

# FIT3175 – Usability Assignment

*Design a Digital Service/Product that Improve  
Education Delivery During Pandemic*

*Reanna Tan, Brigitte Russell, Chamodi Ekanayake,  
Martin Li, Michael Alexander, Darren Luwi*

**Tutorial: 8**  
**Group: 5**

# Table of Contents

<b>Introduction</b>	<b>3</b>
<b>Refined Project Idea</b>	<b>3</b>
<b>Reflection on Individual Sketches</b>	<b>5</b>
<b>High Fidelity Interactive Prototype</b>	<b>11</b>
<b>Labelled High Fidelity Prototype</b>	<b>12</b>
<b>Appendix</b>	<b>26</b>
Individual Sketches	26
Brigitte's Sketches	26
Martin's Sketches	27
Darren's Sketches	29
Chamodi's Sketches	34
Reanna's Sketches	39
Michael's Sketches	49
<b>References</b>	<b>51</b>

# Introduction

The aim of this report is to provide an overview of the design process for our education application. Each member of our team created some individual sketches for the functionality of the app. As a group, the strengths and weaknesses for each of the sketches were discussed and this helped to form our final high fidelity prototype. Our final prototype has been designed in such a way that considers all four of our user personas as well as various design theories, principles, guidelines and laws.

## Refined Project Idea

The app will work by having two different types of accounts, one for students and one for teachers. Teachers will be able to set up a group for each classroom they have and then add individual students to this group. This will allow teachers to give the learning challenges to everyone in a class at once.

The idea is that teachers will pick a few tasks to be included in daily/weekly learning challenges to ensure students stay motivated and engaged. The challenges created within the app can be a mixture of either quizzes/tests, online games, short videos, or flashcards which can be provided by teachers or students can create themselves for content retention. In addition, images and sound can be added to the flash cards to ensure that auditory and visual learners are catered for. When students complete the tasks, they will be given points based on how well they have done. Everyone in a class will be able to see who is at the top of a leaderboard for each week. Furthermore, the app will be designed with progress bars and checklists to ensure students are clear about the amount of work they need to complete. Students will also be sent notifications when new challenges have been uploaded on the app or when the due date for tasks is approaching.

Teachers will also be able to see on their account which students have and have not completed the tasks and how well students have done on the activities. This is to ensure that teachers can cater their attention to the students who need it. In addition, a chat bar will be implemented into the app to allow for informal communication between each individual student and their teacher. This feature has been added as we understand that some students may feel uncomfortable talking in Zooms and want another method of communication to ask their teachers questions.

In order to keep students accountable, the app has implemented a feature where you can put your device on “Stay Focused” mode which temporarily locks the phone for the duration of the study session as desired. The app further has an in-built functionality that determines whether a student has been studying for too long, and alerts them to have a stretch or take a break between study sessions.

As the vast majority of students prefer listening to music whilst they study, the app provides a music option with a selection of songs that they can listen to in the background of their study session. Music includes but is not limited to lofi-hip hop and classical music, to not only encourage greater focus and motivation, but also make learning fun.

Another criteria that this app fulfils is its ability to cater towards people of different learning styles. Auditory learners will benefit from sound integrated flash cards and visual learners will appreciate the drag and drop functionality that is designed to add images.

# Reflection on Individual Sketches

<b>Sketches</b>	<b>Strengths</b>	<b>Weakness</b>
<b>Brigitte</b>		
<i>Brigitte's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design, font and size of tabs are equally distributed.</li> <li>- Application of visuals to make the page aesthetically better</li> <li>- Signifiers on the Name, Email, Password and DOB fields</li> <li>- Dialogues which tell users which step/process they are currently on (reduces short-term memory load)</li> </ul>	<ul style="list-style-type: none"> <li>- The email and password field can be improved through examples and/or recommendations</li> </ul>
<i>Brigitte's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of icons, and reminders such as "3 tasks to do" on the course page and "2/15" on the Task page are informative feedbacks</li> <li>- While on the home page, the home icon will be greyed out. This helps reduce short-term memory load</li> <li>- Application of arrows on buttons and colours for correct answers to indicate that the buttons are clickable and the students' answers are right/wrong act as a meaningful signifier</li> <li>- App's ability to read the question out improves universal usability</li> </ul>	<ul style="list-style-type: none"> <li>- Perhaps the Task page can be improved through provision of clear instructions (e.g. "Choose one of the following answers")</li> </ul>
<i>Brigitte's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Chat icon will be greyed out to indicate that the</li> </ul>	<ul style="list-style-type: none"> <li>- Chat page can be improved through arrows on each bubble which towards the</li> </ul>

	<ul style="list-style-type: none"> <li>- user is currently on the Chat page. This reduces short-term memory load.</li> <li>- Alerts on top of each dialogue bubbles on the chat home page act as a feedback to notify students whether the teacher has replied as well as the number of messages sent.</li> <li>- Ability to unsend messages acts as a strong action-reversal feature</li> </ul>	<p>sender of the message (some users might be confused)</p>
<b>Martin</b>		
<i>Martin's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of icons to improve discoverability</li> <li>- Dialogue sequence at the bottom of the page to indicate which page users are on. This reduces short-term memory load.</li> </ul>	<ul style="list-style-type: none"> <li>- The login page can be improved through underlining the “sign up” button at the bottom of the page to indicate that it is clickable.</li> </ul>
<i>Martin's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Drop-down arrow on the “birthday” field improves discoverability (makes it easier for users to understand what to do)</li> <li>- Asterisks to indicate an important field</li> </ul>	<ul style="list-style-type: none"> <li>- Again, it might be a good practice to underline the “sign up” button.</li> <li>- Examples should be provided on the email address and password fields on the Sign-up Detail page in order for users to understand the requirements and criteria.</li> </ul>
<i>Martin's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- The “Challenge Completed” and “Grade Summary” bars provide informative feedback on the student’s progress</li> <li>- Again, the drop-down arrow on the timer aids discoverability. In addition, it behaves in a</li> </ul>	<ul style="list-style-type: none"> <li>- As the second layer aims to provide plenty of information, the page ended up being too “crowded”. Some users might find this problematic.</li> </ul>

	<ul style="list-style-type: none"> <li>- similar fashion as a typical timer, thus being consistent</li> <li>- The mini calendar at the bottom of the page tells students the date today, tomorrow, etc. , thus reduces short-term memory load</li> </ul>	
<b>Darren</b>		
<i>Darren's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- The tick improves discoverability as it makes it more convenient for users to understand what they are required to do.</li> <li>- Application of arrows as buttons to indicate that the buttons are clickable</li> <li>- </li> </ul>	<ul style="list-style-type: none"> <li>- Does not have some main widget on the bottom of the screen.</li> </ul>
<i>Darren's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- </li> </ul>	<ul style="list-style-type: none"> <li>- Does not have some main widget on the bottom of the screen.</li> </ul>
<i>Darren's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- </li> </ul>	<ul style="list-style-type: none"> <li>- Does not have some main widget on the bottom of the screen.</li> </ul>
<b>Chamodi</b>		
<i>Chamodi's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of icons along with clear descriptions to improve discoverability</li> <li>- Song title, artist name and the playlist are clearly shown on the screen. These provide informative feedback for users.</li> <li>- Addition of music cover reduces short-term memory load, as images are proven to be more effective in promoting</li> </ul>	<ul style="list-style-type: none"> <li>- Perhaps addition of arrows on each button on the Preferences screen might further enhance discoverability</li> </ul>

	<ul style="list-style-type: none"> <li>- recognition</li> <li>- Good mapping of Pause/Play, Skip, Repeat etc. buttons</li> <li>- A small window which provides feedback on the next song in queue.</li> <li>- Ability to undo and redo when selecting songs to add to playlists allows reversal of actions.</li> </ul>	
<i>Chamodi's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of icons to improve discoverability</li> <li>- Spacing between each images enhances aesthetics</li> <li>- Both Drop-down arrow and magnifying glass icons helps signify their functionality</li> <li>- Students can provide answers in audio form. This improves universal usability</li> </ul>	<ul style="list-style-type: none"> <li>- The “difficulty level” indicator on the second layer might be irrelevant. In fact, it might discourage students from attempting the activities shown.</li> </ul>
<i>Chamodi's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Dialogues and the tick icons provide feedback on which tasks are completed and yet to be completed</li> <li>- Drop-down arrow to signify functionality</li> <li>- Clear instruction and information about the challenge (topic, number of questions, etc.) might help prevent user errors</li> <li>- Timer on the top right corner of the screen helps reduce short-term memory load (in case students can't remember when they started their attempt or the amount of time remaining)</li> </ul>	<ul style="list-style-type: none"> <li>- Addition of arrows on the “Start” and “Exit” button might enhance discoverability.</li> </ul>

<b><i>Reanna</i></b>		
<i>Reanna's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of icons and dialogue sequence (at the bottom of the screen) to improve discoverability and to indicate which page users are on which can ultimately reduce short-term memory load.</li> </ul>	<ul style="list-style-type: none"> <li>- The first layer might be too confusing; perhaps a hamburger menu or ability to minimize might be useful</li> </ul>
<i>Reanna's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Provision of detailed Student Info helps error prevention</li> </ul>	<ul style="list-style-type: none"> <li>- As the first layer aims to provide plenty of information, the page ended up being too "crowded". Some users might find this problematic and overwhelming.</li> </ul>
<i>Reanna's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> </ul>	<ul style="list-style-type: none"> <li>- As the summary layer aims to provide plenty of information, the page ended up being too "crowded". Some users might find this problematic.</li> </ul>
<b><i>Michael</i></b>		
<i>Michael's Sketch #1</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Have an aesthetic and minimal design.</li> </ul>	<ul style="list-style-type: none"> <li>- Signifiers on the Name, Email and Password field</li> </ul>
<i>Michael's Sketch #2</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Application of arrows as buttons to indicate that the buttons are clickable</li> <li>- Have a game for all the tasks in every subject that keep motivated the student and provide informative feedback on the student's progress.</li> </ul>	<ul style="list-style-type: none"> <li>- All the icons and widget do not have a name on it and it can make the users confused about what is the function of the widgets.</li> </ul>
<i>Michael's Sketch #3</i>	<ul style="list-style-type: none"> <li>- Consistency throughout the design</li> <li>- Have a dashboard to improve discoverability</li> </ul>	<ul style="list-style-type: none"> <li>- Bottom of the screen home widget is cut out and</li> </ul>

	<p>and make it easy for the user to move to another page.</p>	
--	---	--

# High Fidelity Interactive Prototype

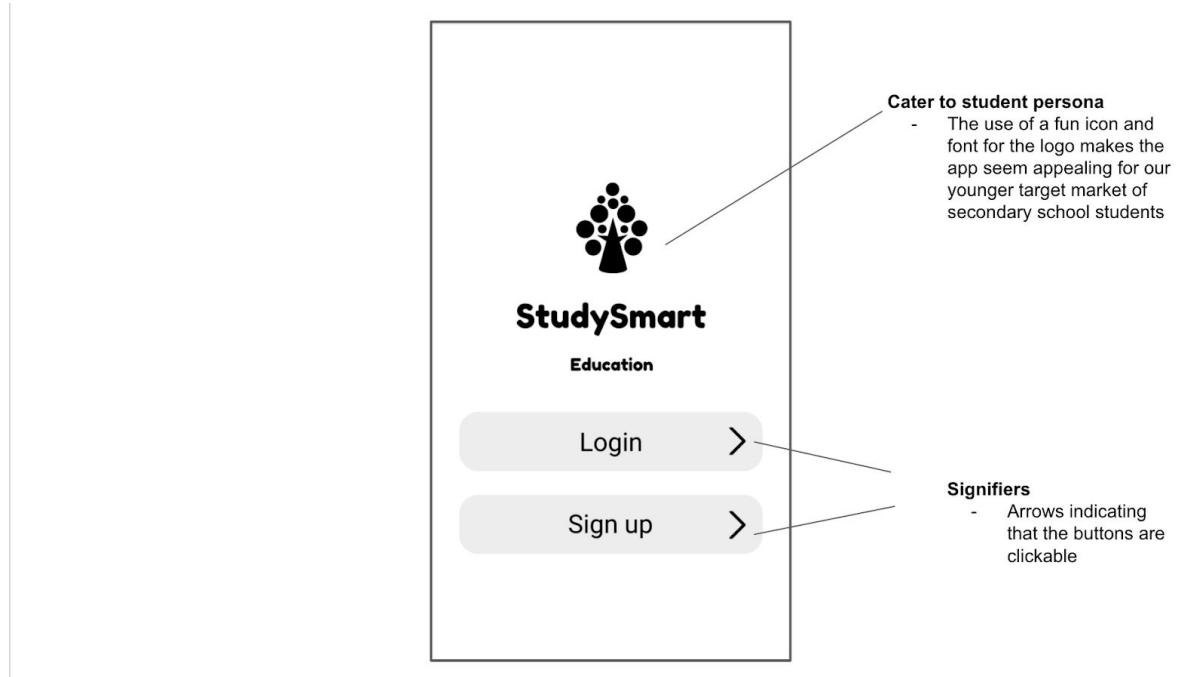
***Link to static prototype (Figma):***

<https://www.figma.com/file/30JBHLnC461qhcSKXKfxJu/Group-5-prototype?node-id=0%3A1>

***Link to interactive prototype (Figma):***

<https://www.figma.com/proto/30JBHLnC461qhcSKXKfxJu/Group-5-prototype?node-id=2%3A2&scaling=scale-down>

# Labelled High Fidelity Prototype



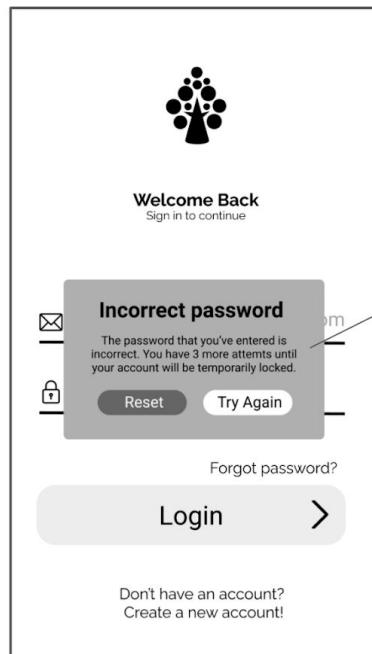
**Permit easy reversal of actions**

- If a user has accidentally clicked the login page instead of the sign up page, the system is forgiving by allowing the user to easily click 'Create a new account!'

**Prevent Errors**  
An example is given to prevent input errors

**Keep users in control**

- If a user cannot access their account, they can easily reset their password by clicking 'Forgot password?'



#### Offer informative feedback

- The error message indicates to the user why the login was incorrect, how many more attempts are left, and what will happen when all attempts are used.
- The error message is useful as it offers the user the option to reset their password

The screenshot shows a mobile application's sign-up process. At the top is a logo of a stylized tree or leaf pattern. Below it, the text "Join Us" and "All fields marked with a \* are compulsory". There are two circular numbered steps: "1" and "2". Step 1 is labeled "Select account type \*". It has two options: "Student" and "Teacher". Step 2 is labeled "What's your name? \*". It includes a note: "Using your real name makes it easier for teachers to recognise you." Below this are fields for "First name" and "Surname". Step 2 also includes a date input field labeled "When's your birthday? \*". The date field contains "MM/DD/YYYY" and has a downward arrow icon. At the bottom is a large "Next >" button.

#### Design dialogues to yield closure

- The application shows the user where they are at in their sign up process

#### Prevent errors

- The application shows the format that the birth date must be written in to prevent incorrect entries
- The system also allows the user to select their birth date from a calendar (via the drop down arrow)

**Permit easy reversal of actions**

- Back arrow allows the user to go to step 1 again if they want to change any of their inputs

**Offer informative feedback**

- The check box fills in grey once the user has clicked it
- Allows the user to know the app had understood their choice

**Reduce short term memory load**

- The same sign up process is used from step 1 to step 2
- The buttons, menu layout and margins are consistent across pages
- This allows the user to not have to relearn functionality and achieve their goal of signing up quicker

**Design dialogues to yield closure**

- The application shows the user where they are at in their sign up process

**Prevent errors**

- The application tells the password requirements preventing incorrect entries

**Feedback**

- The app gives immediate and useful feedback to the user on why their sign up was successful

**Prevent errors**

- The app prevents future unsuccessful sign ups by highlighting to the user which spaces need to be filled in

**Cater to diverse users**

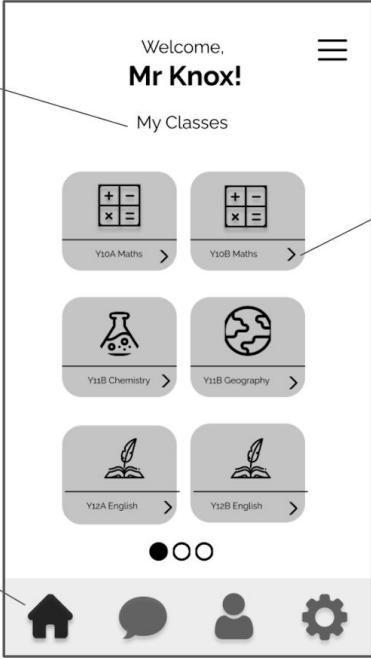
- As well as colour, an alert icon has been used to notify the user what sections need to be filled in
- The icon caters for users that are colour blind, as they may not be able to see the red coloured sections

**Use of Headings**

- The use of headings allows for compatibility with screen readers. This increases the accessibility of the app for users with vision impairments or reading disabilities.

**Activational Feedback**

- By darkening the icon, this gives the user evidence that the control was activated successfully. That is, that they are successfully on the homepage.



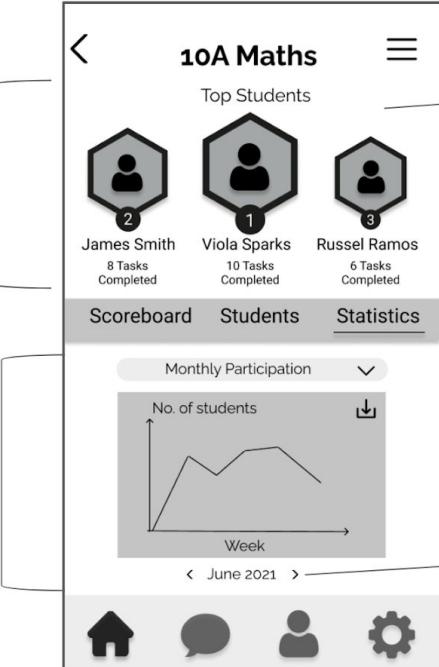
**Clear mapping**

- These arrows demonstrate a relationship between a control and its effects. That is, by placing an arrow to tap on the icon to be redirected to the Y10B Maths page.

---

**Gestalt Theory of Proximity**

- This principle states that there is cognitive tendency to perceive objects close to each other as related. This page displays a border between the two sections of the page with the elements of each section grouped closer together. Thus, users have an intuitive understanding that there are two different goals on this page.



**Satisfies User Requirements**

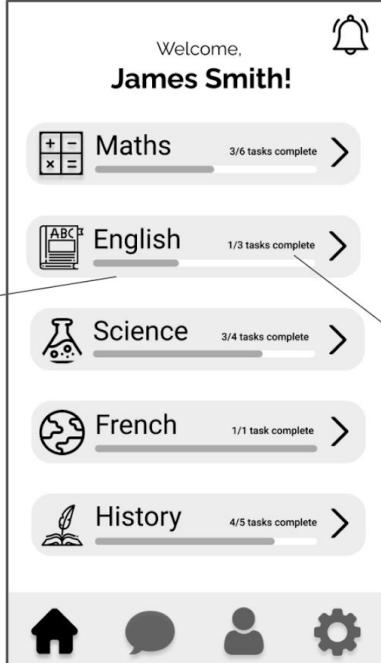
- A common frustration teachers experienced during online learning (as collected from questionnaires) was the inability to track how students are doing academically and personally. This function provides teachers with statistics of classes and students, allowing them to assess progress easily.

**Signifiers**

- These arrows indicate to users that they can scroll through the monthly participation of different months

**Reference to personas**

- In one of our personas, our users trait was that they find it hard to stay motivated
- The progress bar works by helping students feel accomplished when they have finished all their tasks

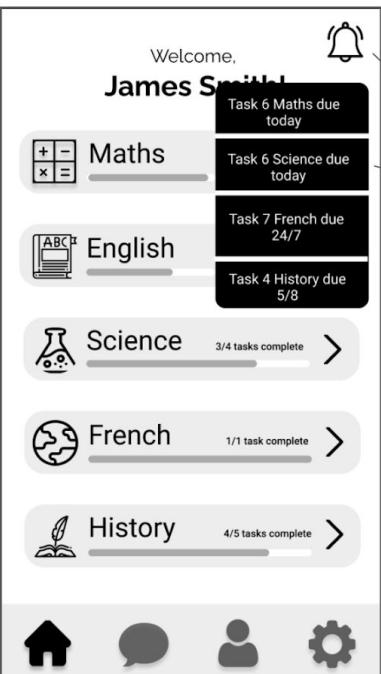


Welcome, James Smith!

- Maths** 3/6 tasks complete
- English** 1/3 tasks complete
- Science** 3/4 tasks complete
- French** 1/1 task complete
- History** 4/5 tasks complete

**Reduce Short-Term Memory Load**

- The progress tracker shows students how many tasks are yet to be completed from the view of a dashboard for accessible notification

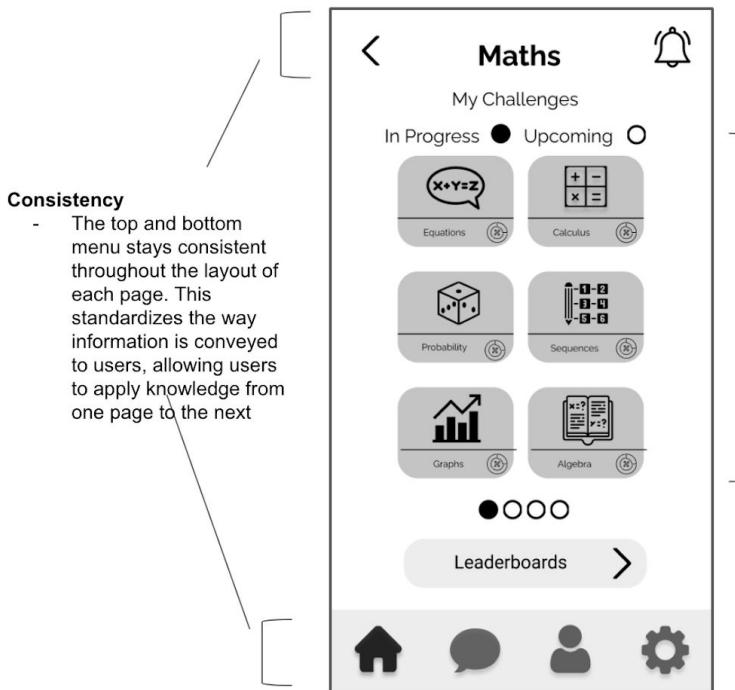
  


Welcome, James Smith!

- Maths** Task 6 Maths due today
- English** Task 6 Science due today
- Science** Task 7 French due 24/7
- French** Task 4 History due 5/8
- History** 4/5 tasks complete

**Reduce Short-Term Memory Load**

- Notifications of tasks that are due, are easily accessed via the icon in the top right hand corner, to remind students what is due, and allow them to plan their study accordingly



#### Consistency

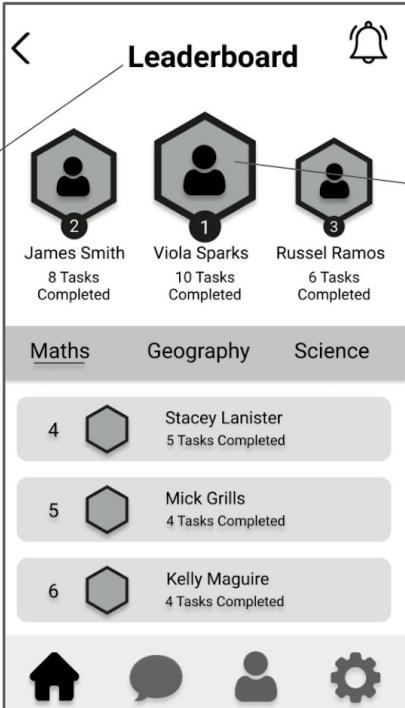
- The top and bottom menu stays consistent throughout the layout of each page. This standardizes the way information is conveyed to users, allowing users to apply knowledge from one page to the next

#### Hick's Law - Categorizing Choices

- This app provides many different challenges that cover a wide range of topics. Categorizing the challenges by topic produces a well-designed user interface in which users spend the least time deciding what to pick next.

**Reference to Personas**

- Relates to competitive trait from personas where students would like to be challenged when learning content

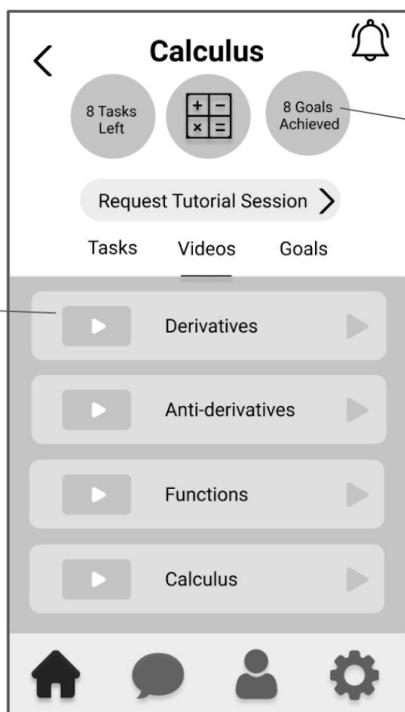


**Von Restorff**

- User profile stands out

**Reference to Personas:**

- Videos relate to having a variety of learning methods for content and prevents lack of focus from a day of online classes



**Reference to Personas:**

- Another trait of one of our student personas was wanting to have goals to achieve during lockdown
- Visually showing how many goals the user has achieved helps students keep motivated

**Cater to persona**

- One of the main frustrations of our users during lockdown was feeling disconnected from their teachers
- Therefore, our app provides an easy way for students to connect with teachers

The screenshot shows a mobile application interface titled 'Request Tutorial'. At the top, there is a back arrow, the title 'Request Tutorial', and a bell icon. Below the title, a prompt says 'Select one or more: '. A list of four time slots is displayed in a grid-like format:

Monday, 1st Jan (10 AM)	<input checked="" type="checkbox"/>
Tuesday, 2nd Jan (2 PM)	<input type="checkbox"/>
Tuesday, 2nd Jan (3 PM)	<input checked="" type="checkbox"/>
Tuesday, 2nd Jan (5 PM)	<input type="checkbox"/>

Below the list is a large grey button labeled 'Submit request >'. At the bottom of the screen are four icons: a house, a speech bubble, a person, and a gear.

**Consistency**

- Layout uses consistent grid, keylines and padding

The screenshot shows the same mobile application interface as the first one, but it displays a confirmation message in a central box. The message reads: 'Your request has been sent! Your teacher will respond shortly.' Below the message is a grey 'OK' button. The rest of the screen layout is identical to the first screenshot.

**Signifier**

- Acts as a prompt to show students how to select sessions for tutorials / one-on-one discussions with teachers

**Design dialogue to yield closure**

This communicates to users that they have completed the request submission, preventing any confusion.

**Cater to student persona**

- One of the main frustrations from our personas were students being bored during online learning
- Having a wide range of topics for the activities will help keep students engaged and interested

**Keep users in control**

- Allow the user to easily change the topic or difficulty to suit their learning needs

**Design dialogues to yield closure**

- Small filled in circle shows the user which page they are on

**Mappings**

- Indicating the button to 'start' the weekly challenge

**Affordance**

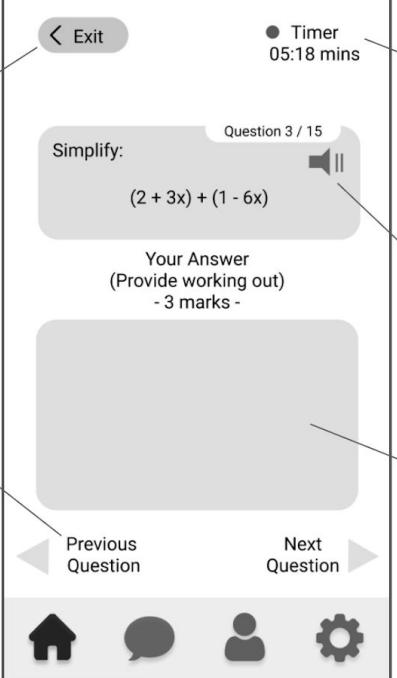
- The drop down menu allows the user to easily select a subject to view what the weekly challenge is about

**Easy Reversal of Actions**

- If the user decides to exit the weekly challenge, they may click on the 'exit' button - note: the button would be accompanied by a dialogue box verifying whether the user intends on exiting the challenge

**Mappings**

- Written indication to move to the next question or back to the previous question (with answers saved automatically) next to arrow icons



**Informative Feedback**

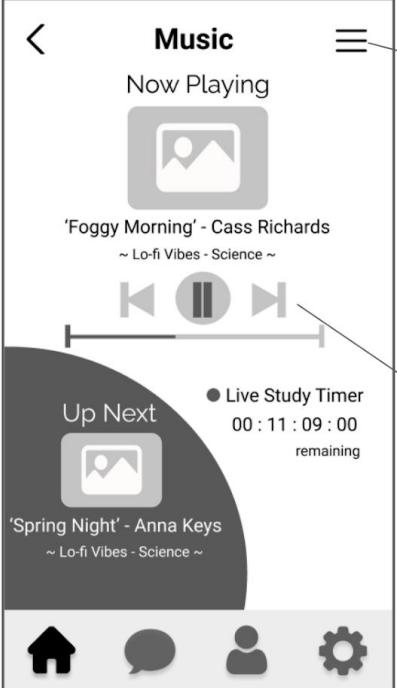
- The timer reminds the user how much time they have taken to do the weekly challenge so far

**Seek Universal Usability**

- The audio feature improves accessibility for students who are auditory learners

**Seek Universal Usability**

- The user may either type or write (using a stylus) their answer in the box provided

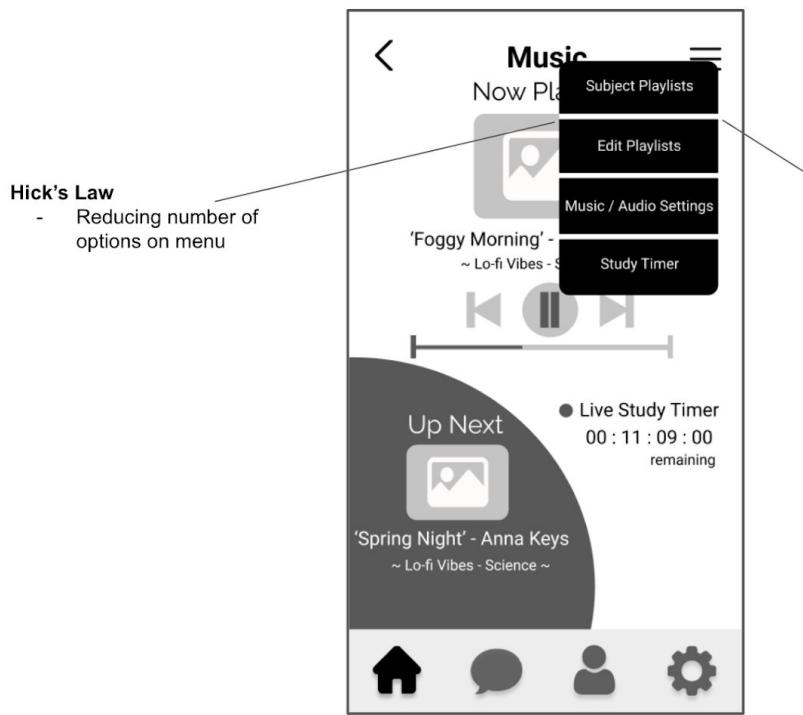
  


**Enable Shortcuts for Frequent Users**

- The hamburger menu allows easy navigation to various subsections (such as 'Preferences' or 'Playlists') of the music function without the need to use the back button

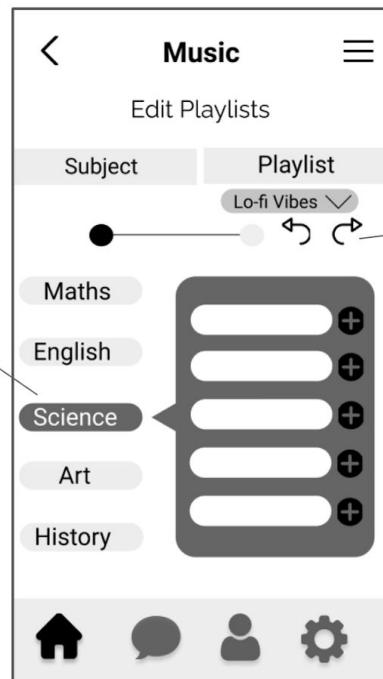
**Signifiers**

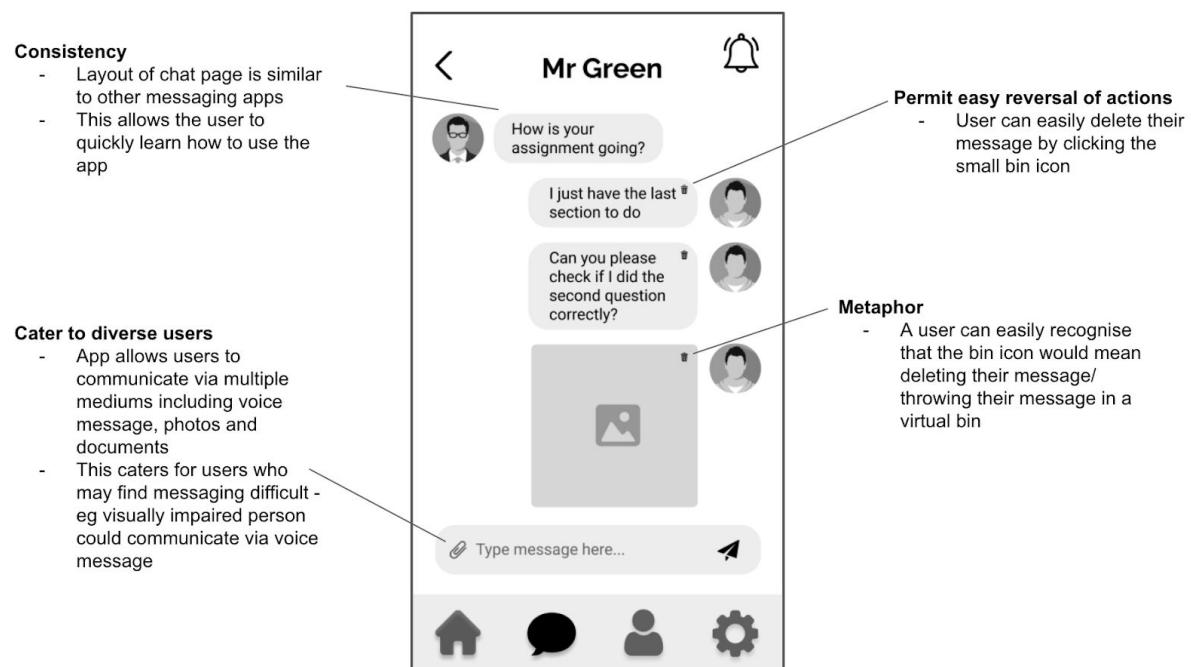
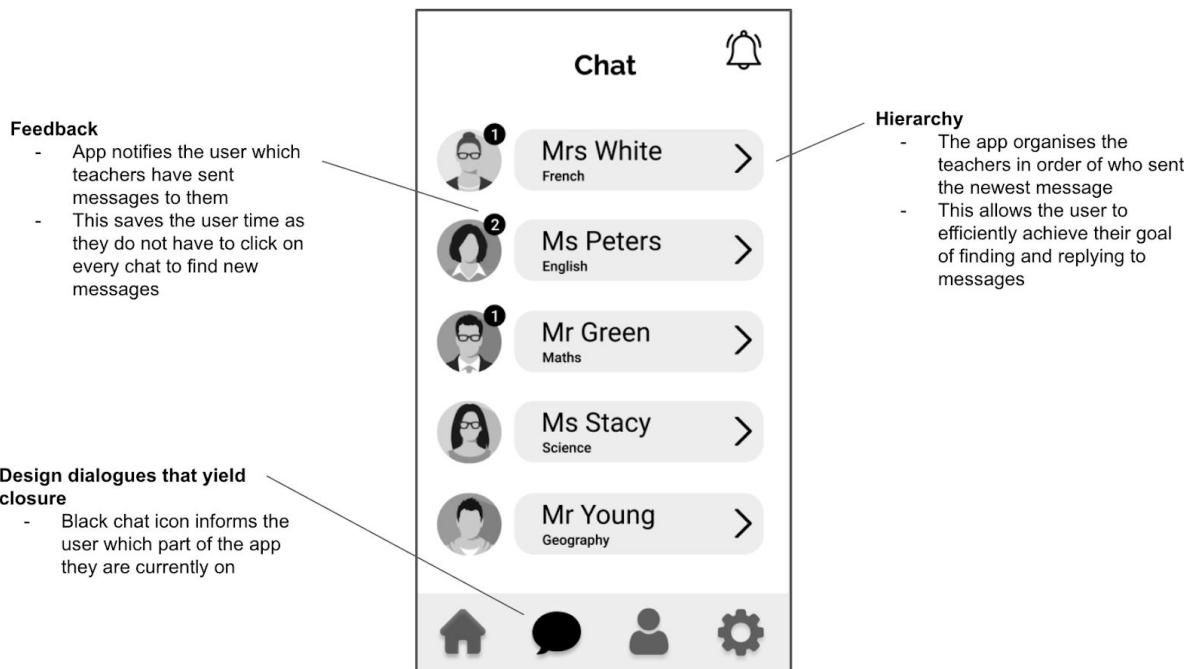
- Using common symbols on various platforms associated with 'pause', 'play', etc



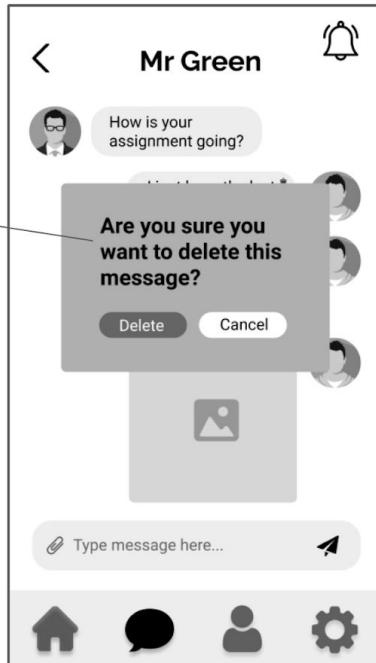
#### Consistency

- The menu button is placed on the top right, as with the notifications button on the student account homepage. This allows users to use their knowledge from previous pages about where to access additional functions.

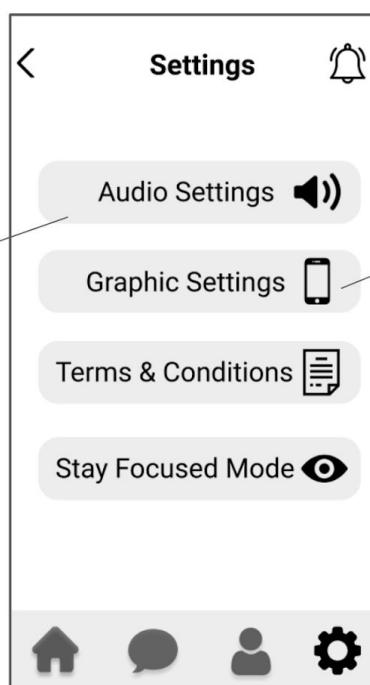




- Permit easy reversal of actions**
- By providing a dialogue box with a confirmation to delete the message, this allows users to reverse a permanent action before it is done. This reduces user anxiety (users are assured that accidentally tapping the delete button won't immediately delete their message).



- Visibility / Discoverability**
- Buttons are enlarged and labelled to indicate what each is intended for
  - This is also supported by related icons



**Icons should be labelled unless their meaning is obvious**

- These buttons have been labelled with both text and icons to help the user fully understand what they mean

**Prevent errors**

- About button helps the user fully understand what stay focused mode is
- This prevents them from entering the mode when they do not want to

**Discoverability**  
The eye icon aims to help users understand functionality

**Keeping Users in Control**  
Giving users authority to set lock duration and manually unlock

**Signifiers**  
Arrows (and drop-down arrows) to indicate clickable buttons

**Welcome Screen**

Welcome,

**STAY FOCUSED MODE IS ACTIVE**

Learn more >

20 min 15 secs before unlock

OK >

**Informative Feedback**

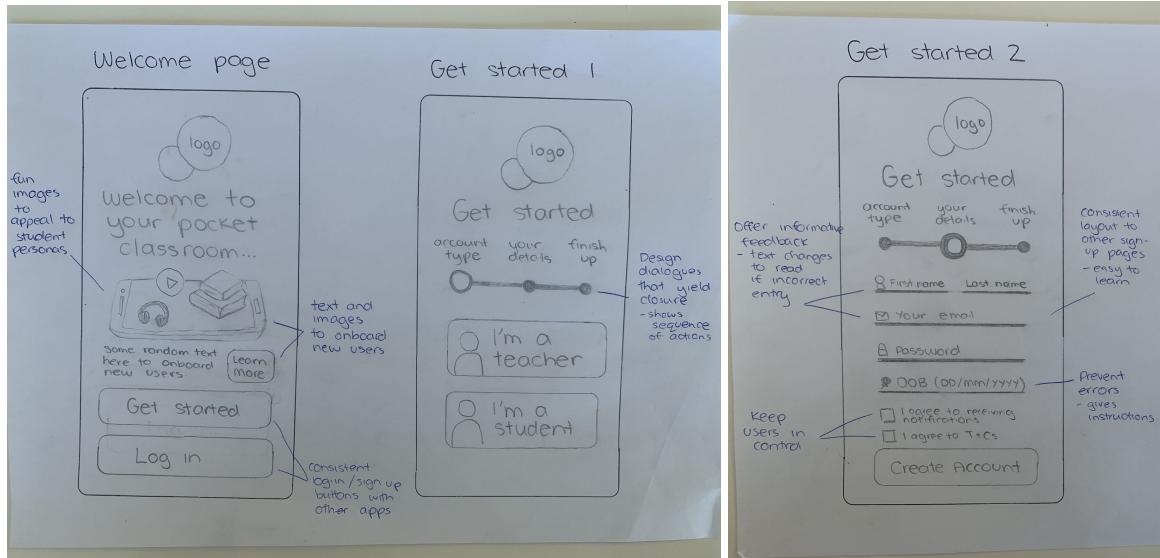
- Tell user that the "Stay Focused" mode is active as well as the remaining lock duration

# Appendix

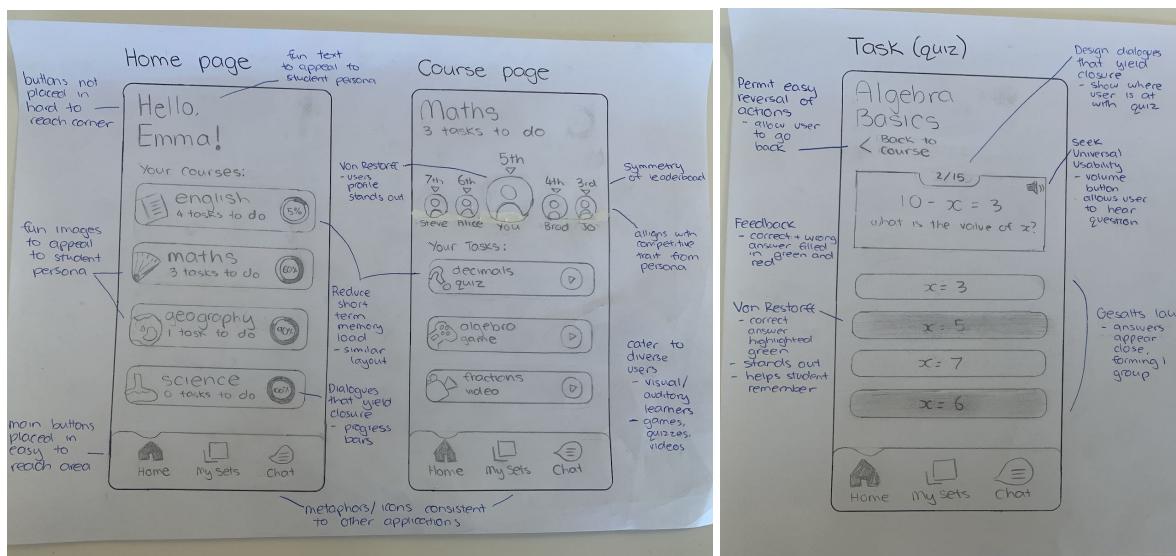
## Individual Sketches

### Brigitte's Sketches

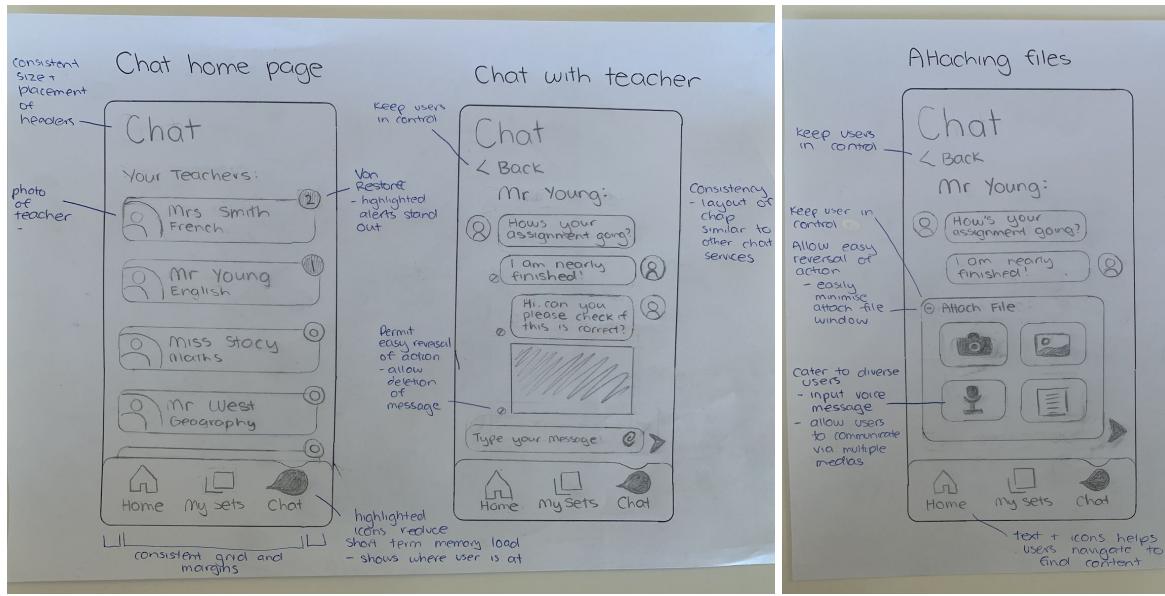
#### Welcome Page → Sign Up Process



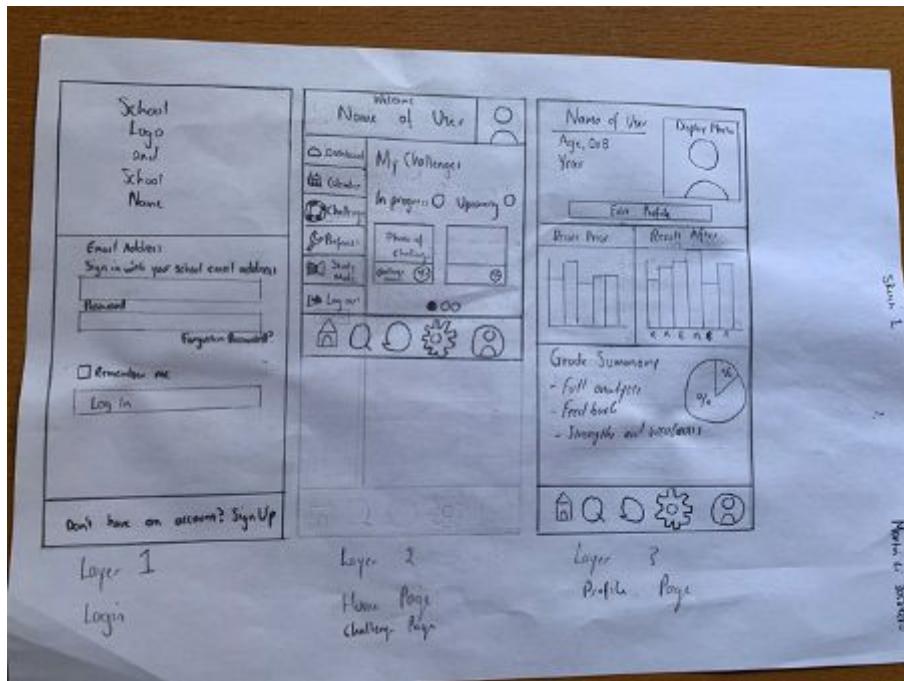
#### Home page → Subject page (eg Maths) → Task (eg Quiz)



Chat home page → chat with teacher → attaching files to chat



## Martin's Sketches



**School Logo**

**School Name**

Email  
Password

Login

Finger-printed?

Sign Up  
Need Help?

**School Logo**

**School Name**

Email  
Password

Remember Password  
The password will be stored  
After 30 days of inactivity  
Delete my account  
OK

Finger... Printed?

Sign Up  
Need Help

**What's your name?**  
First name:  Surname:   
Using your real name makes it  
easier for others to recognize you.

**When's your birthday?**  
January 2021

You can choose who can see this  
from your profile

**What's your gender?**  
Female:   
Male:   
Other:

**What's your email address?**

Create a password

Forgot Signing Up

**Sign Up**

**Layer 1**  
Login

**Layer 2**  
Login Details Required

**Layer 3**  
Sign Up Details

**School 2**

**Maria L. Garcia**

**Welcome Back**  
Sign in to continue

Email

Password

Forgot password?

Login

Our app is available on both +  
new devices!

**School Name**  
User Name:  2  
Email:  Garcia\_1991  
School Logo

**User Name**  2  
Email:  Garcia\_1991  
School Logo

**Display photo**

**My Challenges**  
•  
•  
•  
•  
•  
Challenges completed  
 90% complete  
 100% complete

**Set a new challenge**

Select a date to complete your  
new challenge  
Sun Mon Tue Wed Thu Fri Sat  
00:00 Sun Mon Tue Wed Thu Fri Sat  
00:00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

**SET**

**Grade Summary**  
(Subject)  
 5)

**Notes (N=1)**  
 A)

**Description**  
- what do I expect?  
- What challenges are helpful?  
- Reminding of everything  
- Analysis of results

**Layer 1**  
Login

**Layer 2**  
Home Page  
Challenge Page

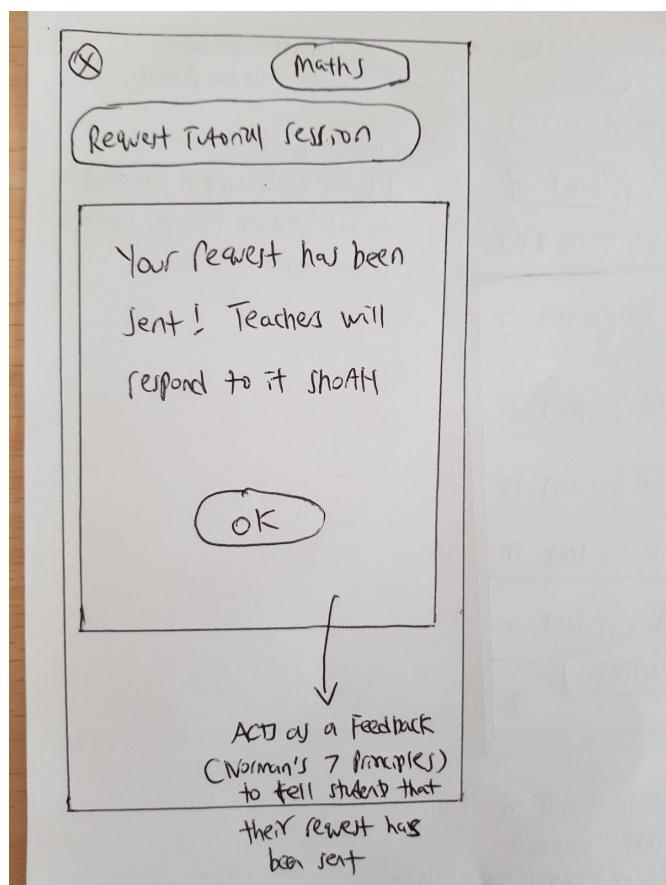
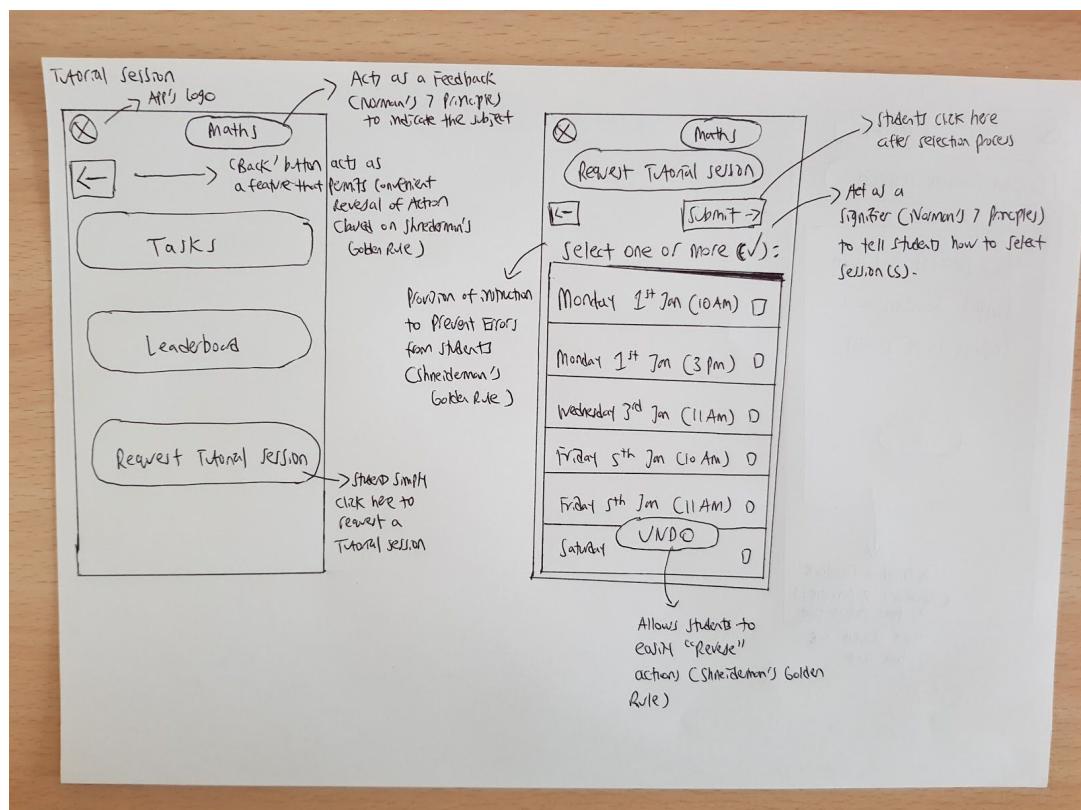
**Layer 3**  
Profile Page

**Mobile** **Parents**

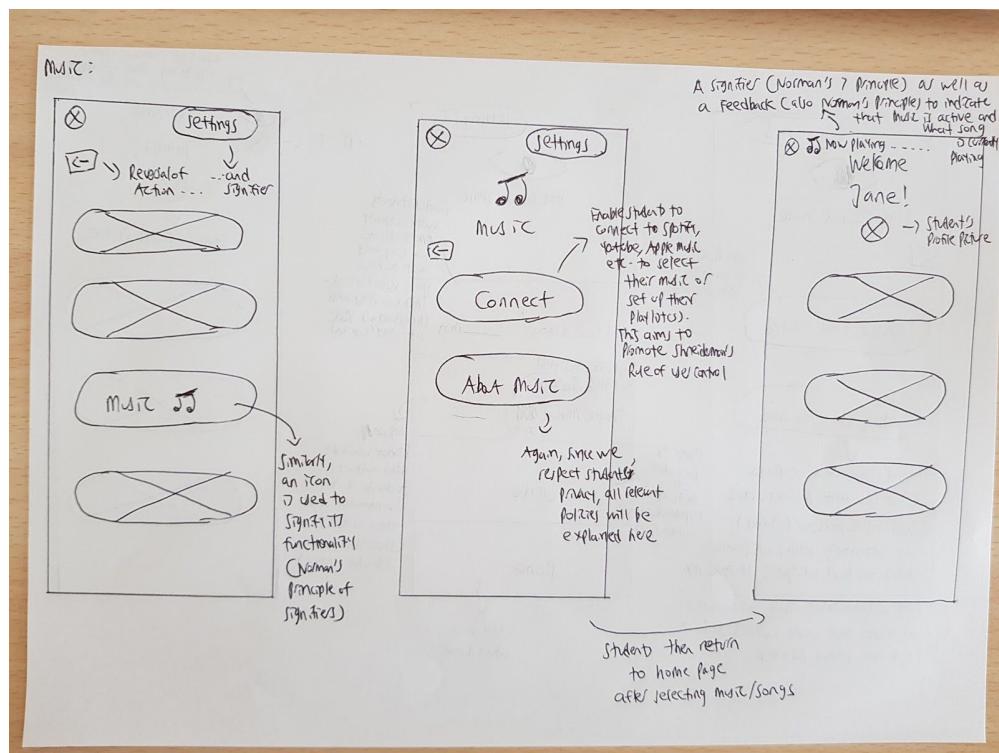
**Search**

## Darren's Sketches

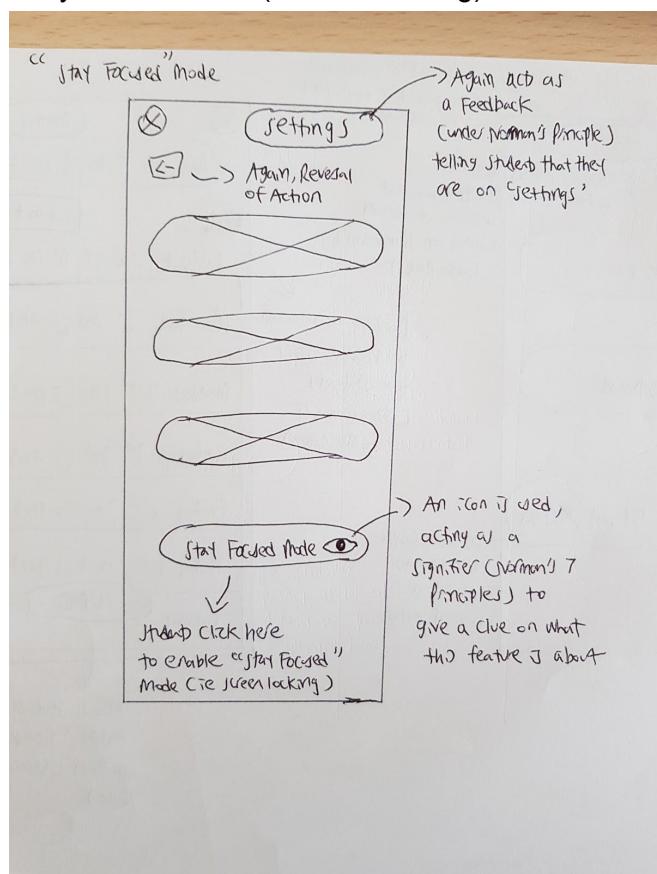
### Tutorial Session:

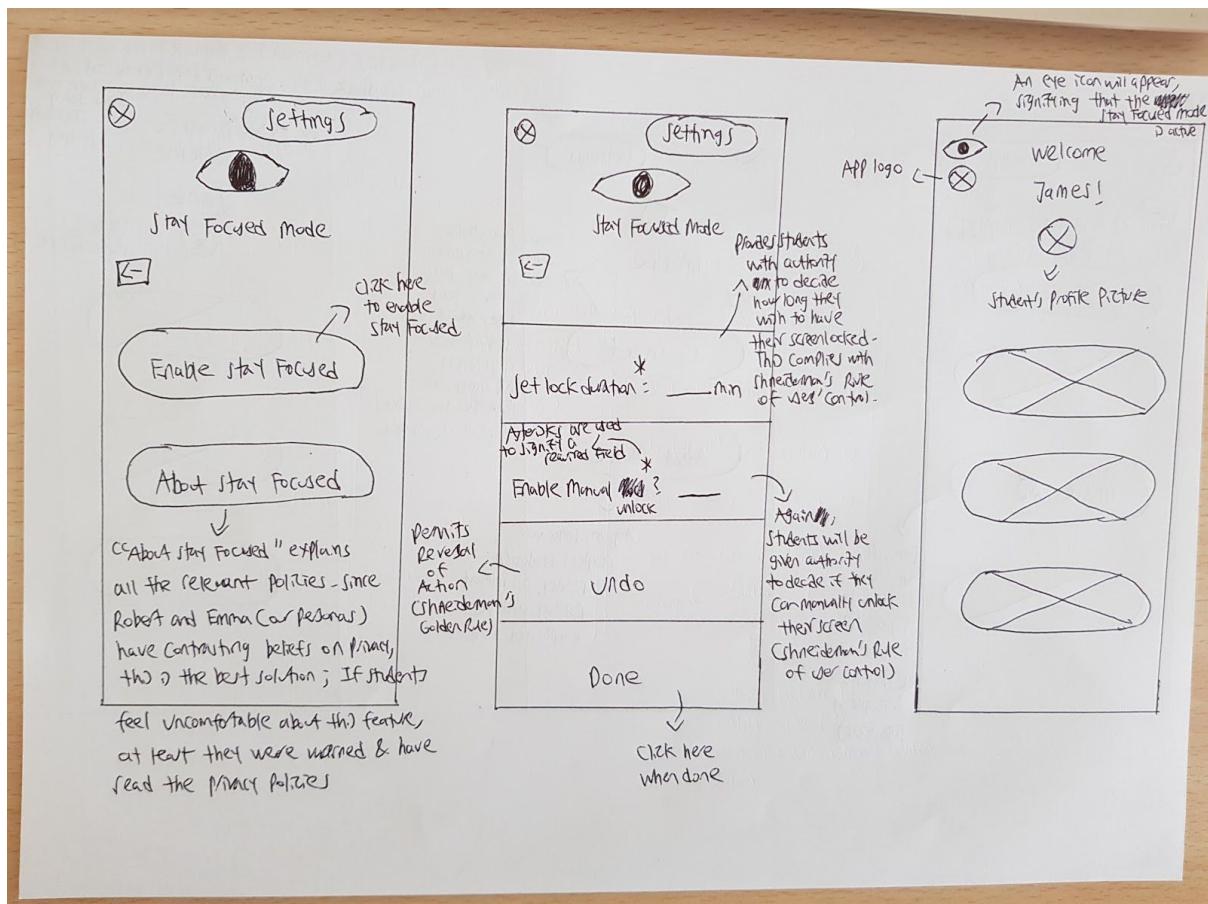


## Music:



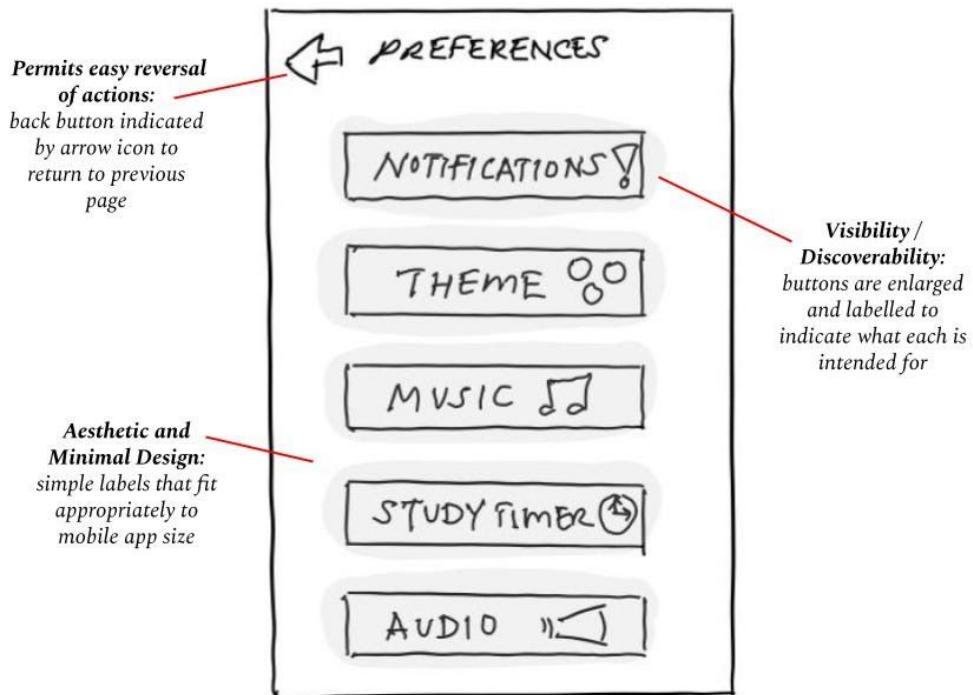
## "Stay Focus" mode (Screen Locking):



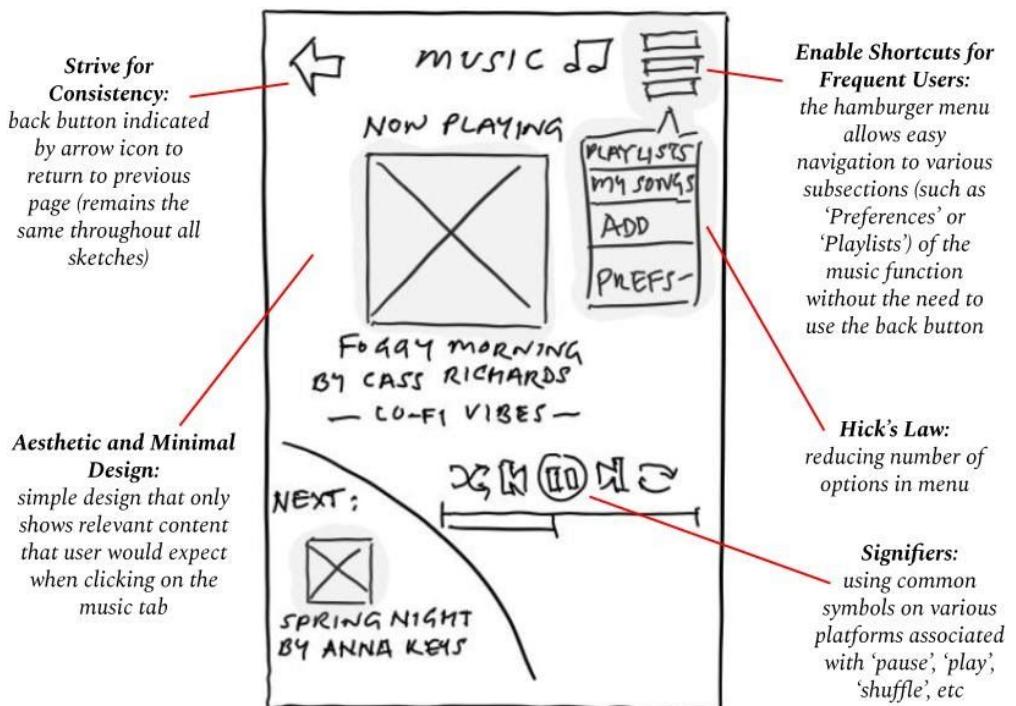


## Chamodi's Sketches

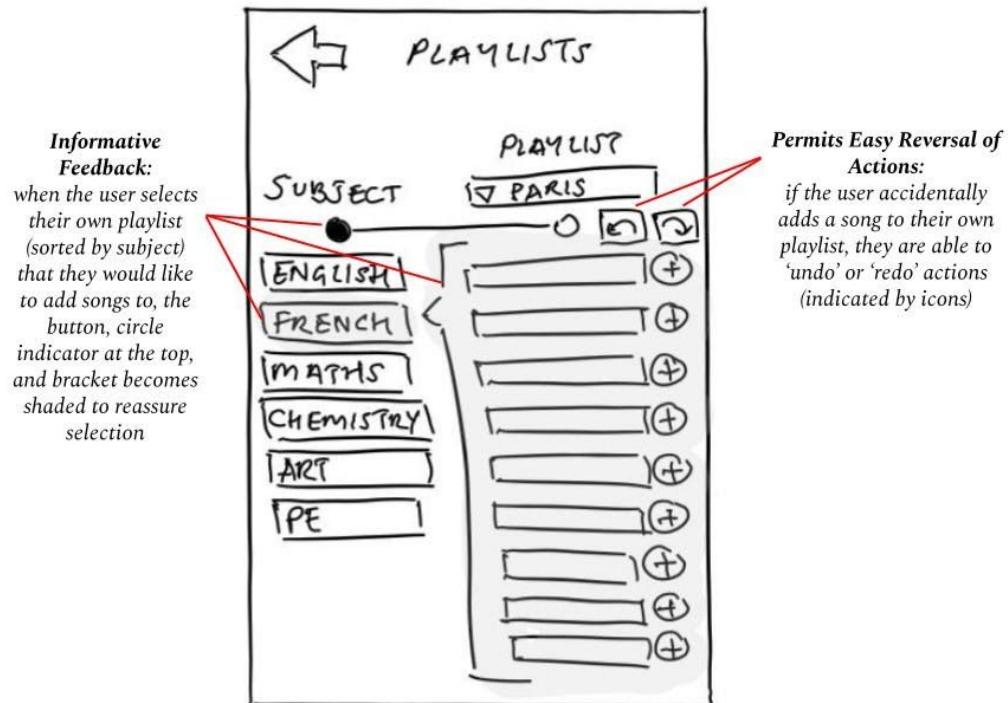
### MUSIC FUNCTIONALITY: SKETCH 1



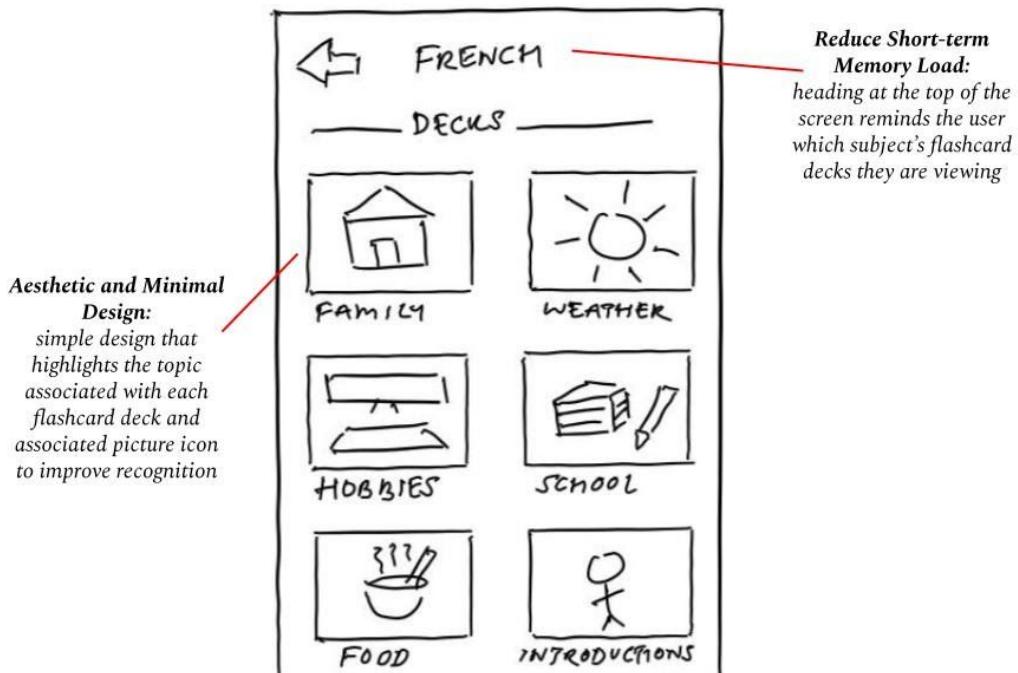
### MUSIC FUNCTIONALITY: SKETCH 2



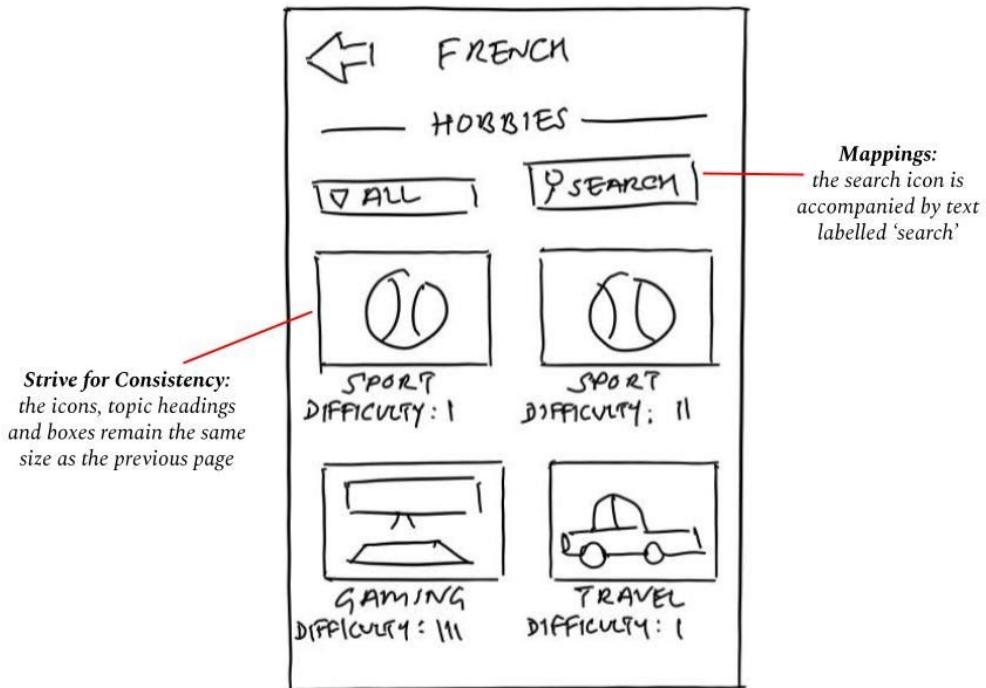
### MUSIC FUNCTIONALITY: SKETCH 3



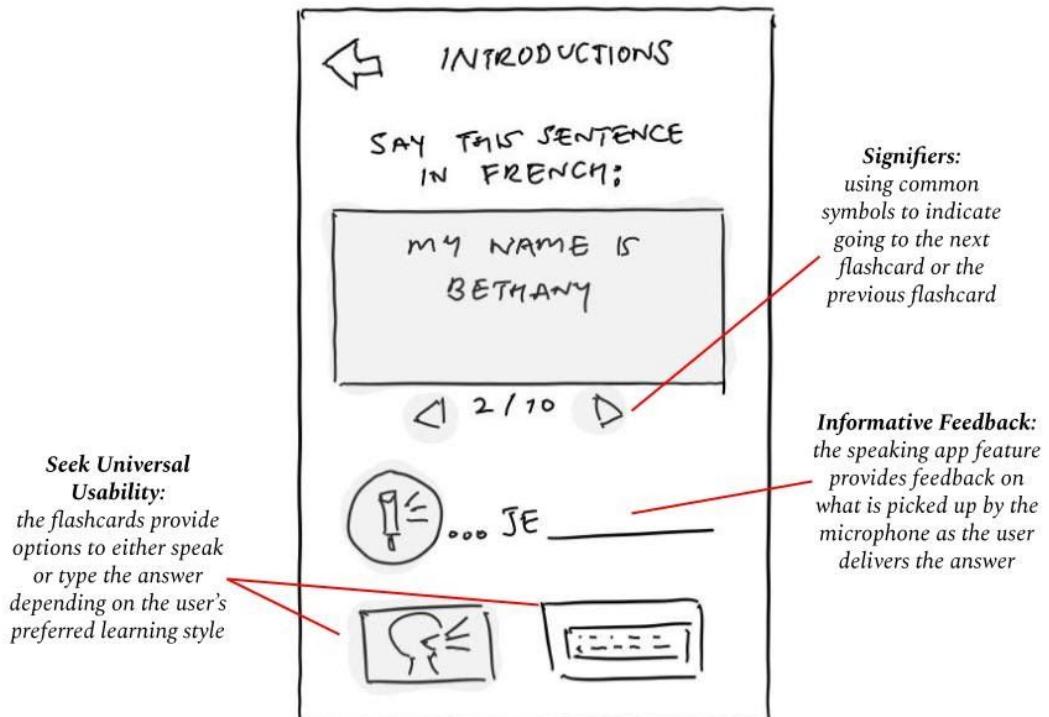
### AUDIO / VISUAL FLASHCARDS: SKETCH 1



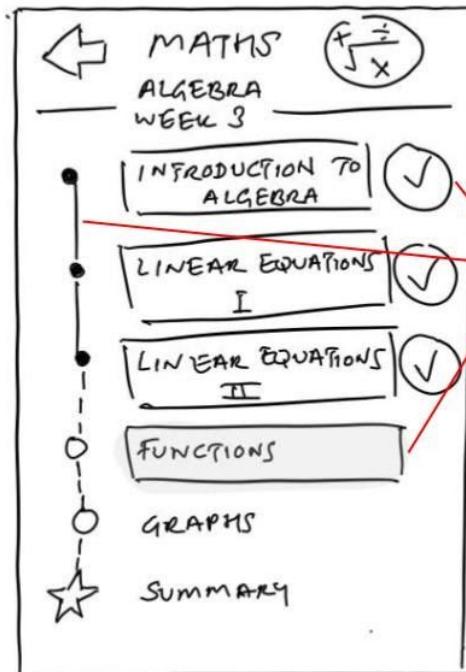
## AUDIO / VISUAL FLASHCARDS: SKETCH 2



## AUDIO / VISUAL FLASHCARDS: SKETCH 3

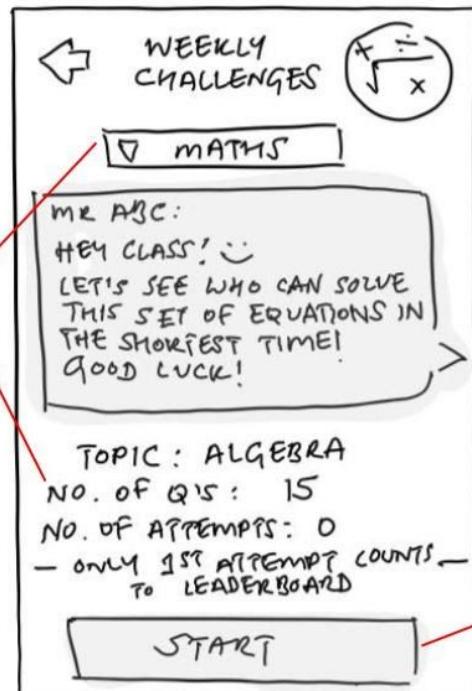


## CHALLENGES / EXTENSION EXERCISES: SKETCH 1



**Informative Feedback:**  
tick symbols indicate when a module / exercise has been completed, along with a vertical progress bar, and shaded button to show which module the user is up to

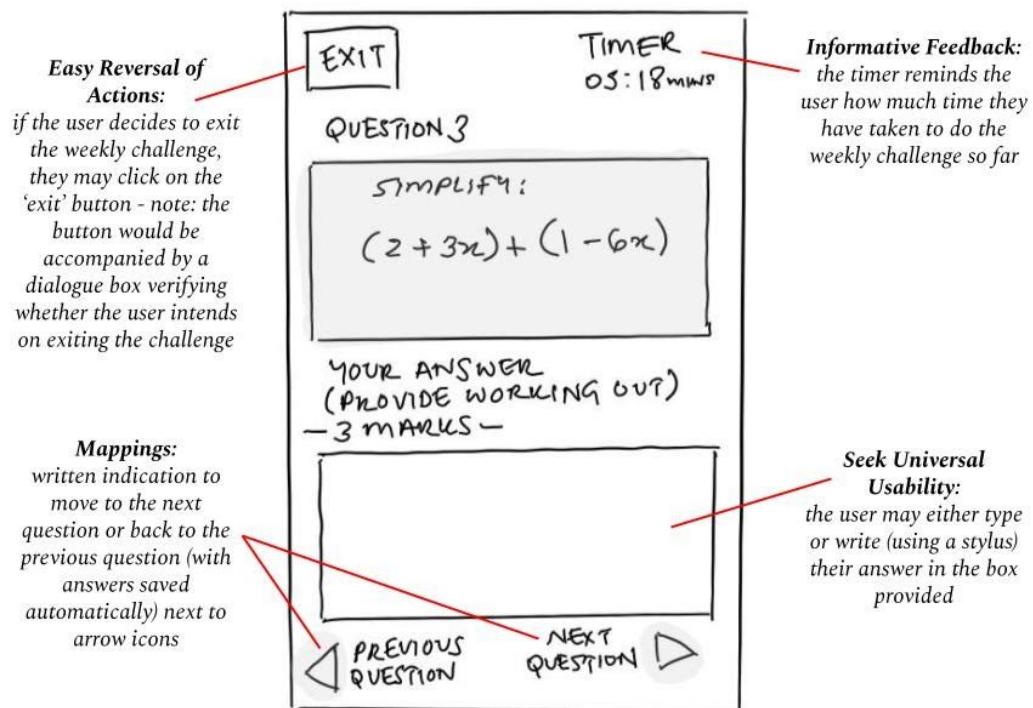
## CHALLENGES / EXTENSION EXERCISES: SKETCH 2



**Affordance:**  
the dropdown menu allows the user to select a subject to view what the weekly challenge is about, without beginning unprompted (which would leave the user clueless on what the task is)

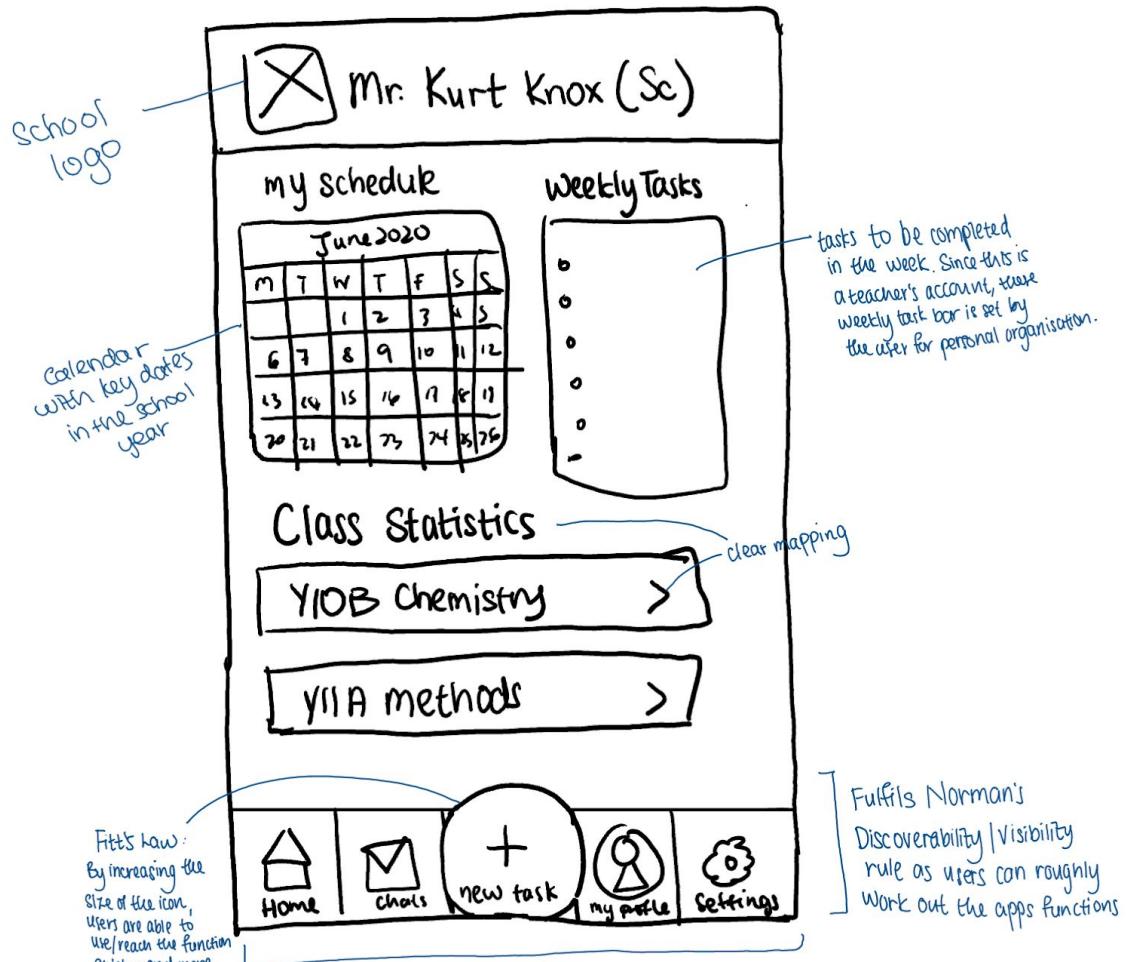
**Mappings:**  
indicating the button to 'start' the weekly challenge

## CHALLENGES / EXTENSION EXERCISES: SKETCH 3

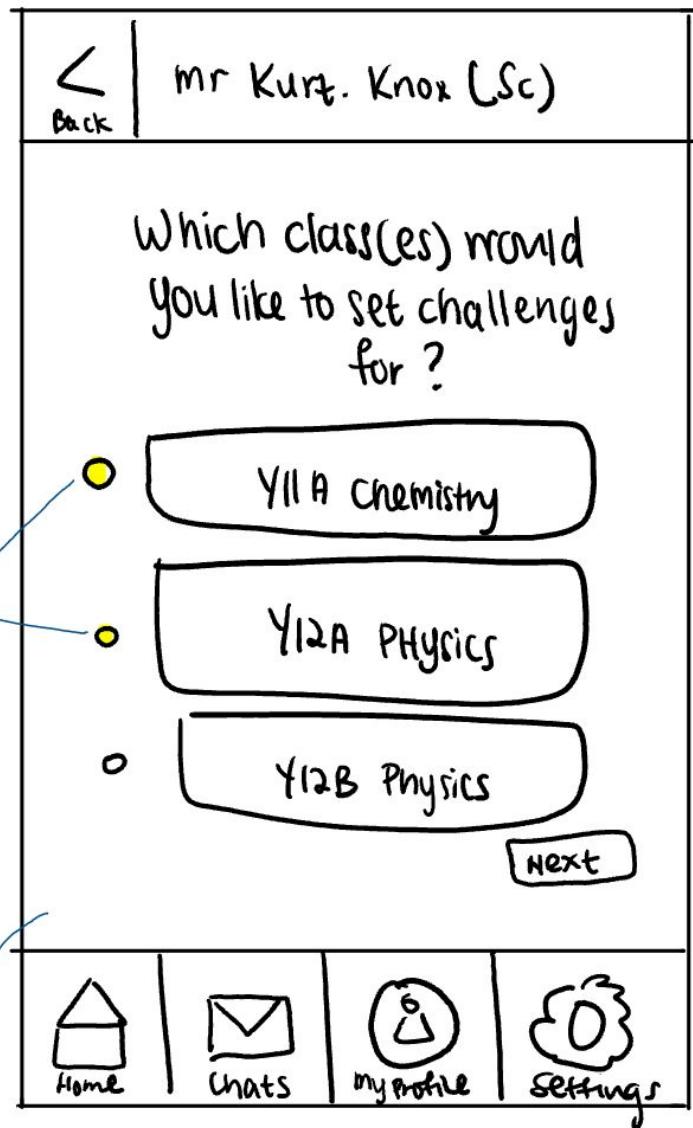


## Reanna's Sketches

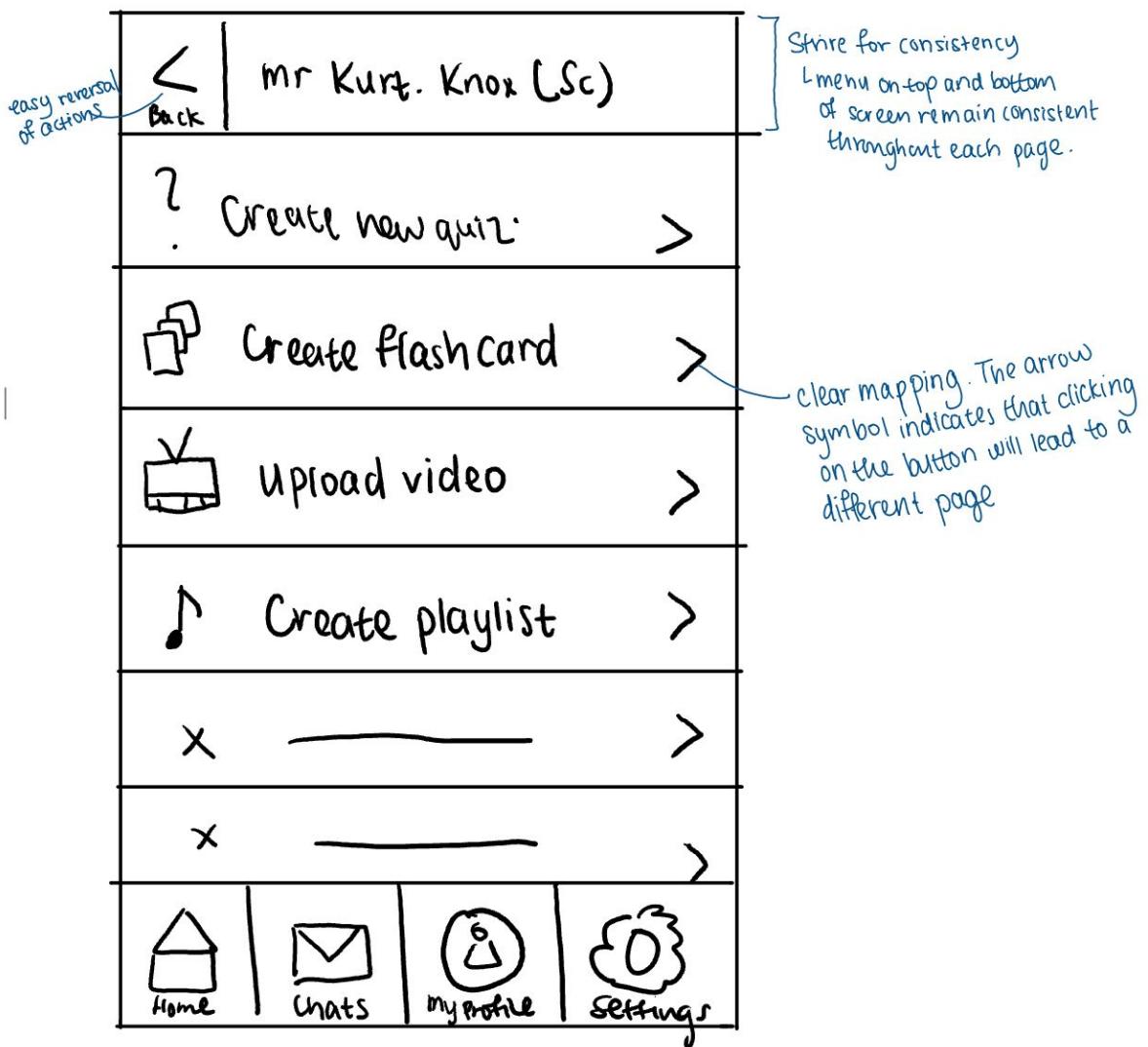
Home page -> Adding new tasks (Teacher's account)



Fitt's Law - menu placed at the bottom of the screen as it is easiest for users to reach.



This simple page fulfils one of Schneiderman's golden rules for interface design (i.e. reduce short-term memory load). By keeping it simple, users are also focused on the task at hand — selecting classes — thus they are not distracted.



View class statistics

< Back | Mr Kurt. Knox (Sc)

**Year 11A Mathematical methods**

**STATISTICS**

weekly participation ✓

allows teacher to view statistics on weekly/monthly participation rates, as well as average grade throughout months/school terms

This page fulfills Shneiderman's rule to reduce short-term memory load. By condensing what could be a multipage display, this design seeks to work around the limitations of human processing.

Gestalt Theory of proximity  
↓  
By grouping these icons together closely with the same mapping, users will have the understanding that by clicking on any profile, it will reveal information on each individual student

**STUDENT SCOREBOARD**

# 1		Jane Doe	>
# 2		John Smith	>
# 3		✓	>

Home | Chats + new task | my profile | Settings

Fitt's law and Norman's principle for consistency

By tapping twice on the new task button, the user will automatically be redirected to the page to create a new challenge for the class. This fulfills Shneiderman's rule to enable shortcuts for frequent users.

<  
Back

mr Kurt. Knox (Sc)

John Smith

# 2

on scoreboard

Weekly participation ✓



This fulfills affordance by including a drop-down option, users know that the app can display different statistics on the student.



message

< June 2021 >

Signifiers: indicates to users that they can scroll through different months

## STUDENT INFO

DOB: xx/xx/xx

House: Sturt

Classes: xxx



Home



Chats

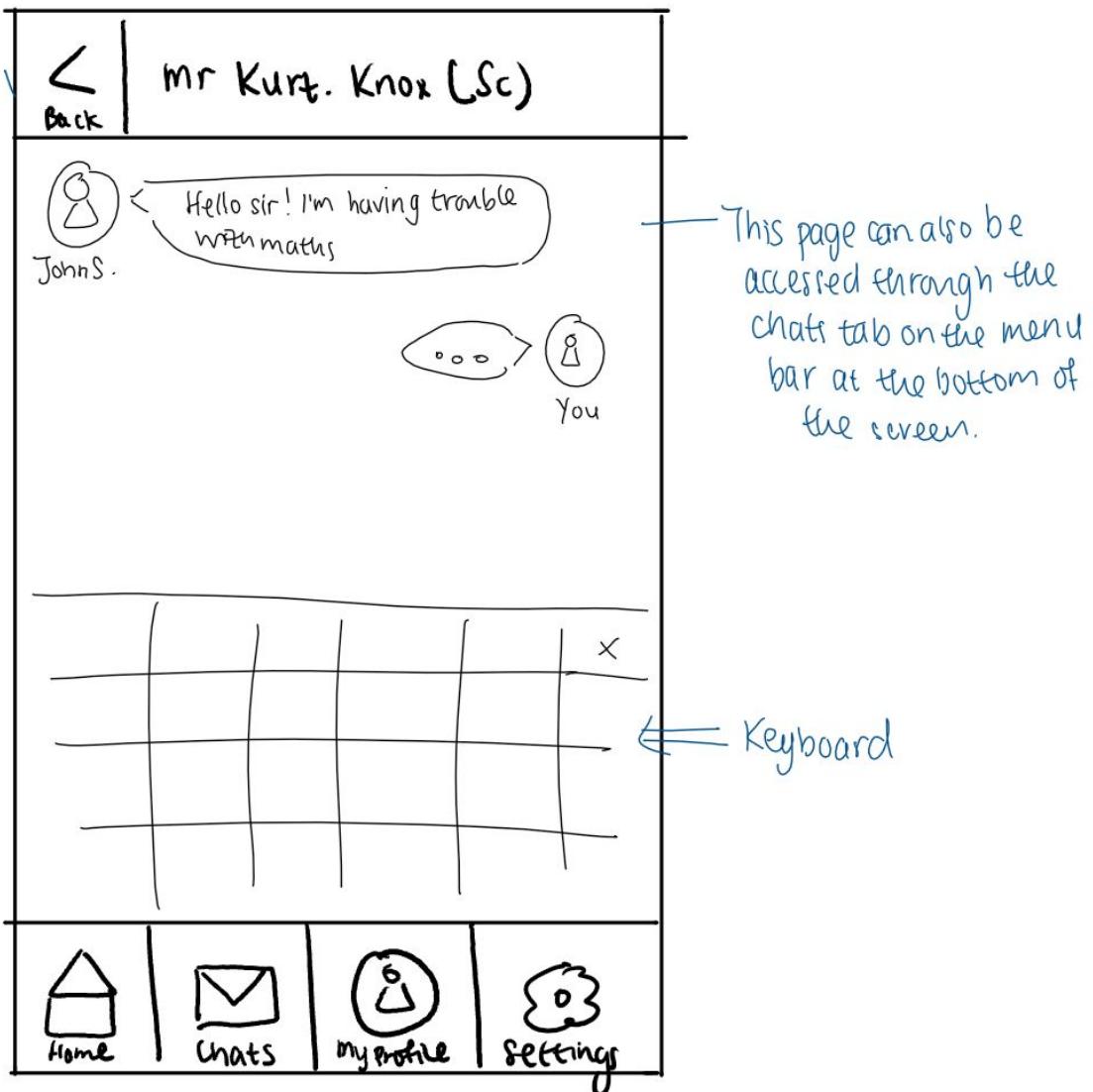


my profile



Settings

After clicking on 'message' button,



To complete challenges (Student account):

A common frustration of users during online learning is the lack of interaction with teachers. This note section can be used by teachers to make announcements in real time. This can help users feel like their teachers are not too unreachable and distant.

< Back | Ms. Elle Suri (Y10)

## Y10A Chemistry

Note from Ms Dervenish 

- Finish Tasks by 11/12 !

### Scoreboard

#1	👤 Jane Doe	12345
#2	👤 John xx	23697
#3	👤 xx xx	xx
#4	👤 xx xx	xx
#5	👤 xx xx	xx

### Tasks :

HomeChatsMy ProfileSettings

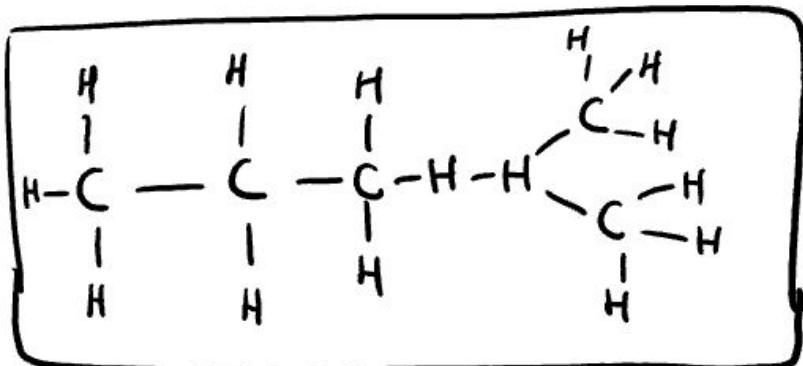
More users identified as competitive and motivated by peers. Hence, this scoreboard is designed to create healthy competition between peers to provide motivation.

Visual feedback. When pressed, the button will have the impression of being depressed.

X  
Exit

Ms. Elle Suri (Y10)

## Question I



What is the molecule?

- A.  XX XX  
B.  XX XX  
C.  XX XX  
D.  XXXX

Check

Strive for consistency.  
The button to proceed to the next page is always at the bottom right.



Home



Chats



my profile



settings

Informative feedback.

Allows users to know how much of the quiz they've finished.

You must answer the  
question before checking!

When the user clicks on the "check" button before answering, this flag will pop up at the top of the screen. It fulfills one of Shneiderman's rules to offer simple error handling.

X  
Exit

Ms. Elle Suri (Y10)



Good Job!

1 down, 10 more to go!

Next



Home



Chats



my profile

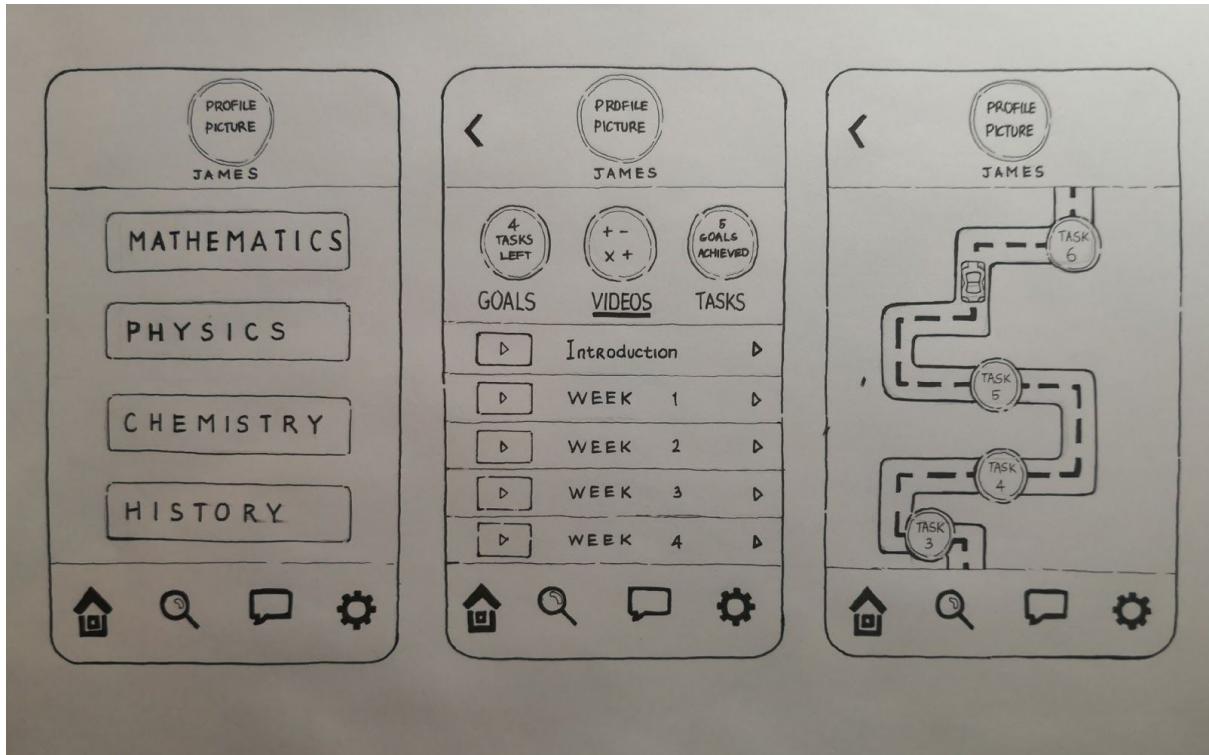
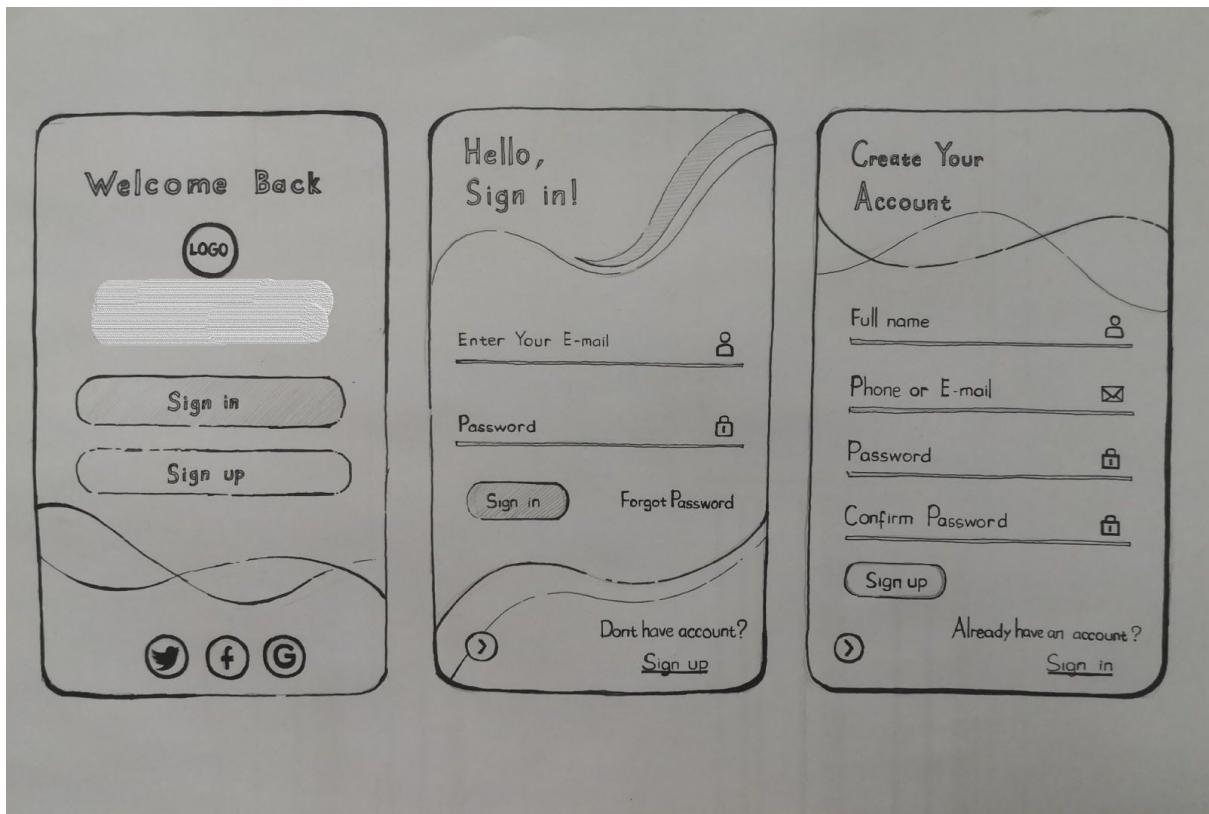


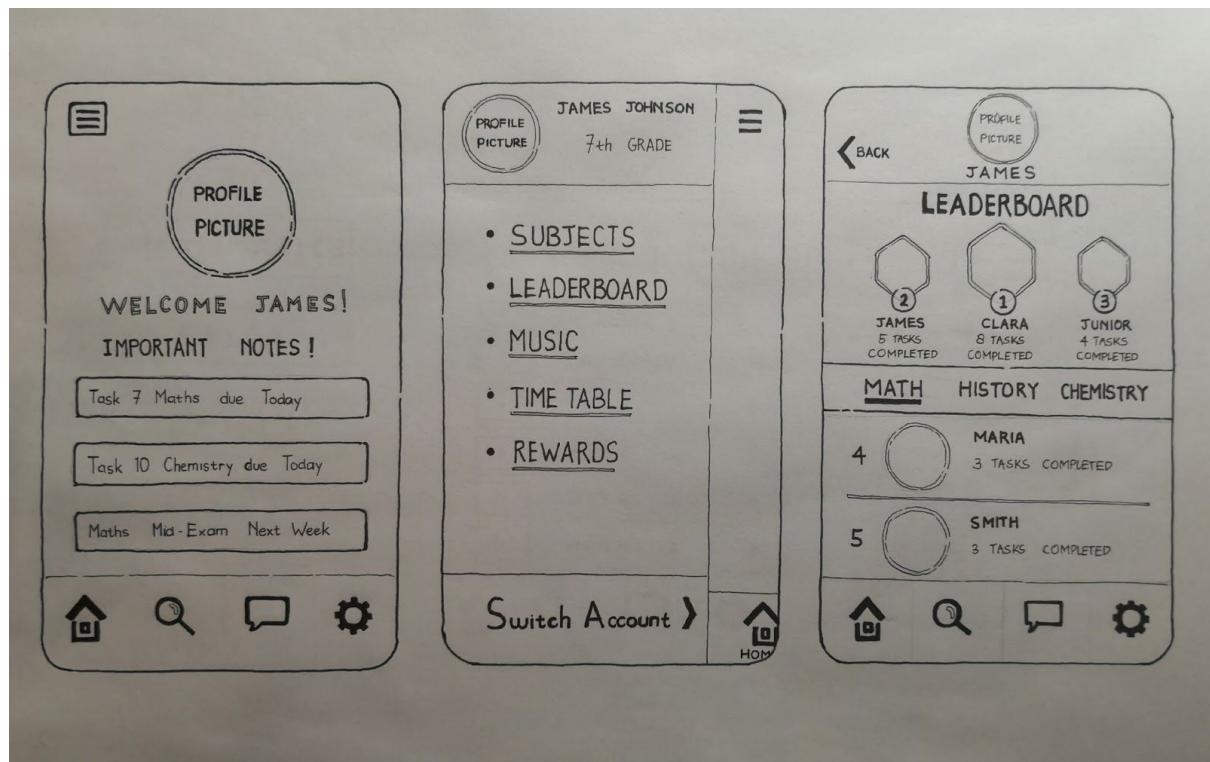
settings

Fulfils Norman's principle of behavioural feedback. This indicates that the student has answered correctly.

Meets Schneiderman's rule of designing dialogue to yield closure. After answering the question, the user knows that they have completed the question and move on to the next question.

## Michael's Sketches





## References

All icons used in the final prototype were taken from <https://www.flaticon.com/>  
Under the flaticon license, these icons are free to use for personal and commercial use.