to voice it out!

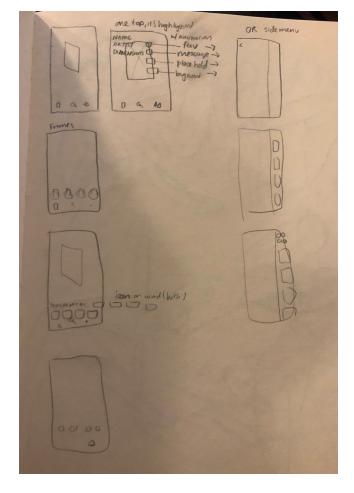
Decisions recorded and logged should be respected, but we can bring up concerns anytime.

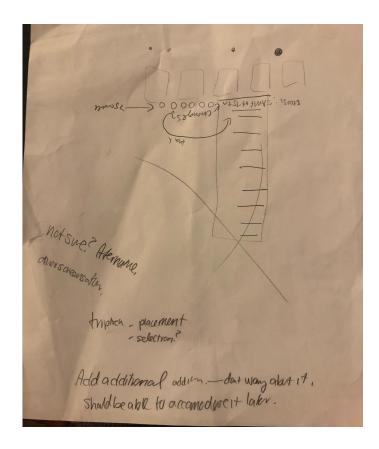
Next Steps:

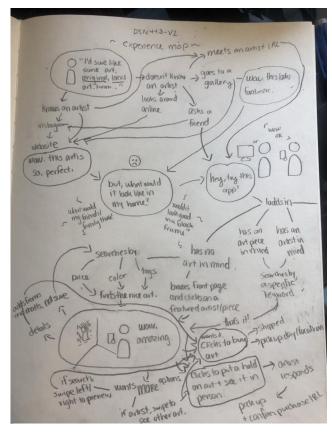
After the semester is over- we'll see where we're at, we could potentially make this product.

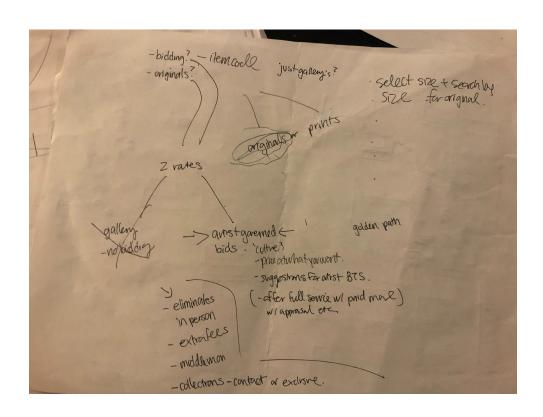


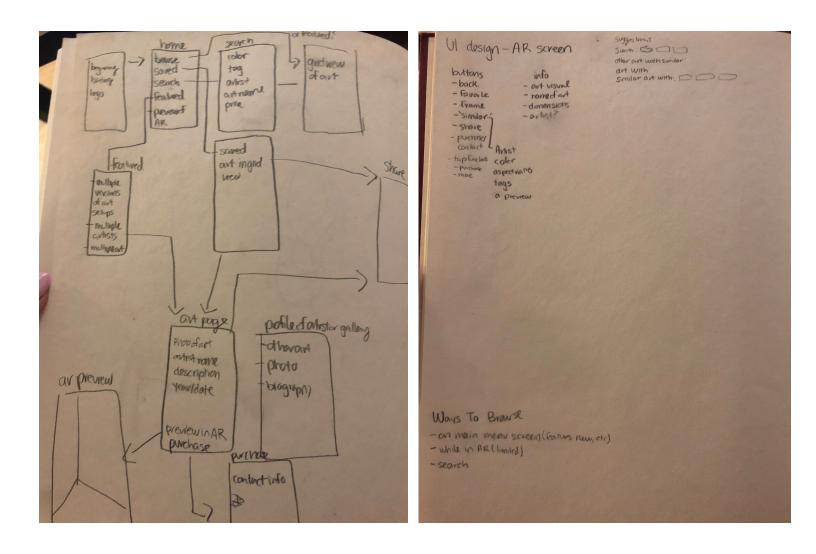


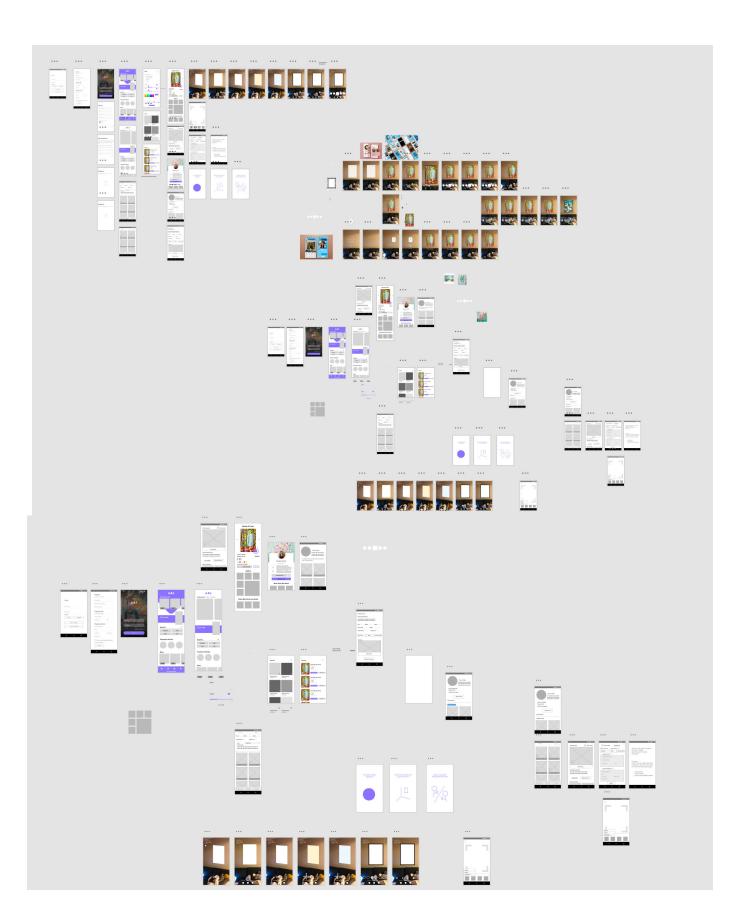


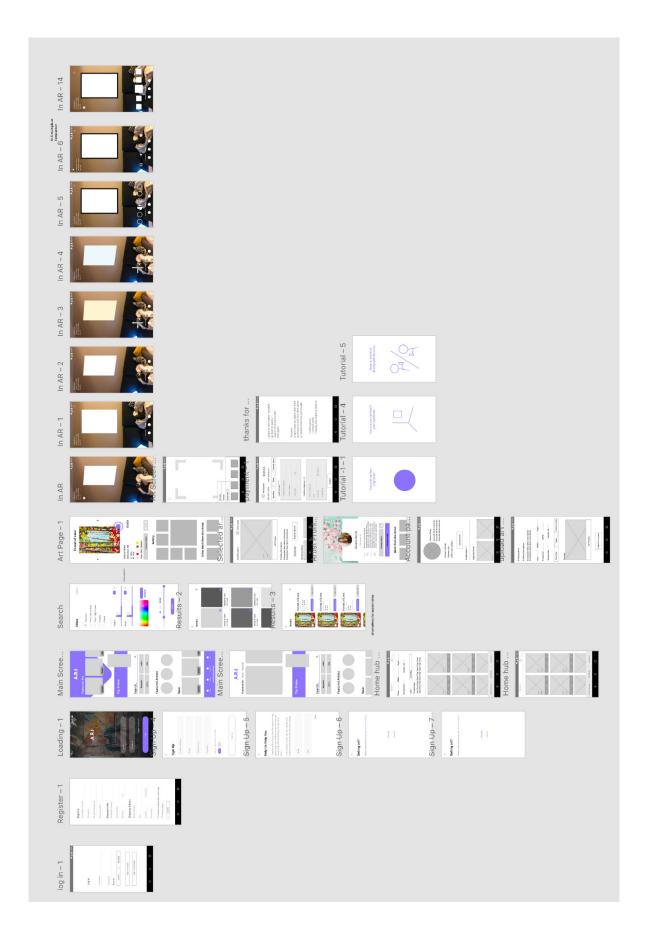








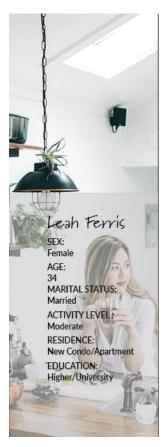












PERSONALITY

Grounded A bit creative Likes plants Traveler

JOB

Government

TECHNOLOGY OWNED:

iPhone, and Macbook, Apple TV

NEEDS AND WANTS

To create a new home in a trendy area Stay connected to downtown Host get togethers with her close group of friends

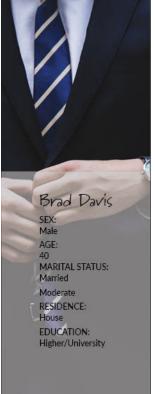
RESPONSIBILITIES

Meet deadlines at work.

SCENARIO

Leah is looking to redecorate her home with a new set of pieces. She's looking to buy locally and needs a set of three. While looking at a local artist they hand her a card that she can put on the wall and test to see if they art is a good fit and the app used with the card refers her to other local artists with collections of art like she is looking for. Using the app she found a local artist piece that fit her needs.





PERSONALITY

Social Looking for the next big things Serious

JOB

Business Owner

TECHNOLOGY OWNED:

iPhone, and PC.

NEEDS AND WANTS

He's well known in the community

Wants to have contacts in all aspects of the community of Edmonton

Starting new businesses

RESPONSIBILITIES

Keep business flowing, meet new people in the community find new ideas, invest in those and profit.

SCENARIO

Brad attends events for art around the city to buy art for his new home. He has a specific style of art in mind and space. While looking at all the art he wishes he could purchase the art and try it out at home. While talking to a curator at one of the events he learns about an app where he can preview art in his new home to make the best decision on what he should buy. Using the app he finds the perfect photographs and art to complement his home.





Very Active RESIDENCE: Apartment EDUCATION: Part Time Studies

PERSONALITY

Enthusiastic Social

JOB

Photographer

TECHNOLOGY OWNED:

iPhone, and iPad, Macbook, Canon camer, airpods, you name

NEEDS AND WANTS

To start his photography business Connect with people to get new projects To be a notorious photographer in Edmonton

RESPONSIBILITIES

Take amazing photos, print them, sell them.

SCENARIO

Marshall wants to make a footprint in the community by taking part of an art event. He's photographing the event, as well as has a stand of business cards and prints run by someone else.



Astrid Merriweather SEX: Female AGE: MARITAL STATUS: In a relationship ACTIVITY LEVEL: Sedentary RESIDENCE: Condo/Apartment EDUCATION: Higher/University

PERSONALITY

Whimsical Social

JOB Artist

TECHNOLOGY OWNED:

iPhone, and Macbook.

NEEDS AND WANTS

To sell her art, make good art, travel, and connect with people.

RESPONSIBILITIES

Keep making art, pay her rent, connect with people.

SCENARIO

Astrid creates art in her free time and would like to start to sell her art, but the canvasees she uses are quite large and buyers are unsure about buying her work in fear that i;t won't fit in their spaces. Astrid pairs with a gallery that scans her work into an app that allows potential buyers to test out and see if her work is a fit for their space. This has allowed astrid to sell her work faster that she did before using the app.

