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Group Project - Part 3: Getting the Design Right

Thump: Class Management Redefined

Roles:

Jadon Burgardt: Title, Problem and solution overview, initial paper prototype, testing process, testing results, final paper prototype, digital mockup, discussion.
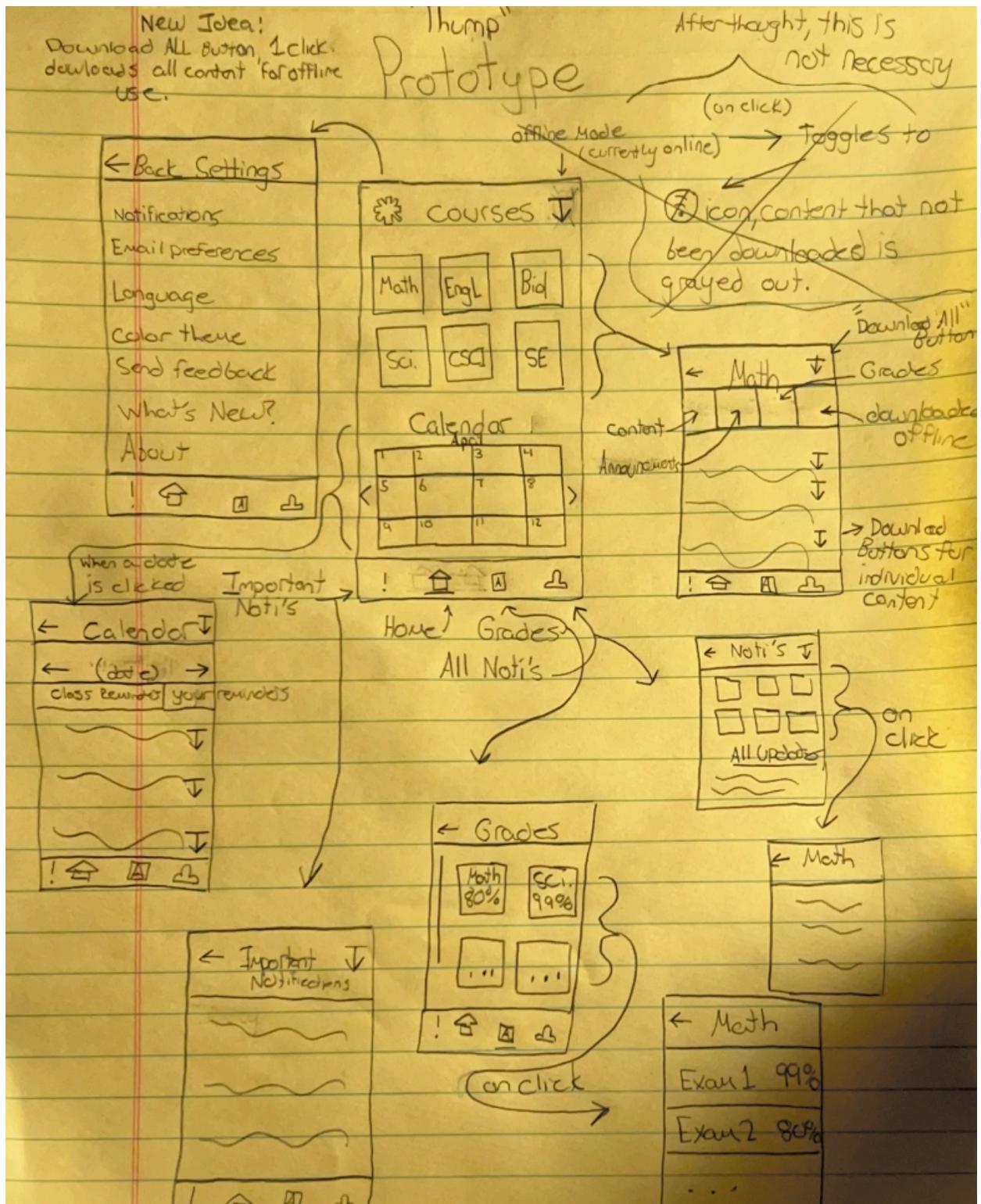
Abraham Newcombe: Was unable to get into contact with.

Problem and Solution Overview:

The current app for SCSU course management (Pulse) has many usability issues, making it difficult and unsatisfying for students to use efficiently. The Pulse app is highly inefficient at accessing course materials, tracking assignments, managing academic progress, and much more. The app is typically very slow and cluttered and lacks intuitive navigation, making the overall experience feel terrible. We could make a much-improved student course tracking app by improving the design and usability of the complaints stated above. Through usability testing based on Nielsen's heuristics, we will iteratively refine our design, ensuring it fits our vision.

Initial Paper Prototype:

Based on our previous research, we have created a more thorough prototype. This will be the baseline for what we test our user evaluations and iteratively build off of.

New Idea!
Download ALL Button. 1 click
dewloads all content 'for offline
use.

"Thump"

Prototype

After thought, this is
not necessary

(on click)

offline Mode
(currently online) → Toggles to

← Back Settings

Notifications

Email preferences

Language

Color theme

Send feedback

What's New?

About

! ⌂ A ♫

⚙ Courses ⬇

| Math | Engl | Bio |
| Sci. | CSCI | SE |

Calendar
App

1	2	3	4
5	6	7	8
9	10	11	12

< >

! ⌂ A ♫

ⓘ icon, content that not
been downloaded is
grayed out.

"Download All"
Button

← Math ⬇ Grades

downloaded
offline

Content
Announcements

! ⌂ A ♫

→ Download
Buttons for
individual
content

When a date
is clicked

Important
Noti's

← Calendar ⬇

← (date) →

Class Reminders your reminders

! ⌂ A ♫

Home ↱ Grades
All Noti's

← Noti's ⬇

☐ ☐ ☐
☐ ☐ ☐
All Updates

on
click

← Grades

| Math 80% | Sci. 99% |

| ⠇⠇ | ⠇⠇ |

! ⌂ A ♫

← Math

← Important ⬇
Notifications

on click →

← Math

Exam 1 99%
Exam 2 80%
. . .

! ⌂ A ♫

This design shows how our two primary tasks, viewing course information and managing
notifications/schedule, can be done.

With this design, we can see a more direct and understandable approach as to what we want this app to accomplish. Based on this, we will see how our user testing goes via heuristic evaluation and usability tests, seeing what users like and dislike with our design.

Testing Process:

For our heuristic evaluation, we will give Nolan Murphy's group access to our prototype, along with a list of Nielsen Heuristics. Based on their evaluation, they will state if we violated any heuristic, the severity of the violation, and an explanation of the situation.

Heuristic Evaluation - With Nolan Murphy's Group:

- **Visibility of System Status**
    - Violated?: "Not violated, for a paper prototype, seems solid, and I always know where I am at."
    - Severity (0-4): N/A
    - Explanation: N/A
- **Match Between System and the Real World**
    - Violated?: "Not violated, the system speaks my language and makes the general information appear in a logical order."
    - Severity (0-4): N/A
    - Explanation: N/A
- **User Control and Freedom**
    - Violated?: "Two notes, on the *notification* page, there is no navigation bar to quickly exit the pages, this might have been forgotten? My second note is that on things like the download button, what if you want to un-download it? This isn't a big violation to us, though, as you can't exactly draw two variants of a button in the same spot."
    - Severity (0-4): 1
    - Explanation: These criticisms are valid and will be taken into account in our reworked prototype and Figma design.
- **Consistency and Standards**
    - Violated?: "Barely, overall, each page is consistent with the others. The only part that is not consistent is the navbar on the notification page"
    - Severity (0-4): 1
    - Explanation: Again, good criticism will be updated accordingly.
- **Error Prevention**
    - Violated?: "From my testing, we see no situation where an error could happen. We think this is because of the minimalist design and lack of excess features. Overall, we think this is good, but the fact that this is a paper prototype should be taken into account; not ALL features can be tested as it is just paper."
    - Severity (0-4): N/A
    - Explanation: N/A
- **Recognition Rather Than Recall**

- Violated?: "Again, we don't think this is violated as the pages are evenly spread out, with not too little or too much content being put on any individual page. Whether I need to check my schedule or grades, there's not a situation where I would have trouble recalling any important information."
- Severity (0-4): N/A
- Explanation: N/A
- **Flexibility and Efficiency of Use**
  - Violated?: "Maybe only slightly violated. We think the download features may be a bit confusing for an older demographic. We did not have issues with this, but it is possible some might."
  - Severity (0-4): 1/2
  - Explanation: We understand this criticism, but we think the target audience of students would not have an issue with this design.
- **Aesthetic and Minimal Design**
  - Violated?: "No, I really like the vision with this prototype; each page looks similar to the others, not deviating too much, but not boring me to sleep with the same exact design as the previous. Fix the nav bar on the notification screen and maybe the download process, and this would be great."
  - Severity (0-4): 1
  - Explanation: We will definitely keep those changes in mind when developing changes to our prototype.
- **Help Users Recognize, Diagnose, and Recover From Errors**
  - Violated?: "Likely could be violated. With things like not being able to uninstall content, etc. We can't really recover from any unintentional input."
  - Severity (0-4): 2
  - Explanation: We understand this; this is something that can be fixed in the final Figma design, as we can introduce more modularity and interactability as opposed to paper.
- **Help and Documentation**
  - Violated?: "We don't think this is violated, but it could be. We don't think this app necessarily needs guidance, as it is pretty straightforward and understandable to use. The only part that may need guidance is the download feature, but even then, that could be easily learnable."
  - Severity (0-4): N/A
  - Explanation: N/A

We will revise our prototype based on this feedback and then go on to our usability tests.

For our usability tests, we have chosen two individuals who are not friends, members of the class, people with engineering backgrounds, or people who have been exposed to our project already. We will show them how paper prototyping works and what we are looking for. During these tests, we will record positive and negative experiences, along with a photo of the situation. If the experience is negative, we will record a severity score (0-4) and also note any changes made and an explanation for the negative feedback.
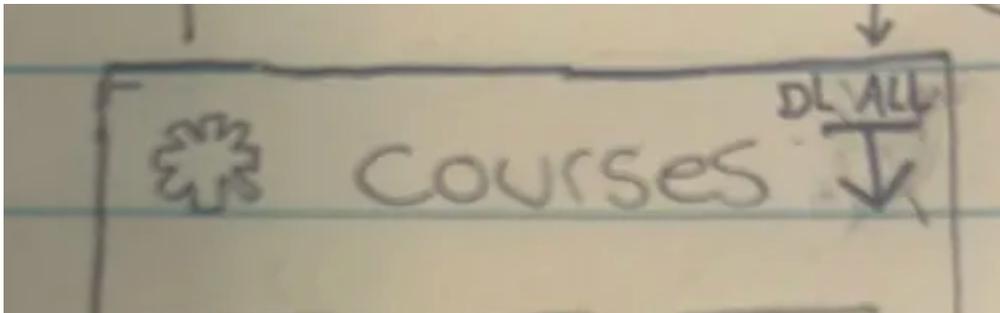
Anonymouse Usability Test #1:

- Photo of Incident:
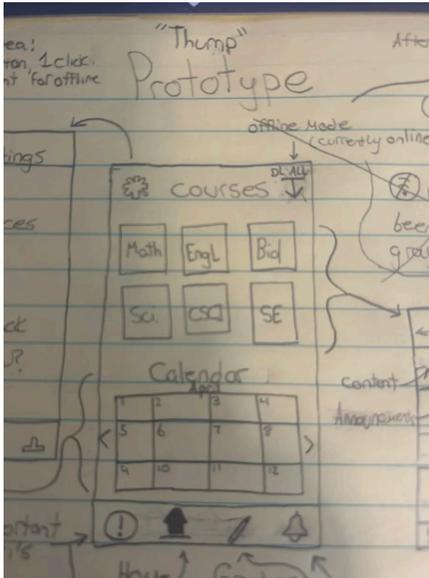
-
- Description of the Incident (Like or Dislike): They liked the header of the app on the home screen. They like how it shows the description of what they are looking at, along with the icons next to it (settings and download).
    - If Negative, Severity (0-4): N/A
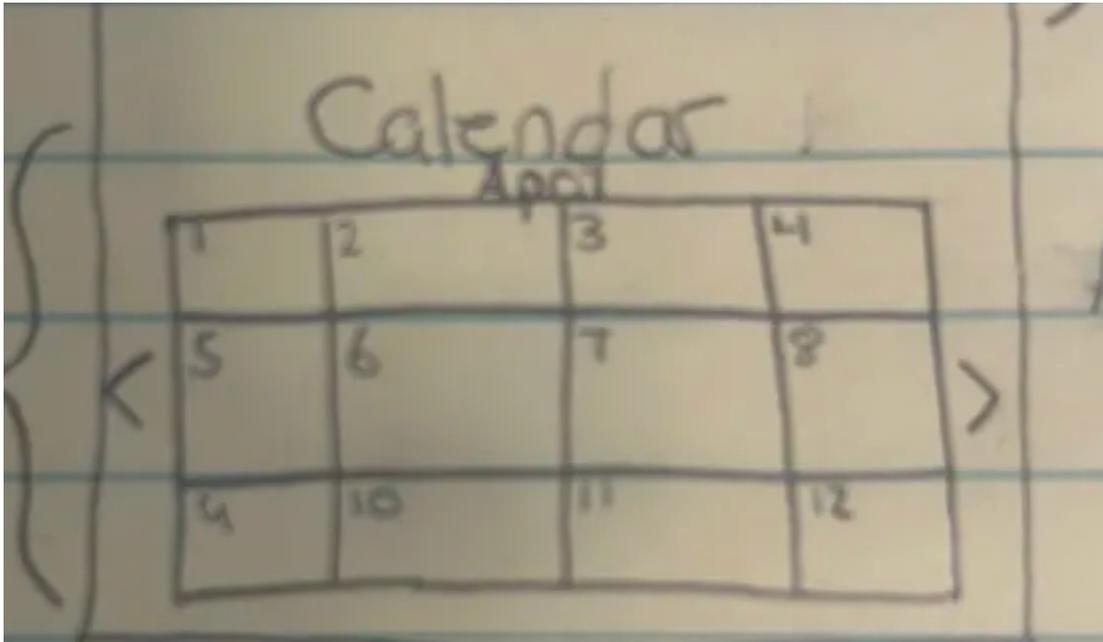   - Changes Made and Explanation for Negative Feedback: N/A

- Photo of Incident:

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- Description of the Incident (Like or Dislike): They recognized what the settings icon does, but the download button is a little confusing to them. They don't understand the point of the download button. After explaining why it was there and why we implemented it, they understood and liked it. But it should be noted that some users will likely not understand the download feature.
    - If Negative, Severity (0-4): 2
    - Changes Made and Explanation for Negative Feedback: We believe that in our final Figma design, we will be able to portray the download feature in a more effective way.

We currently think it is quite difficult to portray how this feature works on paper, but it is good that the users have given this feedback overall.
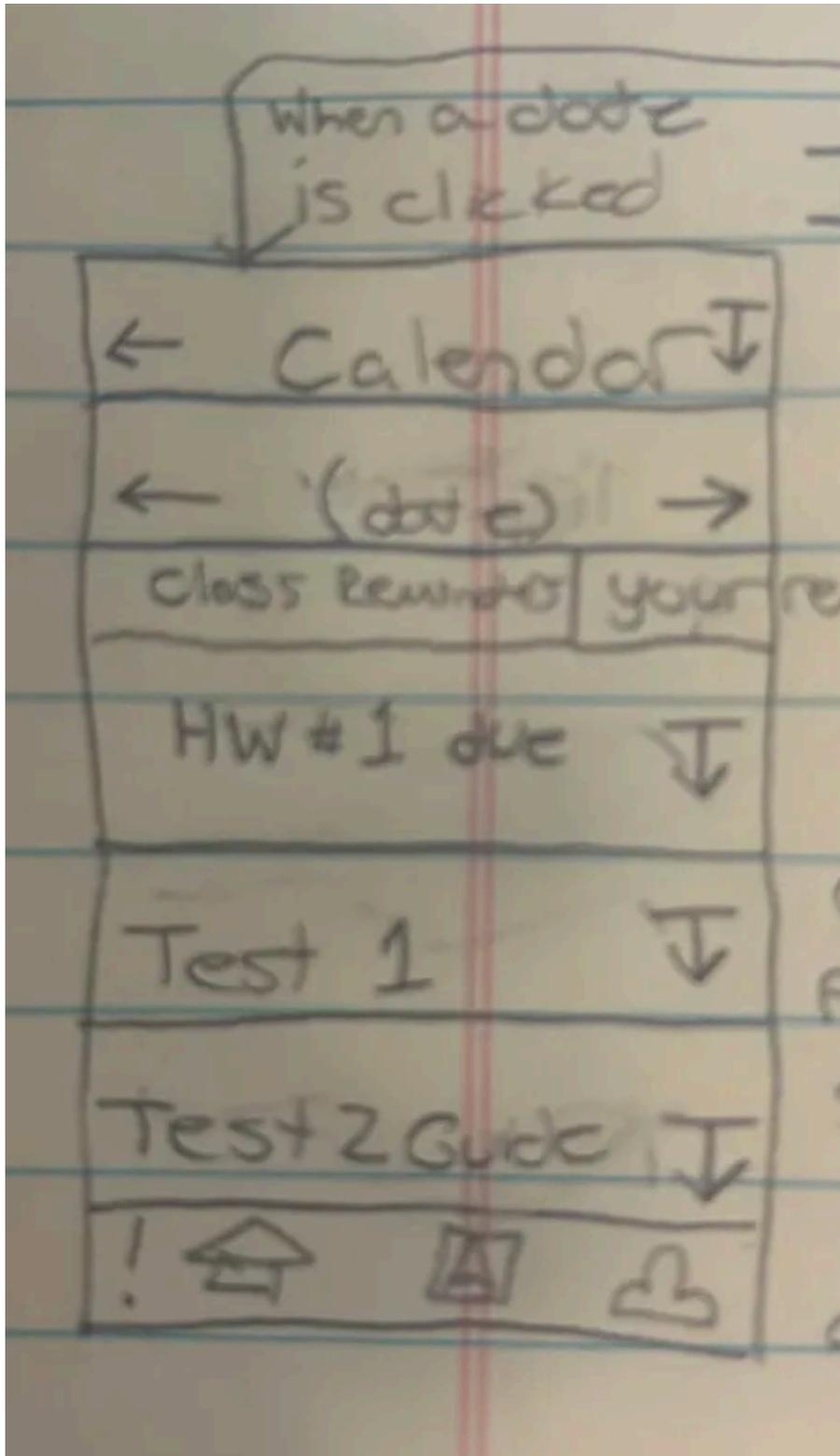
- Photo of Incident:

-
- Description of the Incident (Like or Dislike): They liked the calendar feature and instantly understood the point of it, to track due dates, etc.
    - If Negative, Severity (0-4): N/A
    - Changes Made and Explanation for Negative Feedback: N/A

- Photo of Incident:
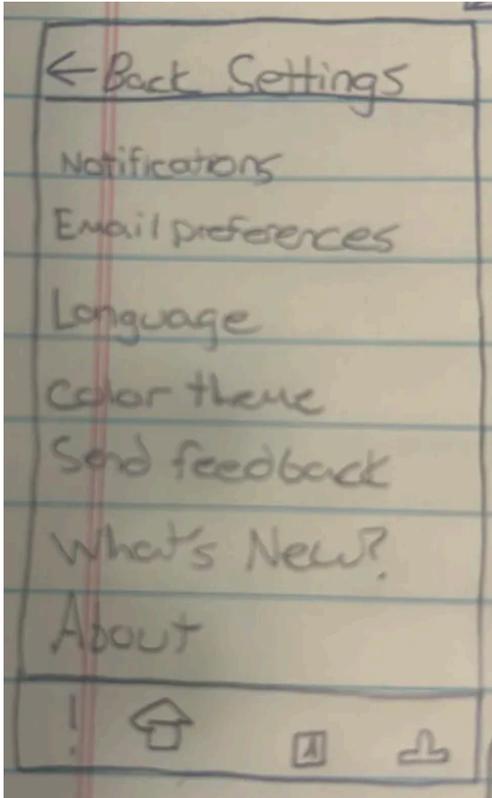
-
- Description of the Incident (Like or Dislike): They were neutral about the settings page. They understand how it works but would prefer it to look a tiny bit more like the other pages. They thought it looked a bit too weird.
    - If Negative, Severity (0-4): N/A
    - Changes Made and Explanation for Negative Feedback: We are not worried about this part, as we know the Figma design will fix this complaint.

- Photo of Incident:

When a date
is clicked

← Calendar ↓

← (date) →

Class Rewatto your re

HW #1 due ↓

Test 1 ↓

Test 2 Guide ↓

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-
- Description of the Incident (Like or Dislike): Probably the biggest dislike (but still not terrible) was the calendar page itself. They didn't hate it, but explained how the design took a tiny bit of staring at to understand. They eventually saw that you could scroll through the dates with the

arrows and then filter each date's calendar items based on whether it was an item you added yourself or one that was dynamically loaded from a class they have.

- If Negative, Severity (0-4): 1
- Changes Made and Explanation for Negative Feedback: We had a feeling this would come up in usability testing. We understand that this may be confusing, but we also think there is value in the fact that the user was able to figure it out relatively quickly with no outside help. The fact that they were able to understand what the paper prototype was trying to get across shows us that they will be able to figure out a Figma design much more easily.

- Photo of Incident:
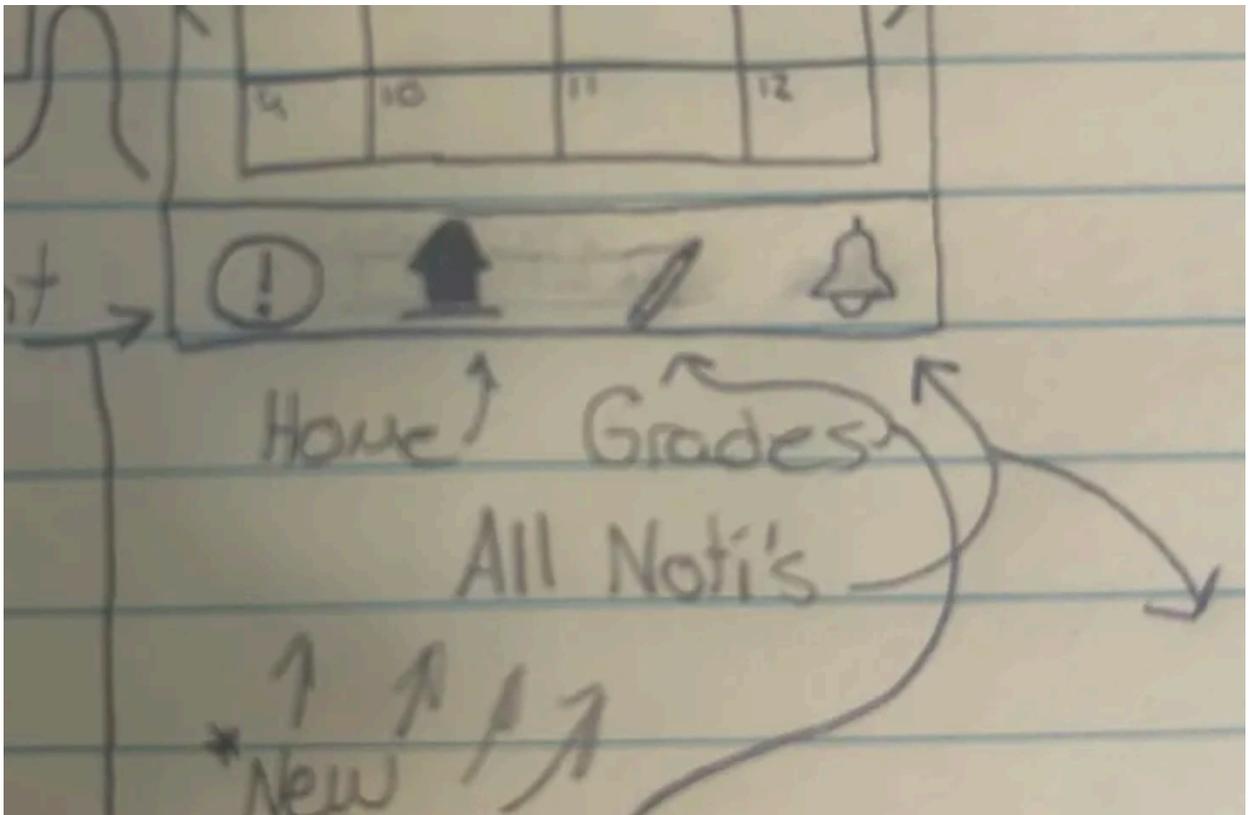
- Description of the Incident (Like or Dislike): They disliked our nav bar icons. They thought the only one that made sense was the "home" icon. This means they wouldn't know what they were clicking on unless we had text next to it explicitly telling them what it did.
  - If Negative, Severity (0-4): 3
  - Changes Made and Explanation for Negative Feedback: We will fix these icons, as this is a pretty big usability issue. We think the inconsistency here will also be able to be fixed much better in Figma.

- Photo of Incident:
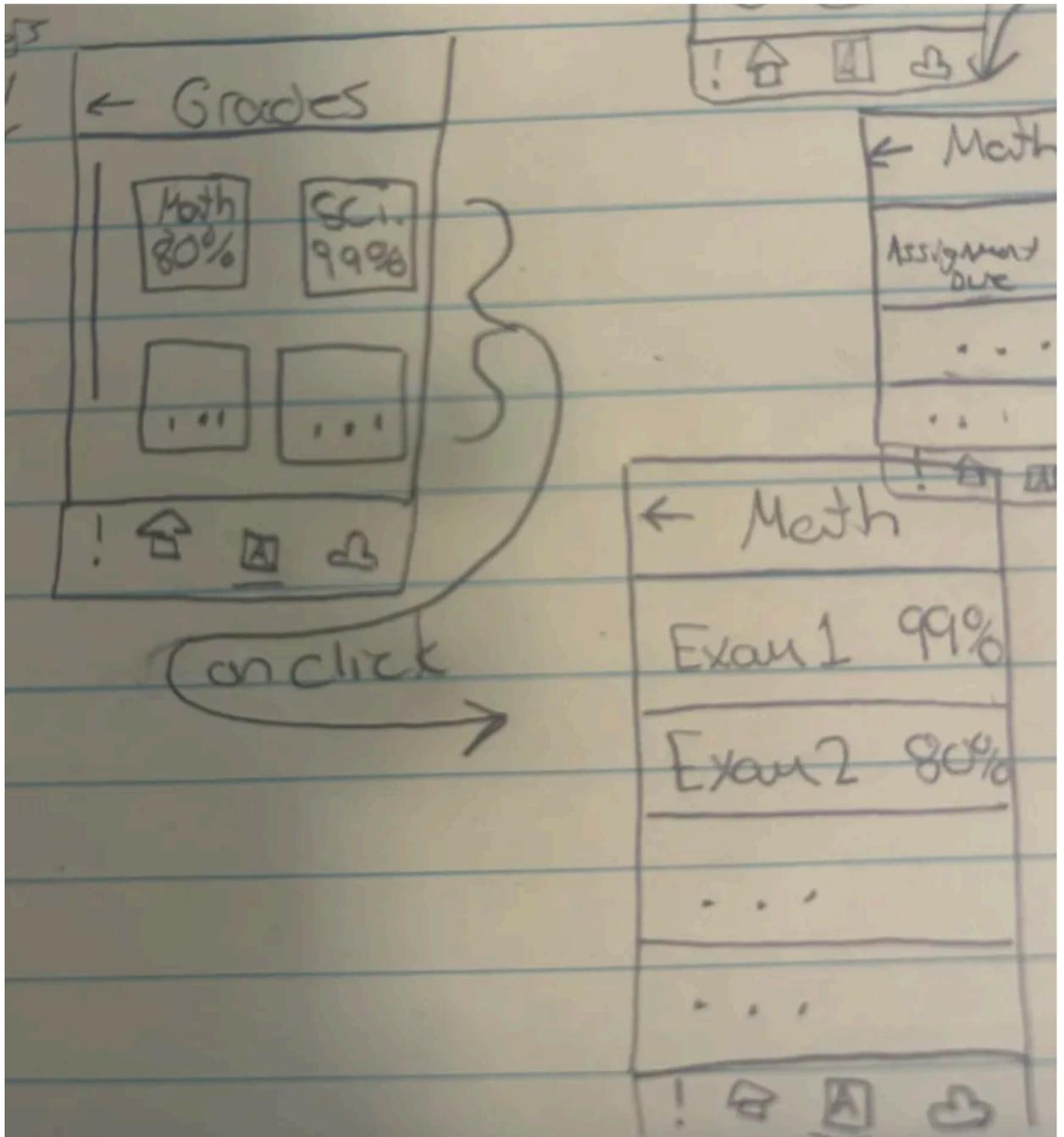
-
- Description of the Incident (Like or Dislike): They liked the "grades" page and stated that the design looks a bit different in a refreshing way.
    - If Negative, Severity (0-4): N/A
    - Changes Made and Explanation for Negative Feedback: N/A


- Photo of Incident:
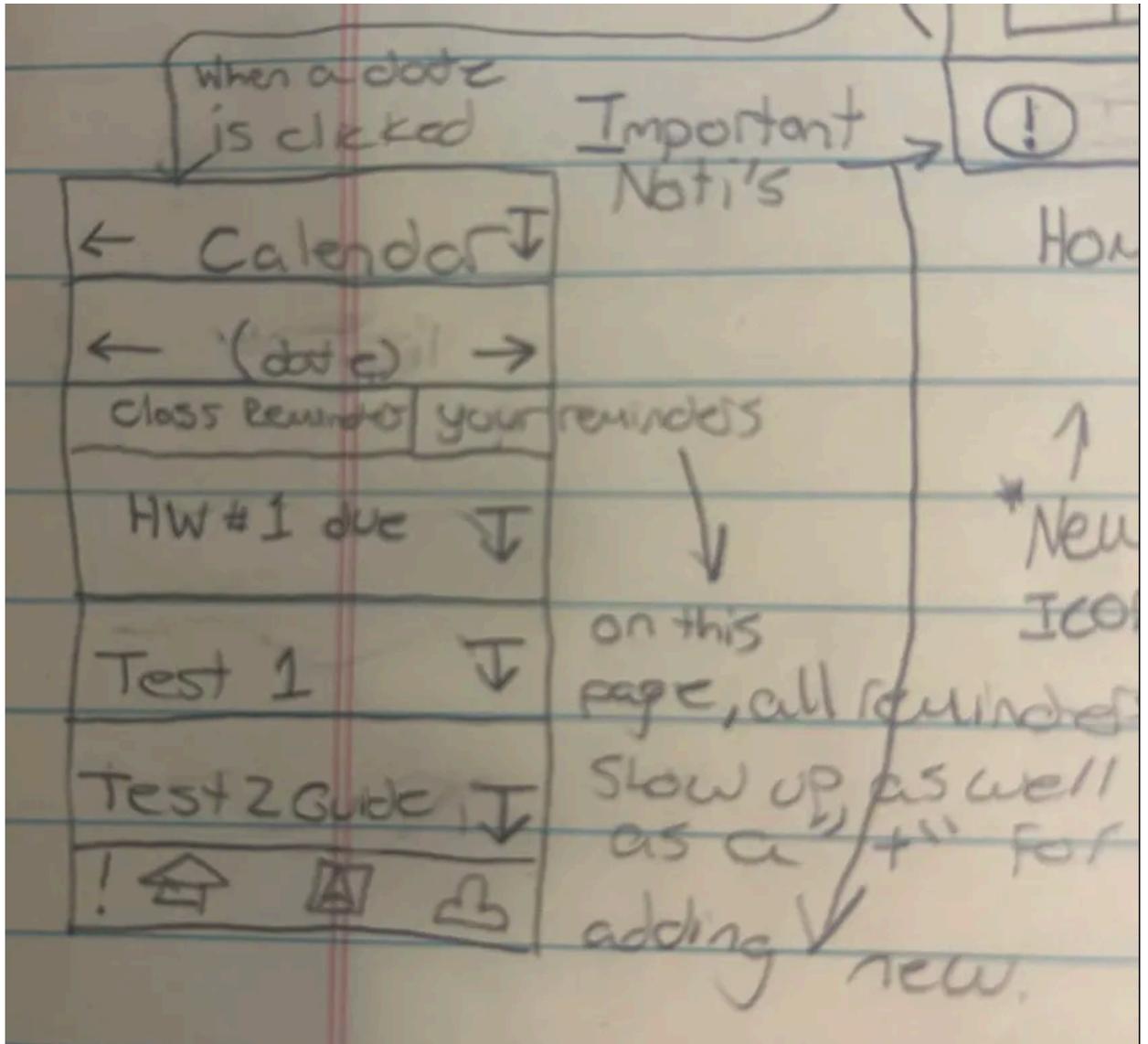
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- Description of the Incident (Like or Dislike): They noticed on "your reminders" in the calendar that there is no page or + button to actually add your own reminder.
    - If Negative, Severity (0-4): 4
    - Changes Made and Explanation for Negative Feedback: This was an oversight and will be updated!

- Photo of Incident:
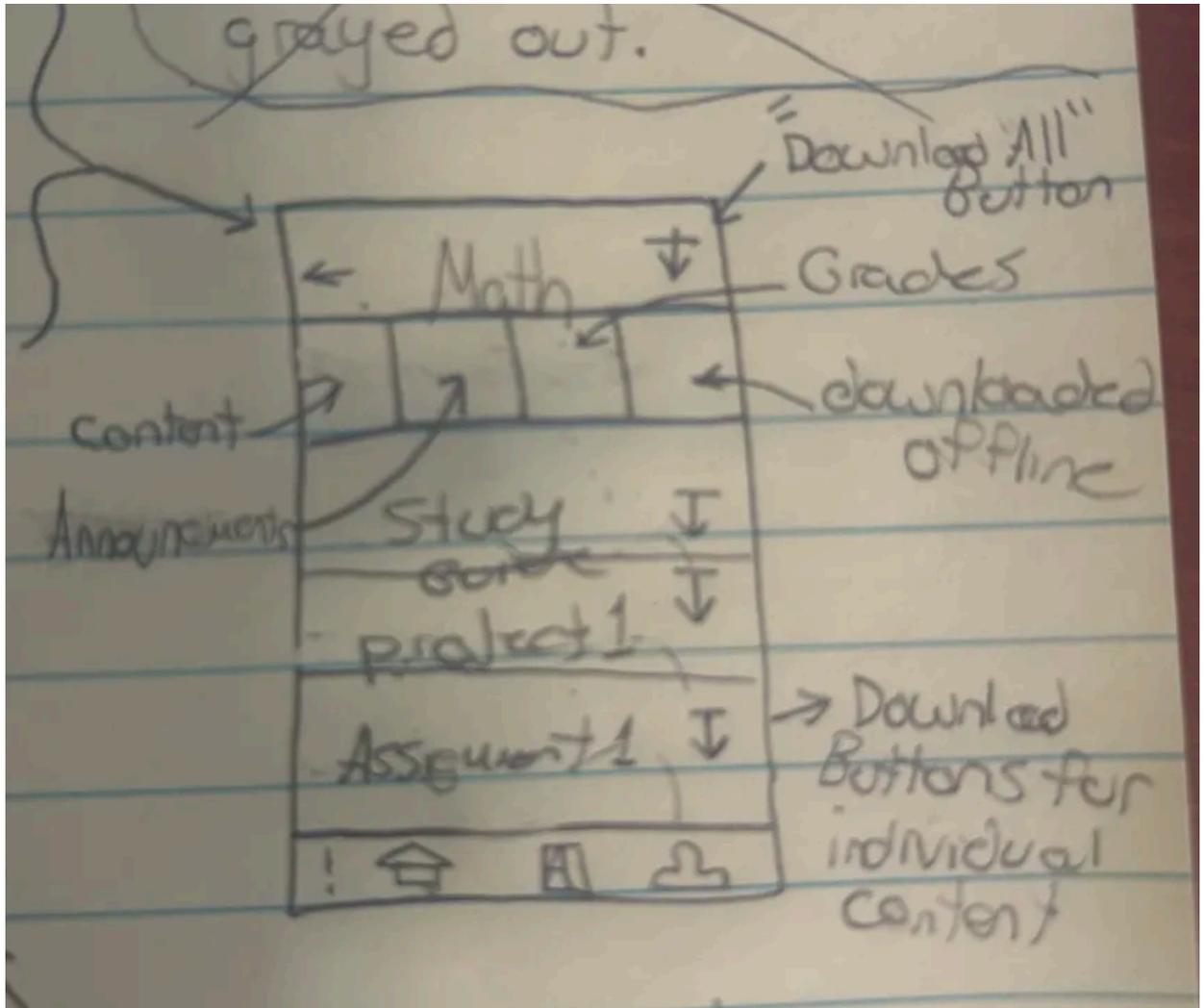
-
- Description of the Incident (Like or Dislike): They almost disliked the page when they clicked on a course, but then quickly realized what it was showing, and then it grew on them.
  - If Negative, Severity (0-4): N/A
  - Changes Made and Explanation for Negative Feedback: N/A

- Photo of Incident:
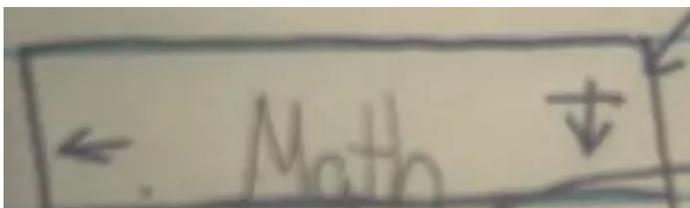
-
- Description of the Incident (Like or Dislike): They did not like the download button in the top right of most pages, not understanding why it was there, as well as on the home page.
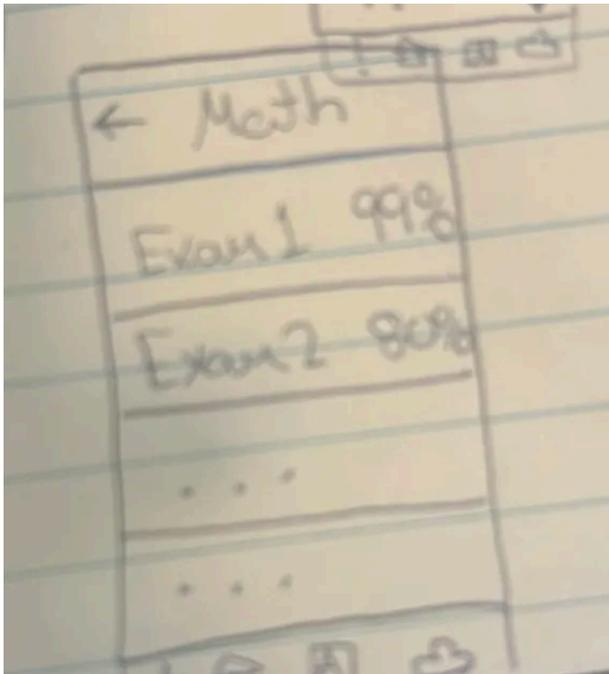 - If Negative, Severity (0-4): 2/3

- Changes Made and Explanation for Negative Feedback: This is fair; the reason we decided to do this was because we wanted freedom as to what the user wants to download. The download button being on each individual page allows for users to download content based on individual class. We think the way to fix this is to add text next to the download button to show this.

Anonymouse Usability Test #2:

For the second user, they actually listed almost all of the same dislikes and likes as the first user, excluding the Icon complaint and the calendar page confusion. Besides this, almost everything else was the same. The only extra thing is shown below!

Same Dislikes:

- Photo of Incident:

-
- Description of the Incident (Like or Dislike): They disliked how, for some of the pages, we just drew "filler" lines to show that content would be displayed there. They didn't understand what we meant by this.
    - If Negative, Severity (0-4):1
    - Changes Made and Explanation for Negative Feedback: The reason we did this is that we believed the content on the page was self-explanatory based on what the category the user clicked on was. We understand now that we shouldn't necessarily assume they know these things and can update it accordingly.

To be completely honest, I wasn't sure how insightful these user tests would be, but after doing them, I can say that they were extremely useful in making this design even better. This feedback shows how a normal user would use our app, and that knowledge will be invaluable for our Figma design. This

feedback altered not only our design but the way we will go forward with creating prototypes. It's much clearer now on how a brand-new user would use an app, and that will be helpful for future projects.
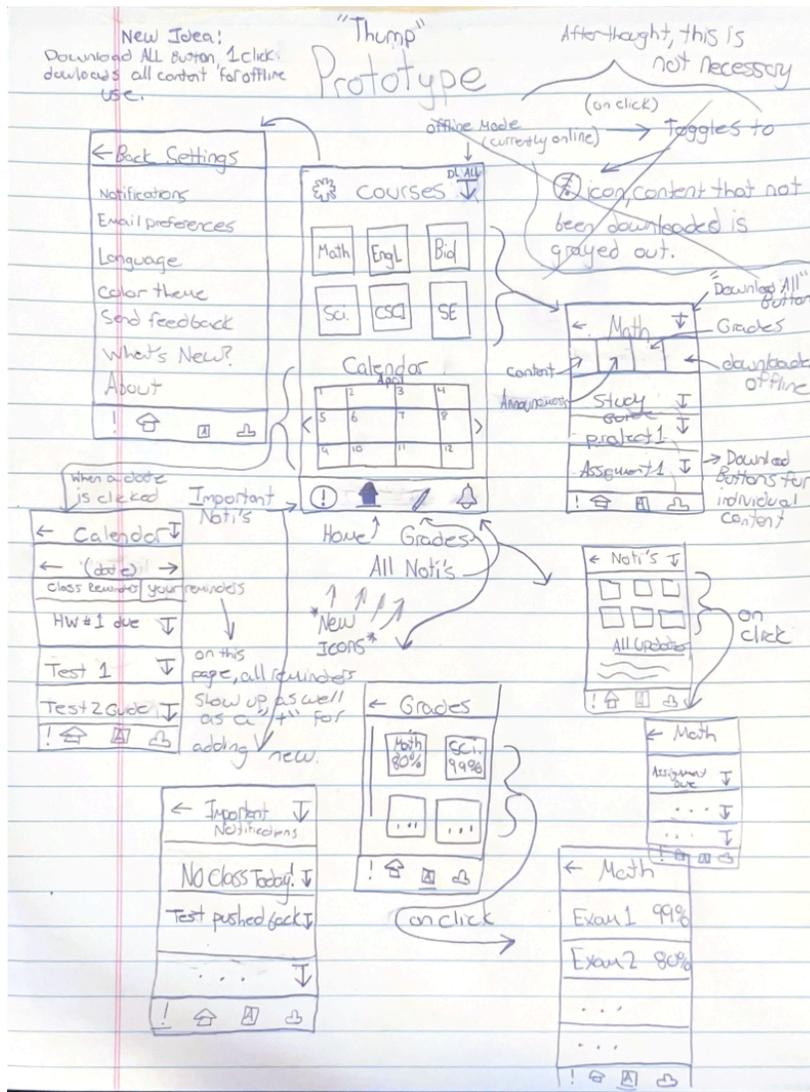
Here, we can see our final paper prototype with the necessary changes that were recommended by users. This makes our two primary tasks (viewing course info and managing schedule), as well as many other features, even more straightforward. Based on this prototype, we will create our high-end Figma design!

Please view the attached video to see our demonstration of the Figma design!
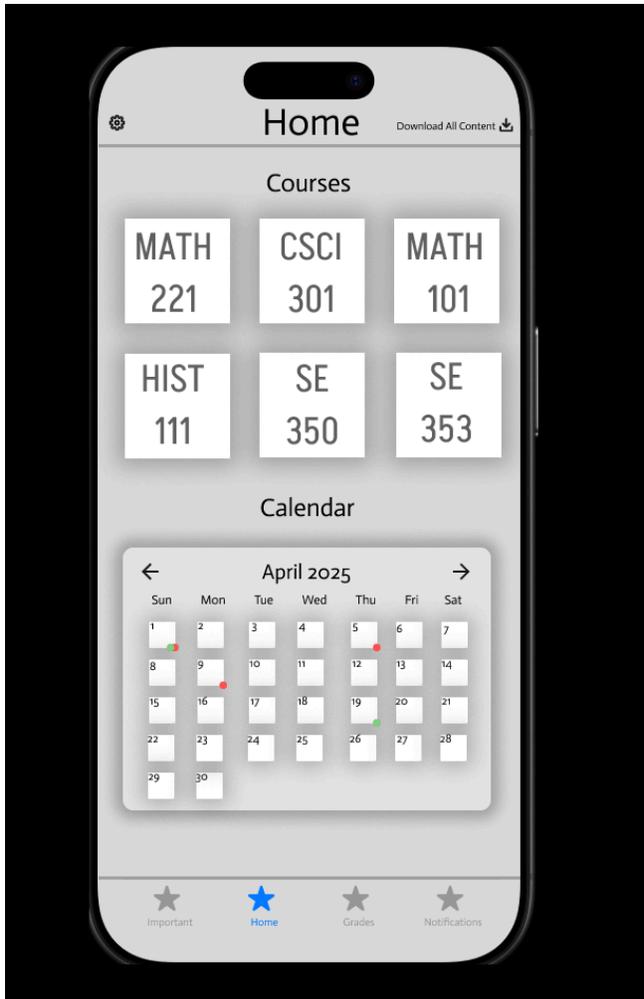
How our two primary tasks work:

- Viewing course information: There is a dedicated page for each course where the user can see class content, announcements, grades, and content that is downloaded offline. In addition to this, announcements for all classes show up in other places, like in the notification area and calendar.
- Managing Schedule: From the calendar and notification pages, the user can easily organize their schedule and day-to-day life. From organizing class reminders to your set reminders to seeing crucial notifications, these features can do it all.

From it being my first time thoroughly iterating a design, I've learned immensely. Until you do it, you never truly realize how insightful user tests and feedback really are. When I made my first design, I thought it was pretty much perfect and did not need many changes, but after doing the user tests, I realized there were many oversights I had not even thought of. From the heuristic evaluations and user tests, my final design was shaped in a way that a real user could find enjoyment and practical use out of it, while enjoying an error-free experience. To be honest, I think I could have even used more iterations.

While I'm happy with the final Figma result, I know it could be even better. This would be the perfect situation for even more user testing to ensure the product is even better. I really think there is no such thing as too much feedback testing, as its value is undeniable.