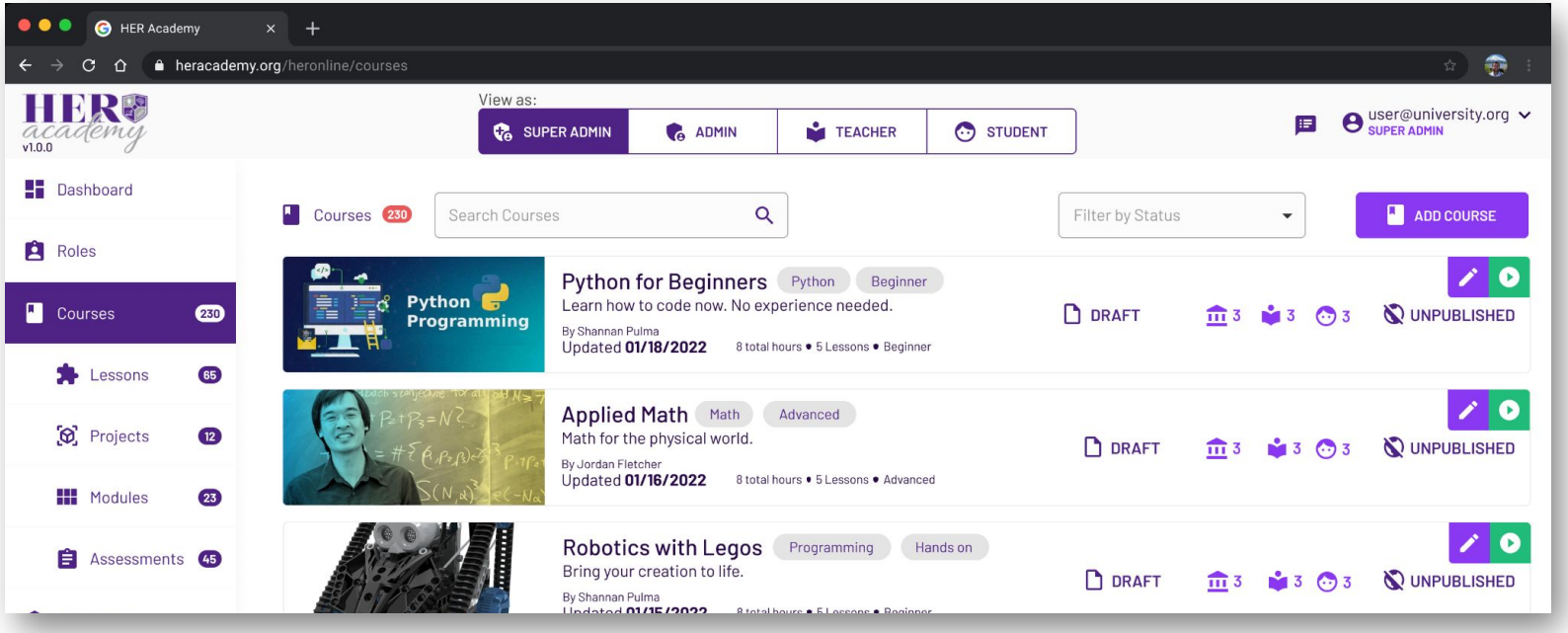


HER ACADEMY

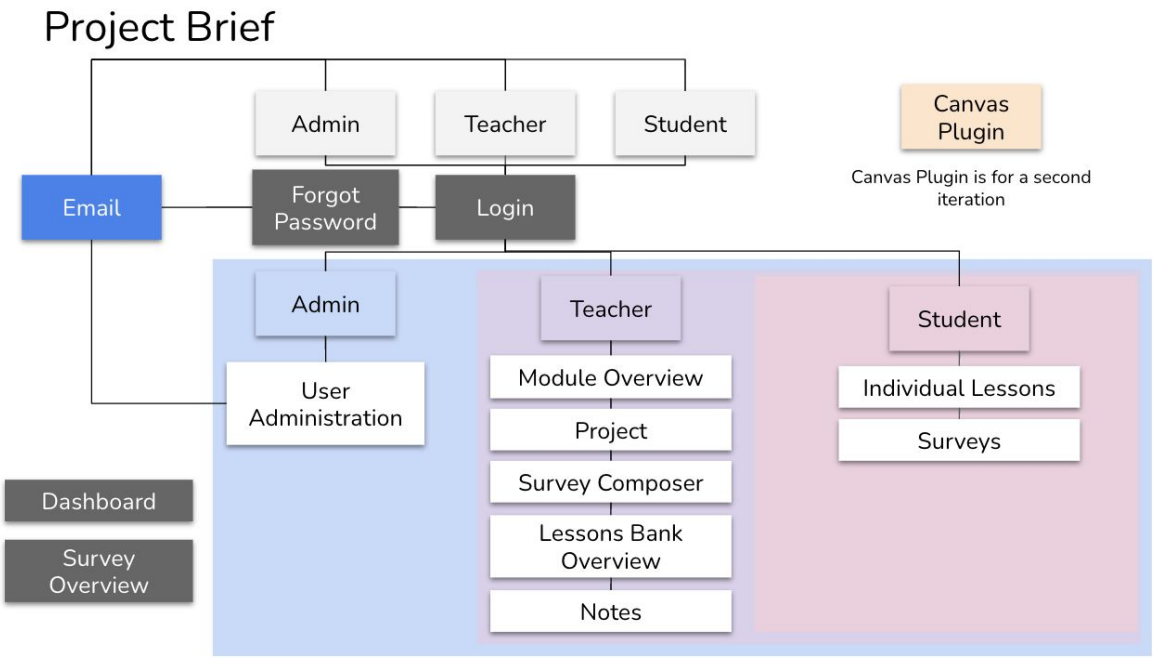
Role: UX Designer, UI Designer, Researcher, Developer
Date: Jan. 2022 - Present
Team: Lena Furci, Shannan Pulma, Todd Swepston
Tools: Figma, Draw.io, Miro, Google Drive, Google Meet, Bubble.io

Project overview

HER Academy is on a mission to empower every girl – and from there every child – to become a creator and designer of technology through computer science, online and in the classroom.

Whether you're coming to us as a pre-K teacher, a librarian, or a math teacher, you can be a computer scientist. HER Academy trains and empowers teachers and educational institutions to be confident experts, able to adapt our lesson plans to suit your students' diverse learning styles and interests.

The new online platform scheduled for release in August 2022 will allow schools to develop a program that supports students who are often marginalized in computer science (CS) – children from underrepresented racial and ethnic groups, children from rural or economically impoverished communities, children with neuro-diverse learning styles, and girls from all backgrounds – in learning and excelling in computer science. As they move through the program, students gain the confidence and knowledge to become designers and creators of computing technology.



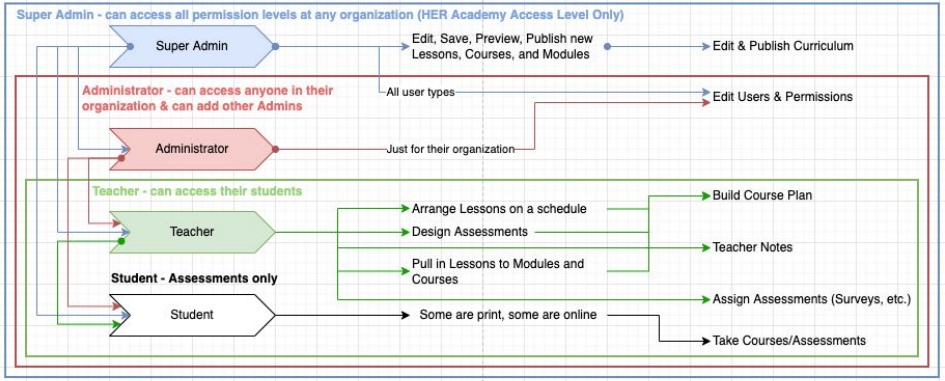
Project scope

HER Academy tasked me with building their first iteration of their custom LMS that suits their specific needs of educating teachers and students with an online platform capable of operating in a hybrid environment of in-class and at-home activities.

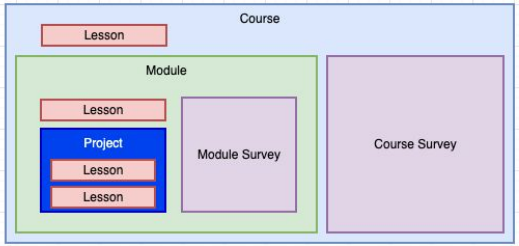
Problem statement

HER Academy currently uses the Google Drive platform to teach all content. All of their programs are done manually and there isn't a way to give people access they need to content in a remote and at-home environment. They would also like to scale their mission by creating a custom online experience.

Below is the product after the initial stakeholder interview. I continued to iterate on this and I will show this later on in the case study.

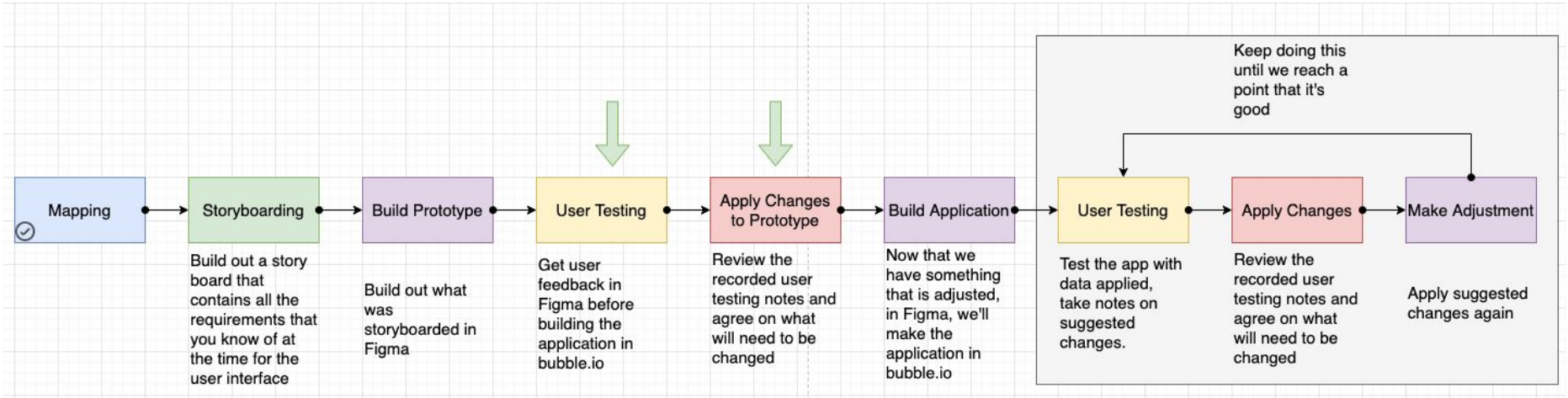


Notes
- Have a way for teachers to give feedback on lessons for HER Academy
- The teachers will design their courses and we'll want to try to integrate those courses into the 3 integrations below when the teachers make their courses
- We would want to do integrations for all of these
  - **PowerSchool/Schoology:** https://developers.schoology.com/api-documentation/rest-api-v1
  - **Canvas:** https://canvas.instructure.com/doc/api/
  - **Google Classroom:** https://developers.google.com/classroom



Design & Implementation Process

We created a roadmap of how we would handle the design and implementation project all online through remote means (email, Google Meet, Google Drive, Figma, Miro, Draw.io, Bubble.io).



The best way to build web apps without code

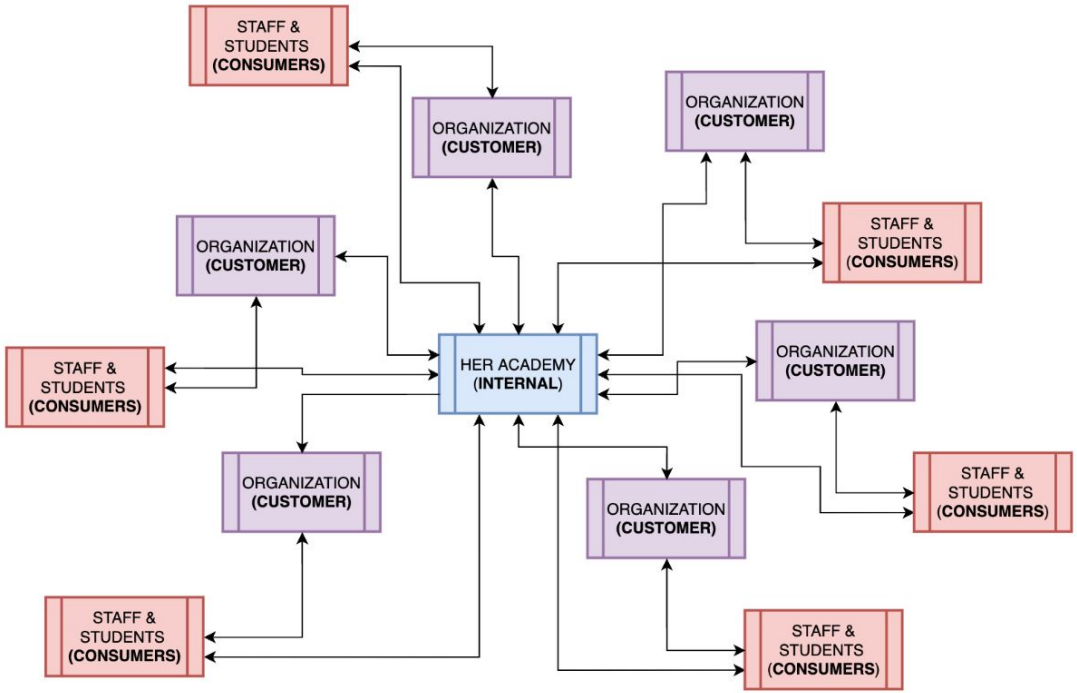
https://bubble.io/

Building tech is slow and expensive. Bubble is the most powerful no-code platform for creating digital products. Build better and faster.

High Level System Structure

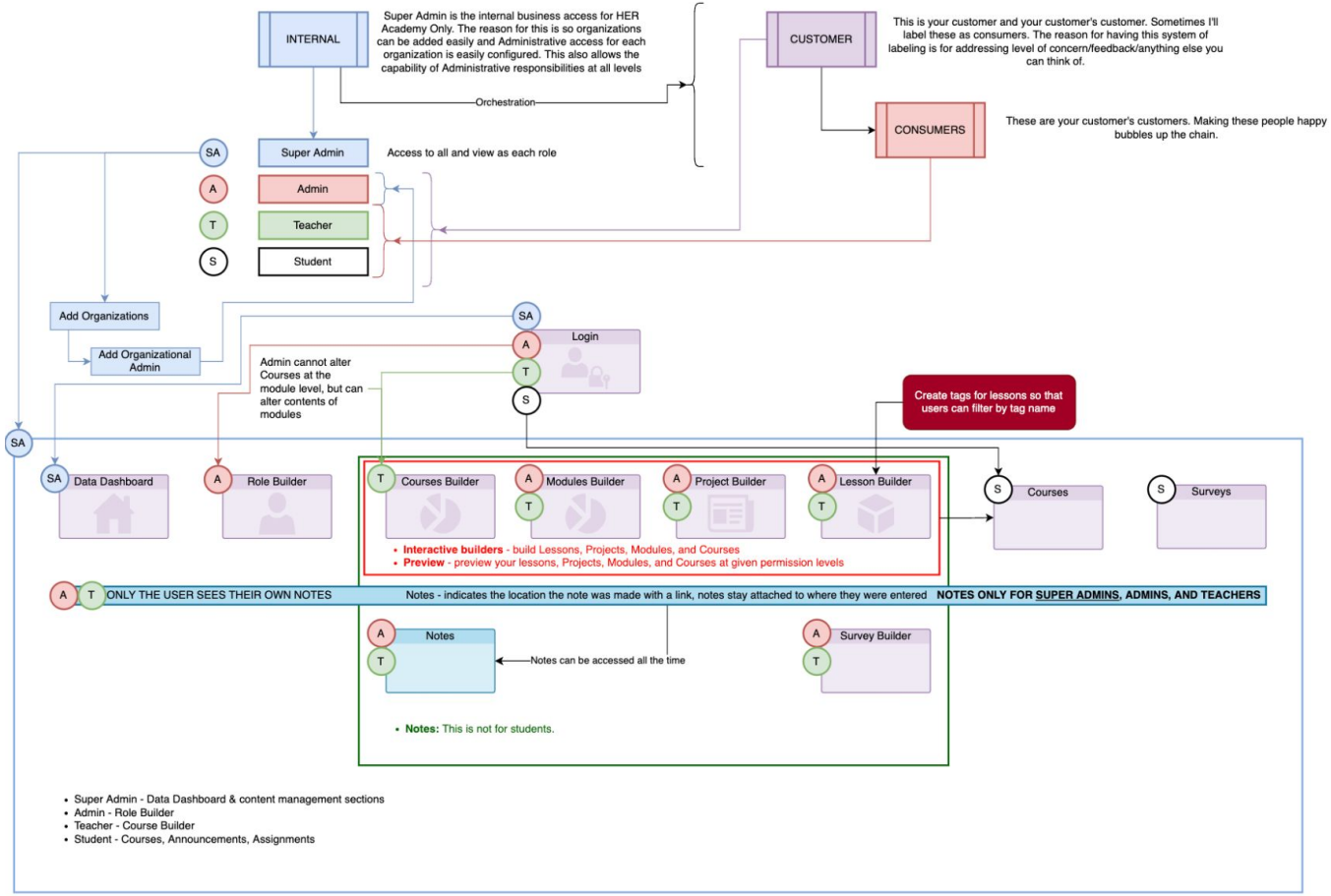
HER Academy Education Online Platform

- This is the structure of distribution of content and access control for the HER Academy Education Platform
- HER Academy will have administrative access for all levels of access in order to assist organizations, their staff, and their students
- HER Academy will be able to stand up new organizations and give administrative access to their new members
- HER Academy will also be able to add any sort of content and assist clients in setting up their content, as well as create repositories of content for organizational use



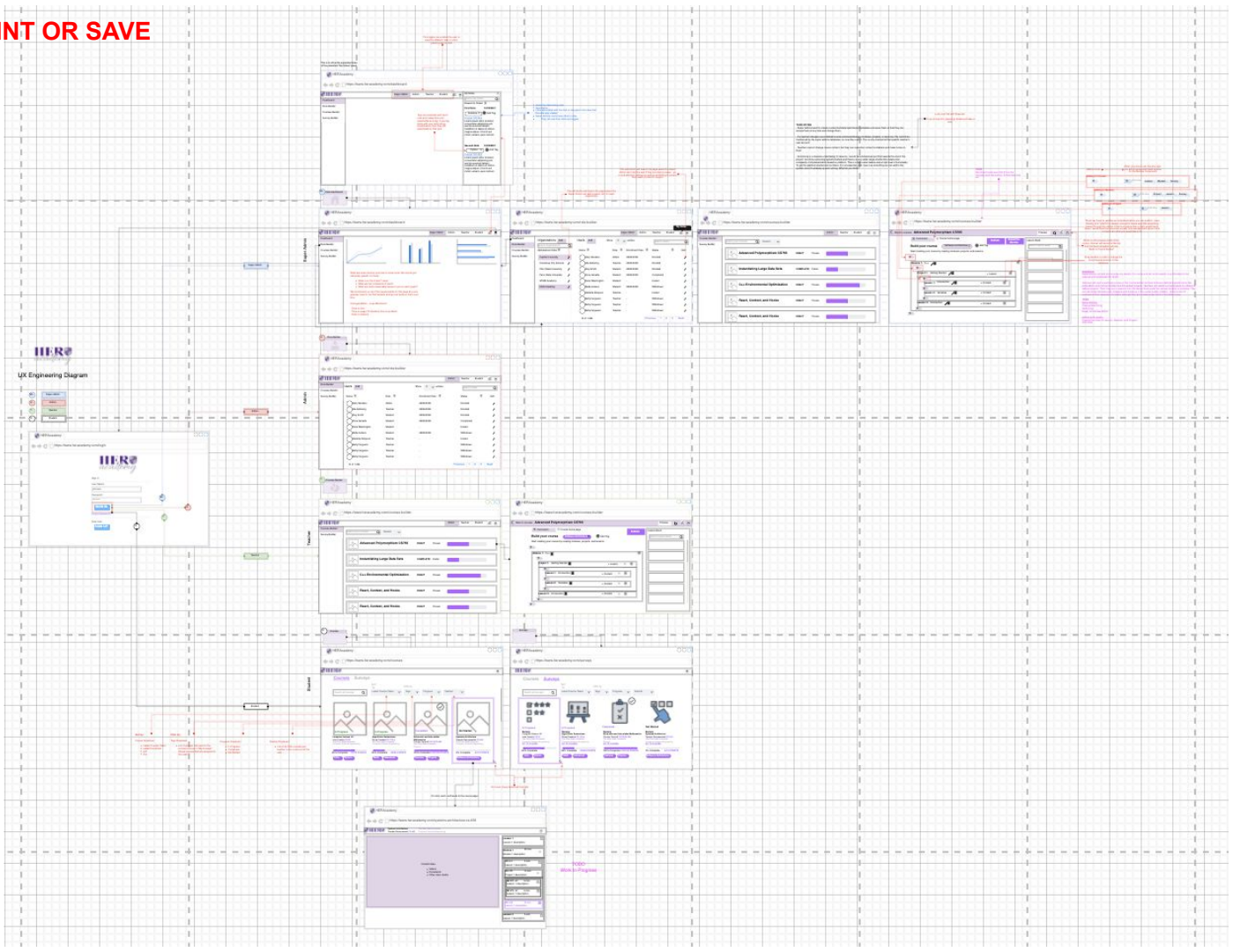
Initial Site Map

In order to take into consideration all of the possible users, we did a very high level pass at the application instance level. To the right is a sight map including Super Admin, Admin, Teacher, and Student access levels



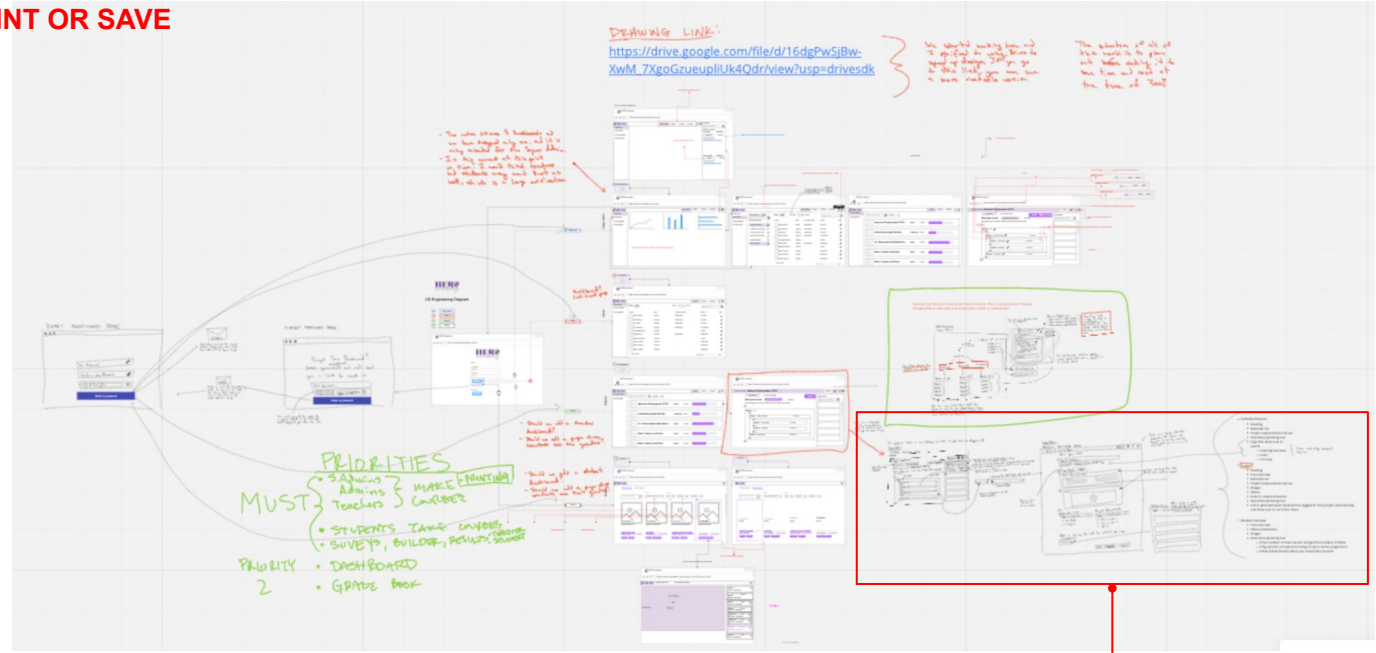
Storyboarding

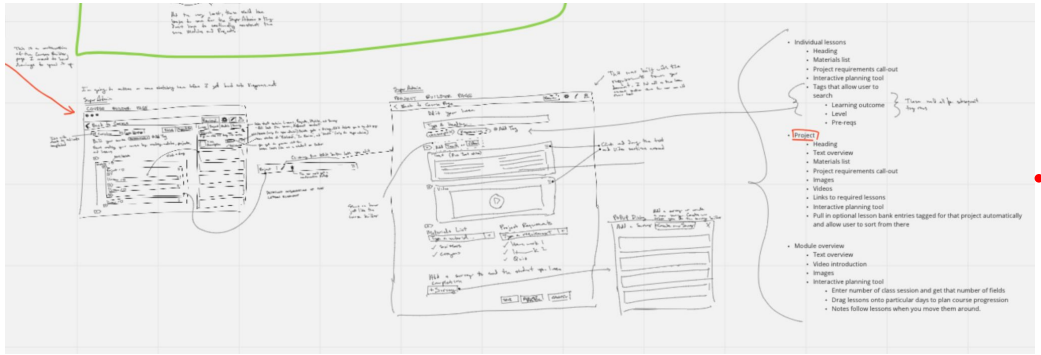
At this point we had enough information to start doing some storyboarding to think out how this system would work based off of our knowledge so far. The two people that I worked with are both teachers and run HER Academy, so we started from there so that we could put out and idea to build a prototype from. We also referenced other online learning platforms to come up with our concept.



Storyboarding

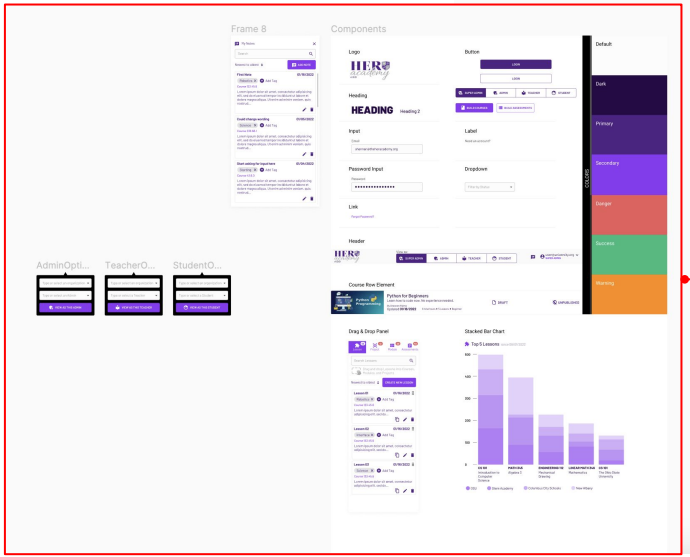
To speed up the process since the storyboard was getting a bit big on an older computer, I used my iPad and Miro to start drawing on top of the draw.io storyboard to continue down the path until we hit a point of where we were ready to start prototyping.

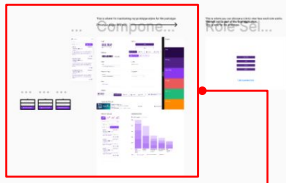


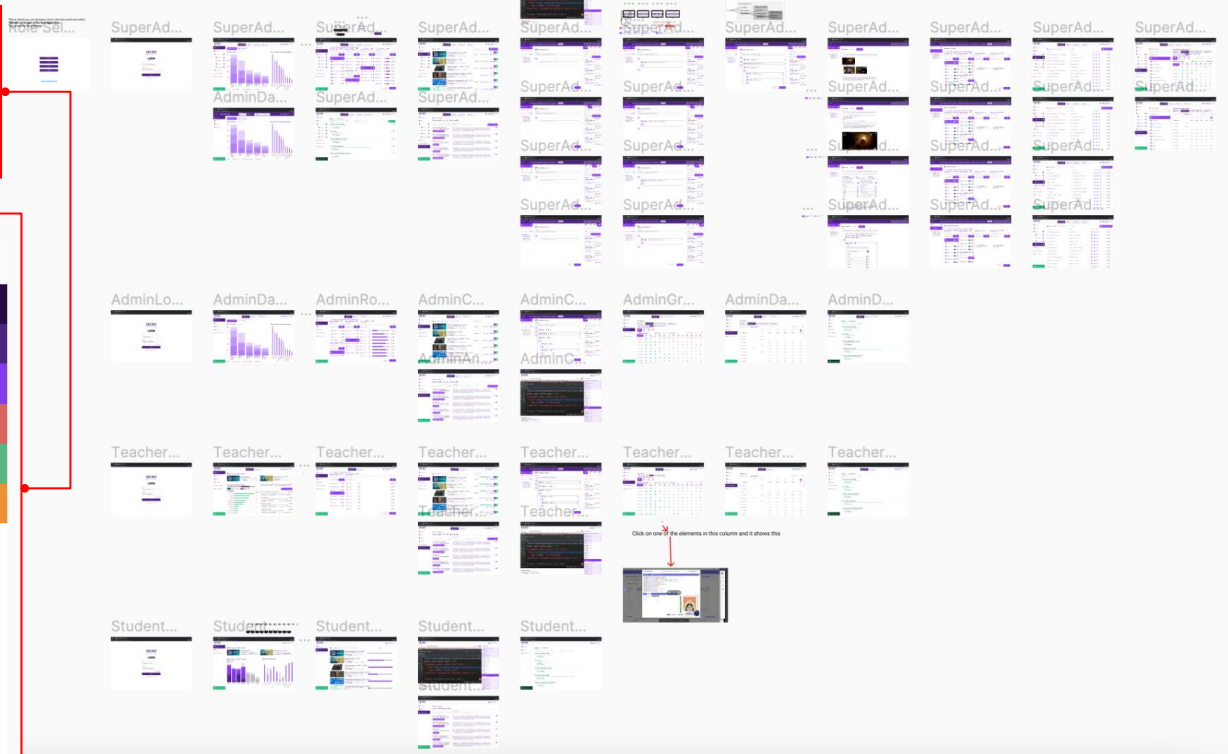


Prototyping

After we finished storyboarding, we started prototyping in Figma to further flesh out the idea and get ready for usability testing. I generated the color scheme and a hand full of reusable components for the Design.

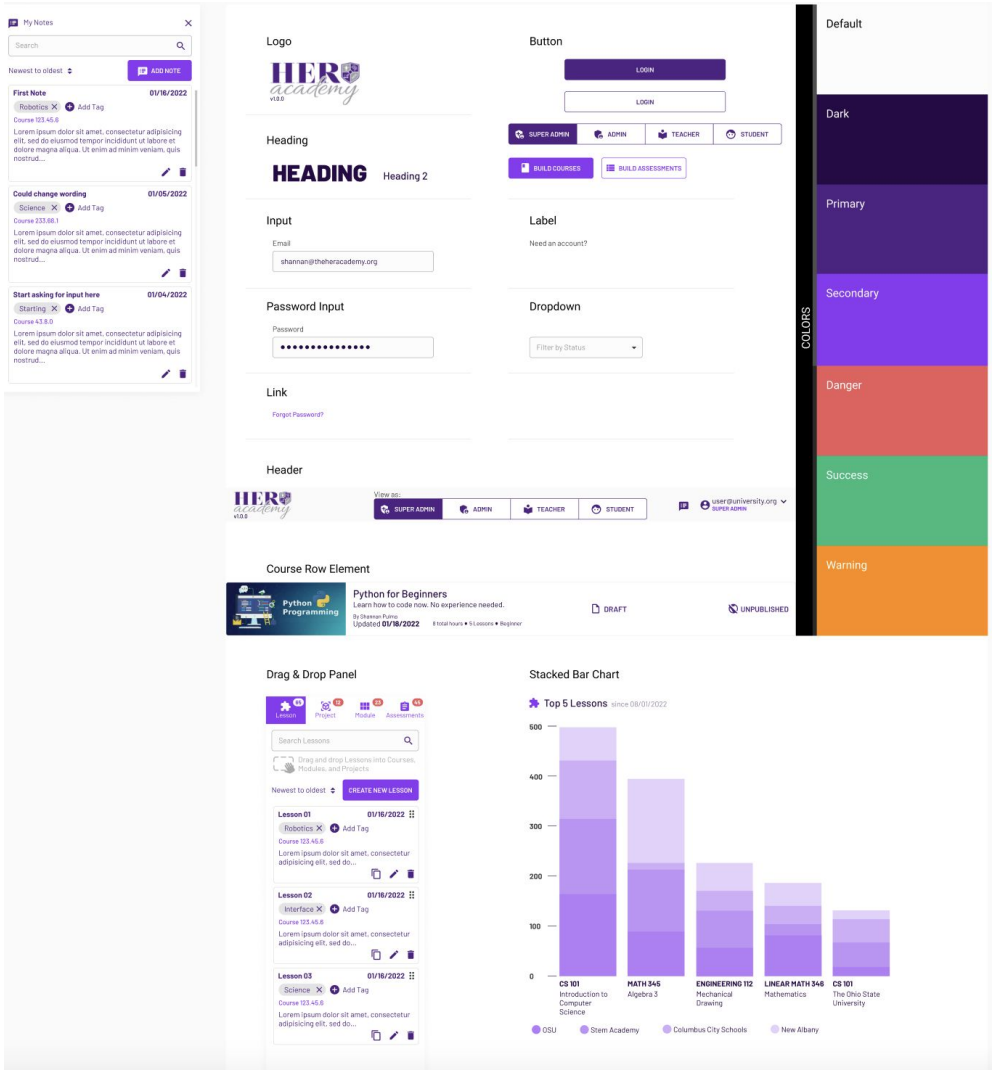






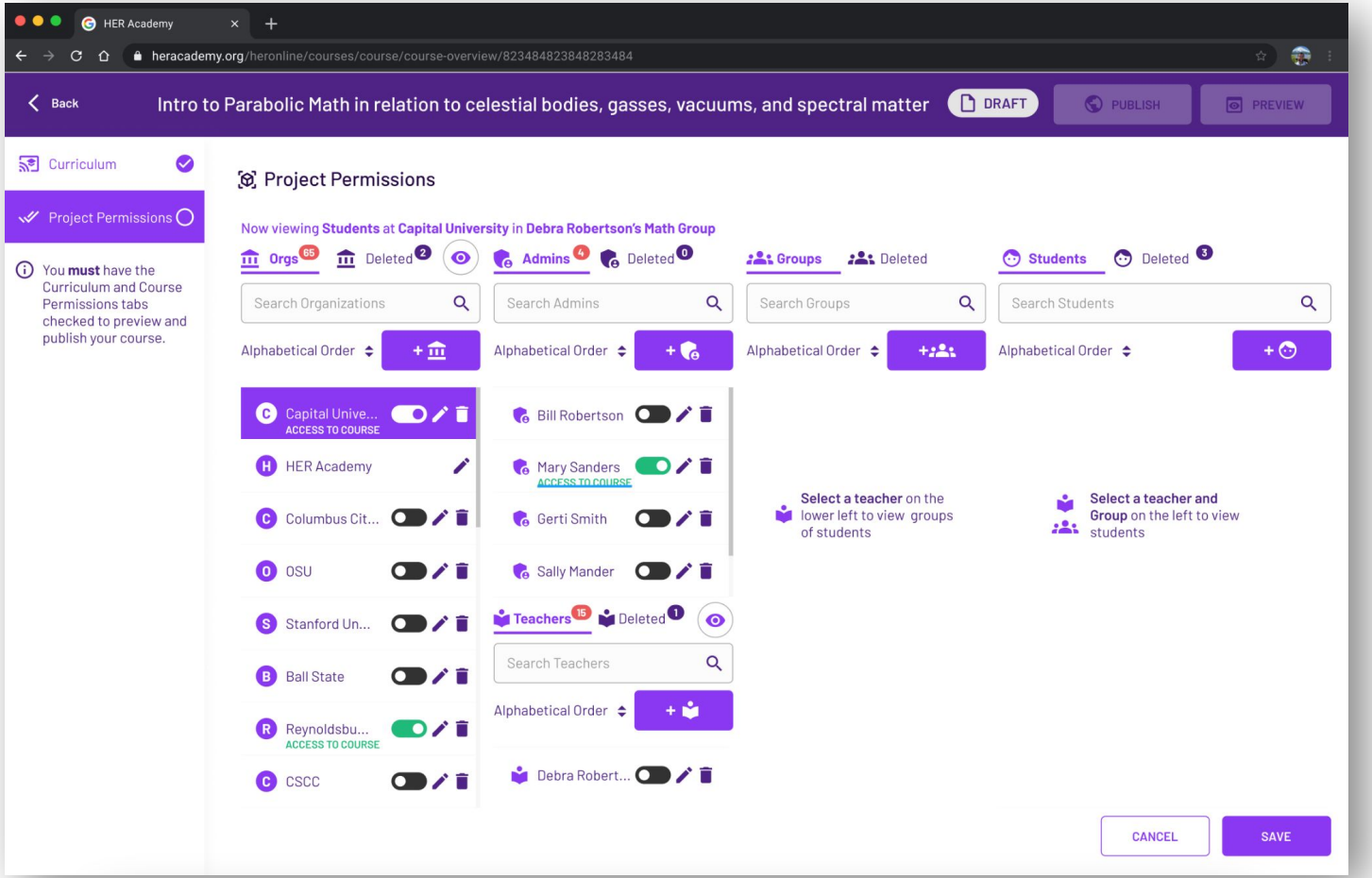
Prototyping

Here are the **reusable components** and the color scheme used for the prototype. I prototype at a “Cinderella” level for speed. This means that it is good enough for a small project with an extremely tight deadline. Since we are going to build the app with a no-code tool, there can be pixel-perfect refinement at that stage. This follows the GV Design Sprint methodologies, which really gets ideas out fast and keeps the momentum up on projects.



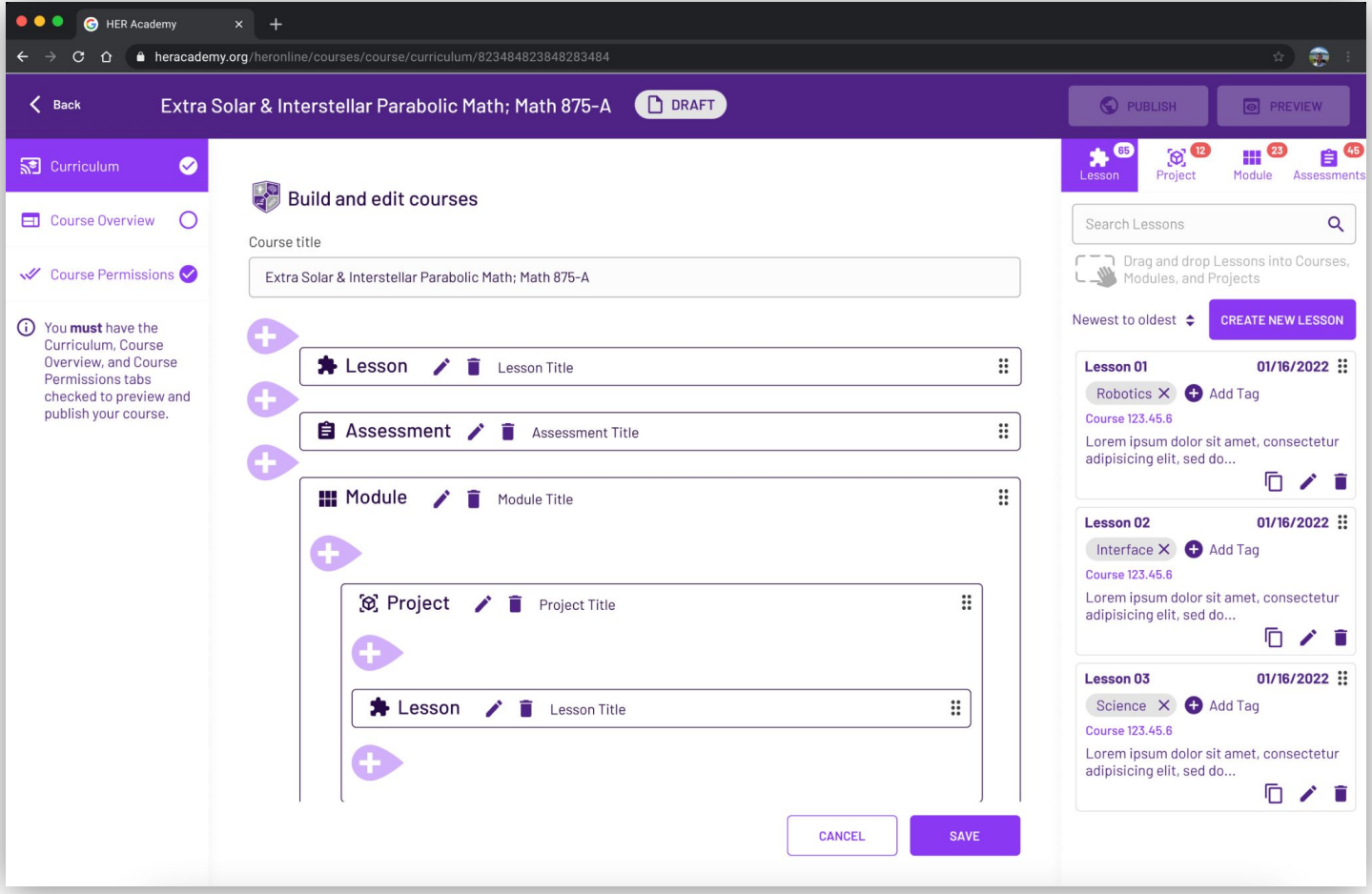
Prototyping

This is the Project Permissions page where a member of HER Academy can assign permissions to Organizations and their different levels of users.



Prototyping

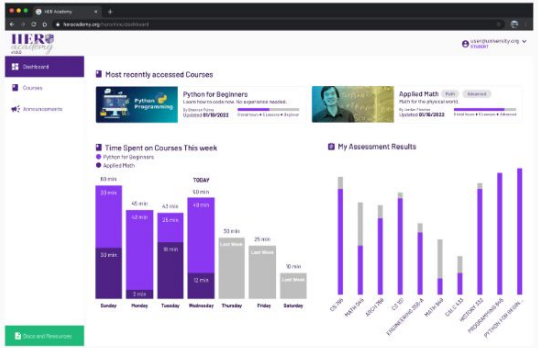
This is the Curriculum Builder for Courses page where a member of HER Academy can drag and drop different pieces of courses as well as edit the contents, remove components, or construct new ones.



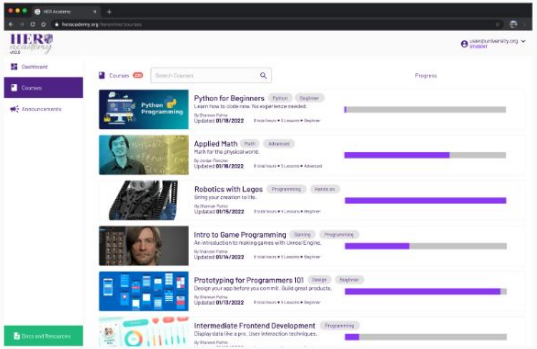
Prototyping

This prototype has a lot of pages, so I'll share one last view of what a student view will look like.

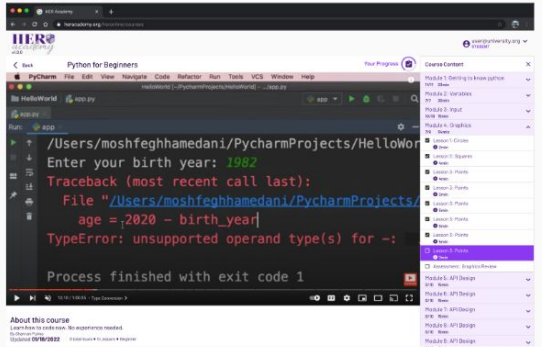
Student Dashboard



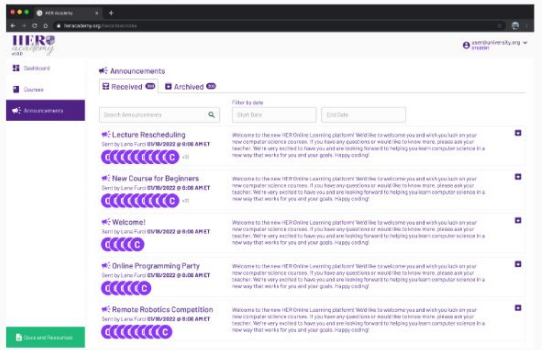
Courses Page



Course Page



StudentAnnouncements



Announcements Page

Usability Testing

I wrote a script to keep track of the usability testing and made a testing matrix so we can quantify qualitative feedback from UX Testing. So far we have tested 2 teachers, so we will test 3 more, and then 5 each of the Super Admin, Admin, and student roles. 5 usability tests provides 80% of the information you need and anything more is a loss of return on investment.

	Background							Feedback			
	User	Type	Grades	Subject	LMSs Used	Grading	Remote/In Person	Course Design	Teacher Dashboard	Roles	Courses	Gradebook
2/16/2022 @ 7:15 AM ET	Karen	Teacher	1-6	Computer Science	Canvas	Doesn't give grades	Mostly in person, but does do some remote	-				She likes the ability to input her grades
2/15/2022 @ 7:00 AM ET	Will	Teacher	9-12	Computer Science	Canvas	Does personal grading in Excel, then adds uploads Excel to Canvas	Mostly in person, but does do some remote	- Does of the design himself for regular classes - AP, he uses their materials	Doesn't like the wording of "Overall right/wrong", just use the wording "Overall"	Progress bar may not be useful	He mentioned that he does all of that himself	- Doesn't make sense to show him his own name - uses long names for courses - so not sure if the current configuration accomodates for lot

Here is what a script looks like and the notes that are taken during the tests. These tests are much smaller than what I typically do at large firms. I'm facilitating the entire thing, so I have to do very abbreviated versions of what I do on large scale enterprise projects.

Interview Questions

1. Have you done something like this before?
2. Let me explain a little bit about what we're up to.
    a. When we've been developing some new designs and new ideas, it's really valuable to get some fresh eyes and a fresh perspective on it, so that's how I need your help. I'd like to spend some time chatting with you about some stuff, it's pretty casual, and then I'll show you some different designs and ideas. I'll ask you a lot of questions, but I don't want it to feel like I'm testing you. I'm trying to figure out if these designs work, if they make sense, so I'm testing the designs. I'll show it to you and I'll ask you to think aloud as you're looking at these, so I'm trying to see it through fresh eyes, through your eyes.
3. So maybe for starters, can you tell me a little bit about the work you do?
    a. What does that involve?
    b. Do you work remotely, kind of a hybrid, always in the office?
4. What I want to show you is a prototype of an app. What that means is, some things will work, some things may not work, but we'll just kind of try it and there is no way to break it or anything. I just wanted to make sure to bring up again that I'm just testing the prototype and I'm not testing you. I'm going to be asking you questions, but there's not a right or wrong answer. As we do that if you think aloud, it really helps me see how the design is working.
5. Just start asking questions of how they would do certain tasks as they go, but don't tell them how to do things.
6. Thank them at the end.

Karen Interview 2/16/2022 @ 7:15 AM

- Teach 1-6 grade Computer Science
- She doesn't give grades so the grades graph on the teacher landing page isn't useful
- Likes the grid view of Google Slides
- She doesn't like the pictures on the courses page
- "This is so good!"
- Teacher could input their grades
- Wants the ability to put comments on their projects inside the LMS (but she doesn't currently do this)
- This would work well with older students
- With younger students it's paper and pencil
- They can give a young child access to a video to watch, but they wouldn't use the platform
- Teachers will need to go to each lesson in the "student mode" as a teacher

Will Interview 2/15/2022 @ 7 AM

- Teaches Computer Science
    - Programming and Design thinking 9-12
- For the most part fully in person
- Use Canvas - does the grading and put documents all in Canvas
    - This is accessory
    - Copies stuff in Excel
    - Has bulk importing
- He designs all of the course work himself for most of the classes
- For AP, he just uses their lessons
- Dashboard
    - Daily participation - curious how it's tracked
    - Overall Right Wrong
        - Doesn't like the naming of this
        - "Overall Distribution" is better
- Roles
    - Progress bar may not be useful
- Courses
    - He's going to create courses
- Gradebook
    - Doesn't make sense to have his name there
    - Names his projects and lessons long names, so they may not show up very well
- Mentioned Due Dates
- Toggle Publish on and off
    - Publish individual sections
    - Publish large sections
- Student Page
    - Student results separated out to show that they aren't failing
    - Place these in a separate course (Todd - can't remember what that means)
- Student Course page
    - Looks good
- Didn't think he's the target end user

At this point, this is where we are in this project!

This is a very exciting side project to be working on because I'm getting a chance to work the entire project. I have worked several projects in the past from concept to living product and enjoy it! I also enjoy working with a team and more focused on specific sections, but it is nice to have the entire overview.