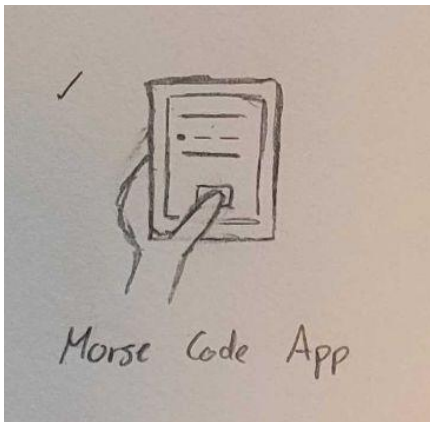
Here were our ideas for designs and what we managed to come up with for our first initial ideas. Generally, the common interests that we found seemed to be many interactions that involved testing reactions, for instance like hitting the button when the screen blinks blue, or hitting a button faster than an AI opponent. More overlapping ideas involved interactions that would give the user a random image, fact, location and/or basically anything to pass the time as they press the button.

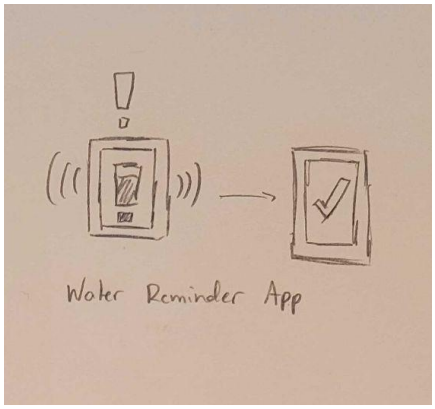
Through all the sketches, we narrowed down our ideas to those that seemed the most interesting to us, and how creative we could make it. Our attention turned towards the following ideas and sketches:

10 Project Sketches

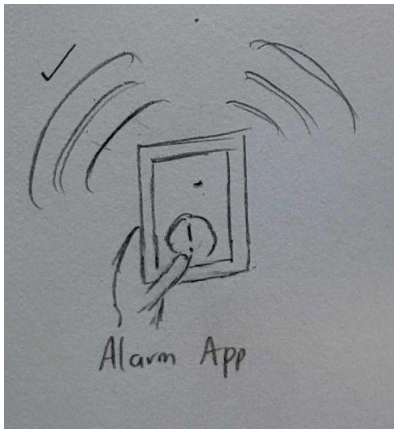
1) **Morse Code Game**
   The basis for this sketch/idea was that the user played a game or test of sorts, to practice their morse code skills. We thought it was interesting because many people don't consider morse code now in their daily lives. Furthermore, morse code just needs a button to learn. We did not end up choosing this idea as it has been done in different ways before and it is not a novel idea. Other than maybe computer science students, not a lot of people would enjoy learning morse code. This was one of the ideas the group chose from Joshua's sketches.



2) **Water Reminder app**
This idea's main purpose was to remind the user that they need to drink water. Sometimes people forget to drink water often, and thus this app helps with reminding them to do that. Every hour or so, the app will sound an alarm of sorts to tell the user to drink some water. Once the user drinks some water, they can click the button to stop the alarm. We did not end up choosing this idea as it has been done in different ways before and it is not a novel idea. This was one of the ideas the group chose from Joshua's sketches.



3) **Alarm App**
This idea's purpose was to enable users to have a loud alarm on them at all times. This app centered around the idea of alarm devices that people pull when they are in distress, and thus attracting attention. We thought that not a lot of people carry those devices around, but everyone nowadays has a phone, and thus we thought it would be a great app. We did not end up choosing this idea as it is not a novel idea and there are rare cases when it would be useful compared to calling for help.This was one of the ideas the group chose from Joshua's sketches.

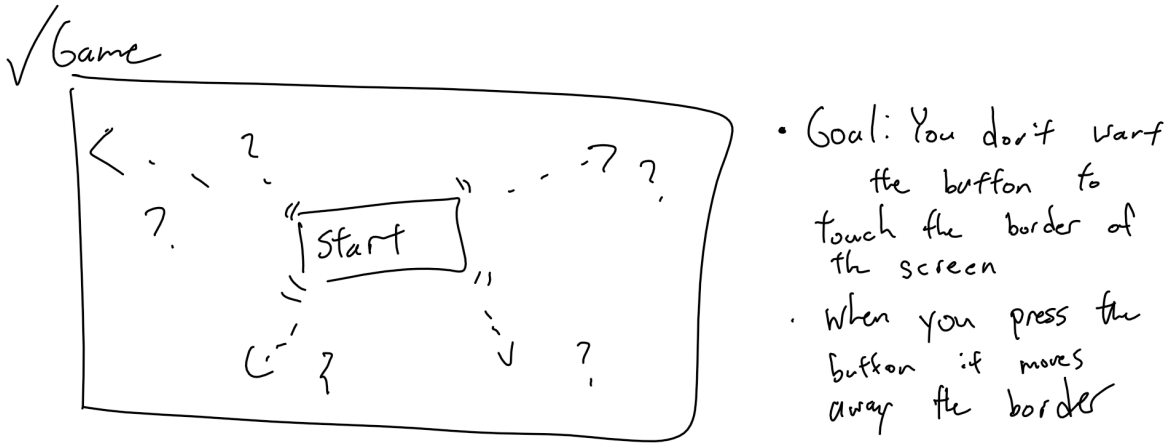


4) **Car Drifting Game**

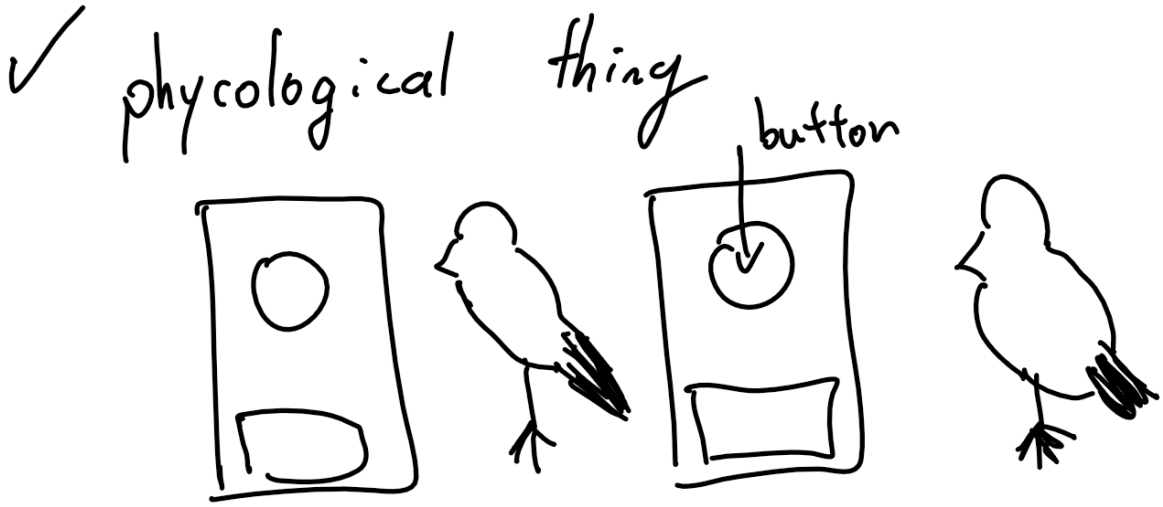
This idea was a game for the user to click and hold the button in a correct series of sequences to drift the car into the correct orientation. We did not end up choosing this idea as it requires us to know the drifting knowledge, and implementing this idea in the timeframe might not be feasible. This was one of the ideas the group chose from Jin's sketches.

5) **Bouncing Button Game**

In this idea, we had the thought of having a button that moved around on the screen, and clicking the button would return the button to the middle of the screen. The user would lose if the button hit the edge of the screen, and thus the objective of this game is to keep the button from hitting the sides of the screen. We did not end up choosing this idea as it resembles sort of like a different Pong game. This was one of the ideas the group chose from Jin's sketches.

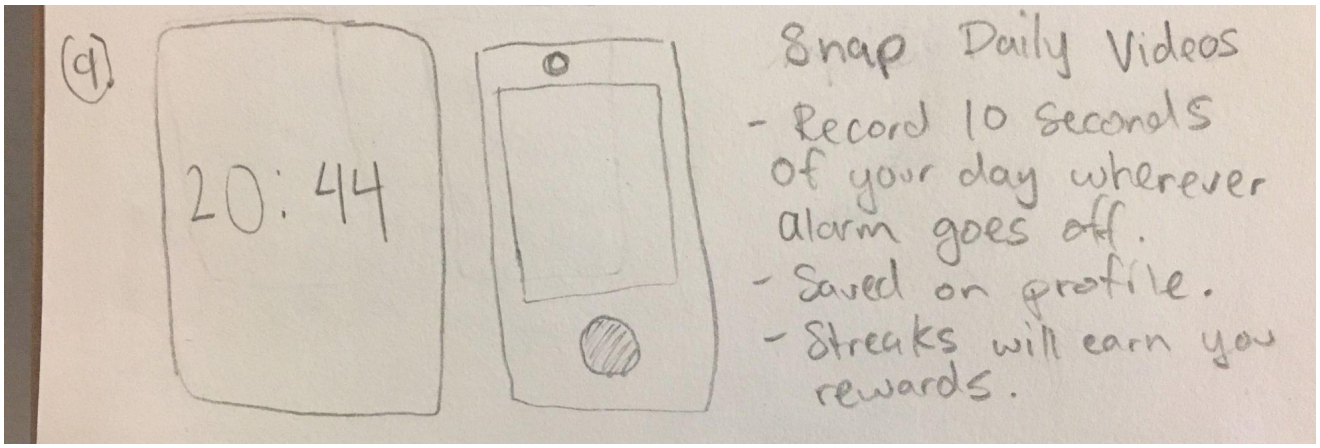


6) **Psychology Test App**
This idea was centralized around parents or guardians that are raising children. This idea was to help parents give to their kids in moderation so they don't grow up to be spoiled, but also not grow up to be neglected. The app would measure the times the parent had appeased to their child, and derive results for the parent for feedback. We did end up choosing this idea as it seems like the most novel idea, and implementing this idea in the timeframe will be feasible.This was one of the ideas the group chose from Jin's sketches.



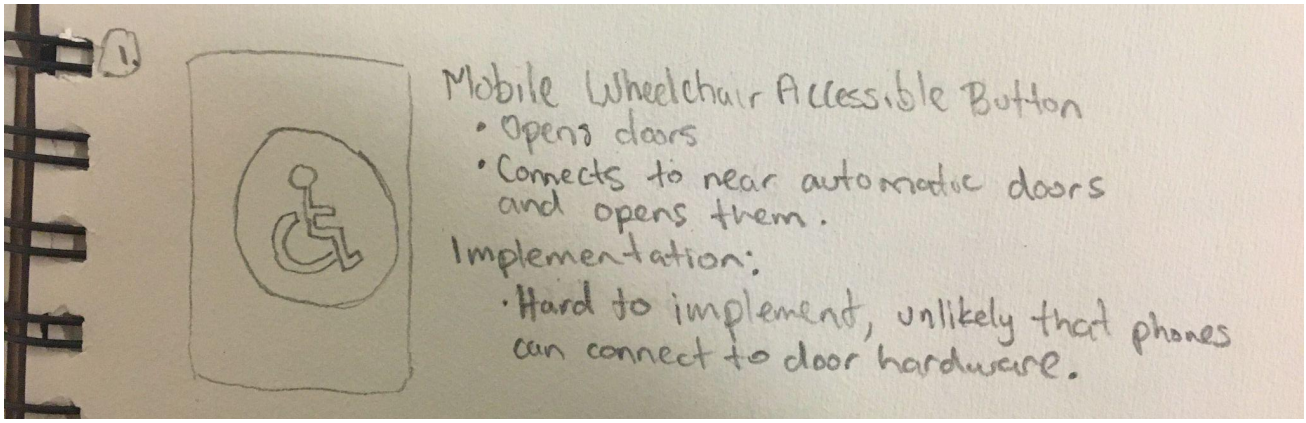
7) **Picture Timeline App**

For this app, the idea was for the user to take a picture each day at the same time, and eventually make a timeline of photos where the user can see themselves age through the days. The app will remind them at roughly if not the same time each day, to take a picture to add to the timeline. We did not end up choosing this idea as it requires us to know the backend knowledge to store media, and implementing this idea in the timeframe might not be feasible. This was one of the ideas the group chose from Ali's sketches.



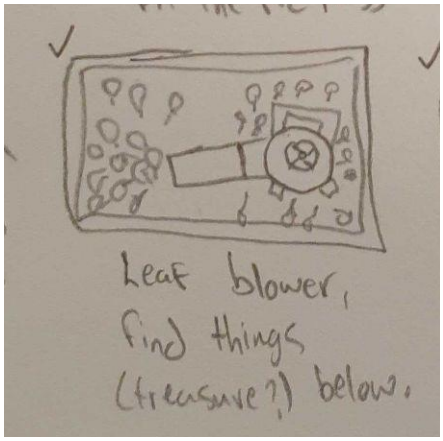
8) **Handicap App**

The handicap app was one of the more interesting ideas for our group, where the user would press a button to automatically call a handicap elevator or something of the sort. However we did not go through with this idea as the time constraint was difficult and our team's skills lacked the necessary skills to finish the deliverables on time. This was one of the ideas the group chose from Ali's sketches.



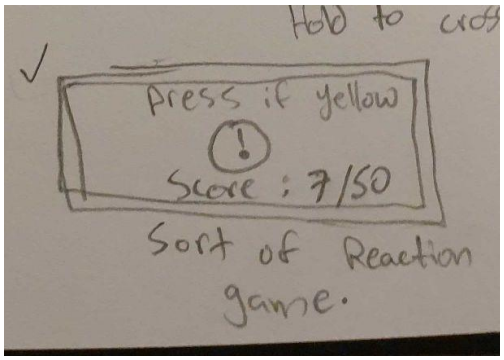
9) **Leaf Blower App**

This idea was for passing time when the user is bored, where the user would use a virtual leaf blower to blow away leaves on the screen. We did not end up choosing this idea as we saw something similar within the previous project examples.This was one of the ideas the group chose from Mustafa's sketches.



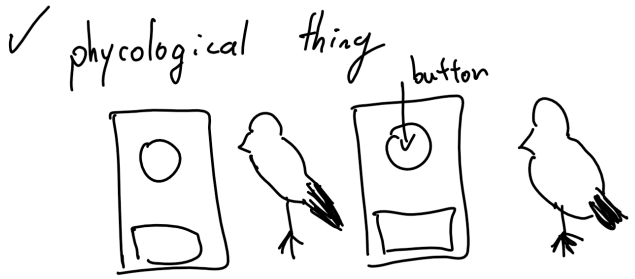
10) **Reaction speed app**

This idea was for the user to play a game, where they would test their reaction, hitting the button when the correct color appears on the screen. We did not end up choosing this idea as we saw something similar within the previous project examples, and implementing this idea in the timeframe might not be feasible.This was one of the ideas the group chose from Mustafa's sketches.



10 Refined Project Sketches

Our ideas then went forwards with the Psychology App, for a few reasons. We know that this app was centered around parents/guardians with children, and we thought developing an app for a specific demographic would help with our further designs. We also thought of the idea as creative and very useful, and so we could really make an impact on its usability when designing the app.

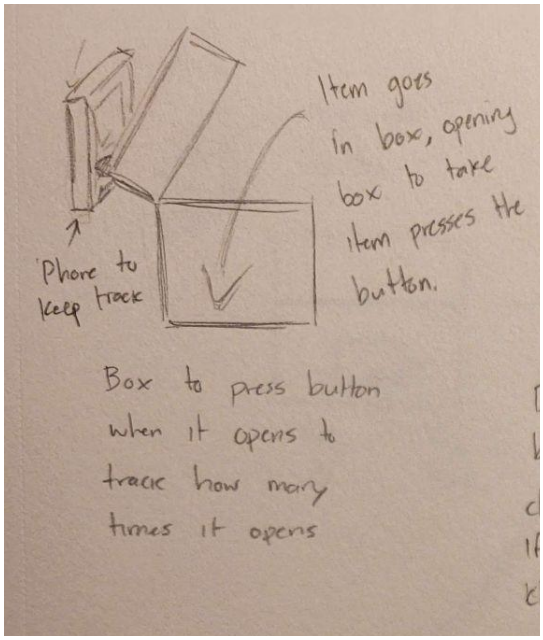


Our original idea for the app was for the parent to feed a bird or some sort of animal when it requested food. The parent would have to ask themselves if they have over fed the bird recently or at least keep track of how many times the bird was fed. At the end of a certain time range, the app would give the results to the parent, either they are giving too much, not giving enough, or they are doing just fine. We had some ideas here:

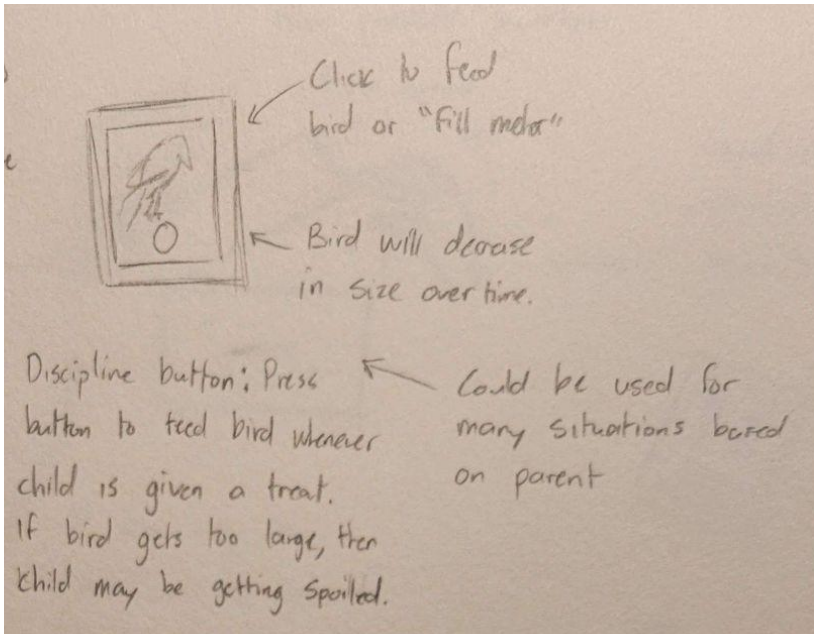
1) **Alarm Feature**
   This idea was an early feature that would be integrated into our original idea of the bird/simulation, where it would play a loud alarm, or vibrate violently when it is time to feed the bird. Tthis idea was to give a sense of urgency to the user. We did not end up choosing this variation as it strays away from the original idea and we don't want our app to be panic inducing. Jin created this refined sketch based on the psychological idea we chose.

Our ideas were taken a bit further, and we ended up scrapping this “bird idea” and tried to design the app such that the user would have more of an interactive experience while using the app. Here are some further designs and variations that we came up with.

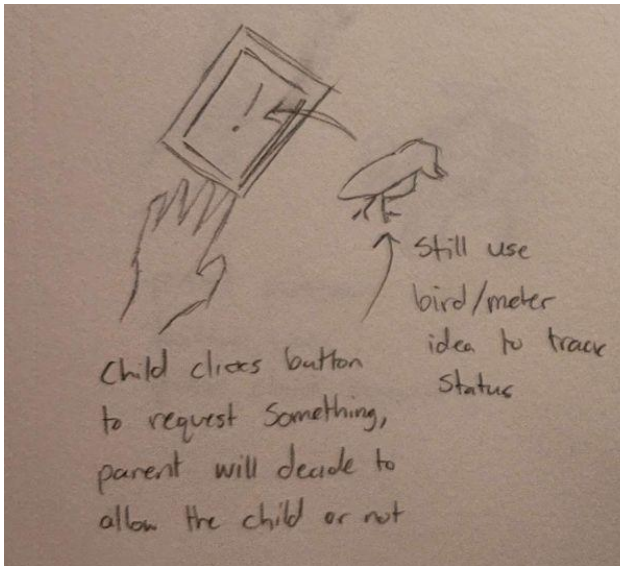
2) **Box Button**
   We thought that if a child opened a box to grab something, the lid of the box would hit the button and indicate that the child had taken something out of the box. The parent would decide what could be put in the box, which allows for flexibility. At the end of the day, the parent would retrieve the phone and see the results. This would allow the parent to essentially see how well they’ve been disciplining the child and not having to repeatedly press the button over and over. We did end up choosing this variation as part of the final idea. With the help of Neil the group pitched in this idea and Joshua created this refined sketch.



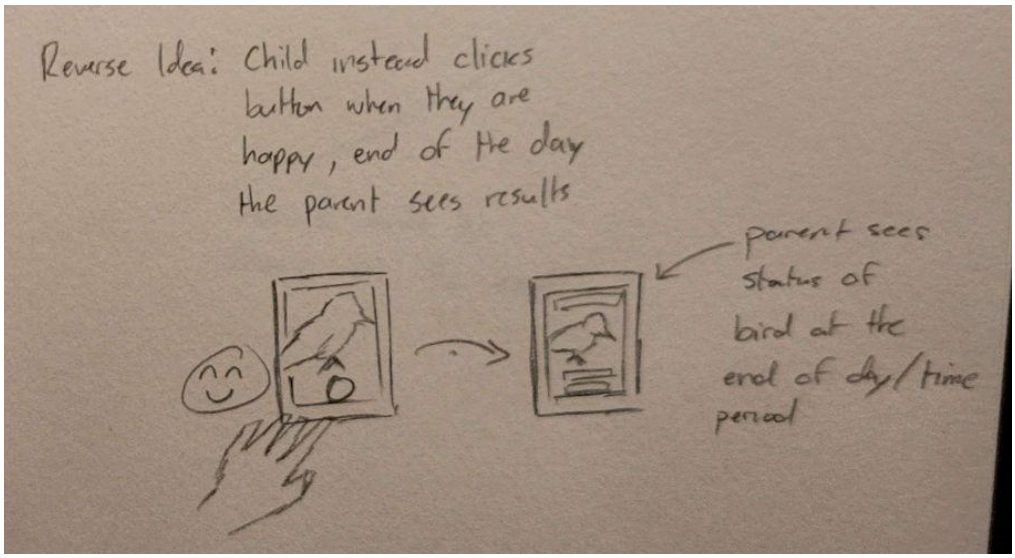
3) **Manual Button Press**
This idea is similar to our original, and still as simple. Here, the thought is when the parent appeases the child in any way, they would press the button. At the end of the day or time limit, the parent would receive their results. We did end up choosing this variation as part of the final idea. Joshua created this refined sketch based on the psychological idea we chose.



4) We had some variations of this idea too, where instead of the parent pressing the button, the child would instead press the button. We thought this was an interesting approach, as the child is then the one interacting with the button, and as long as the child is mature enough to follow the parent's instructions, it could potentially be more accurate. Of course, there would be results at the end. Joshua created this refined sketch based on the psychological idea we chose.

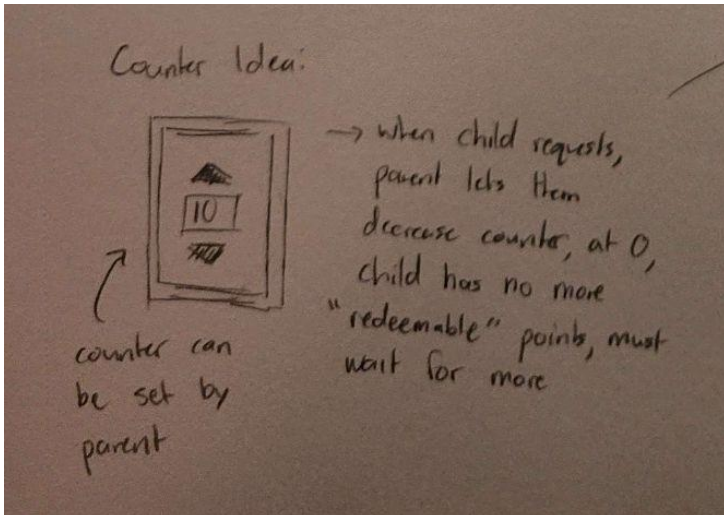


5) Another variation was that the child would click the button to request whatever they wish to the parent, and the parent would then decide whether to appease them or not, and press the button if they do. Again, the results would appear at the end of the day or the time period. Joshua created this refined sketch based on the psychological idea we chose.

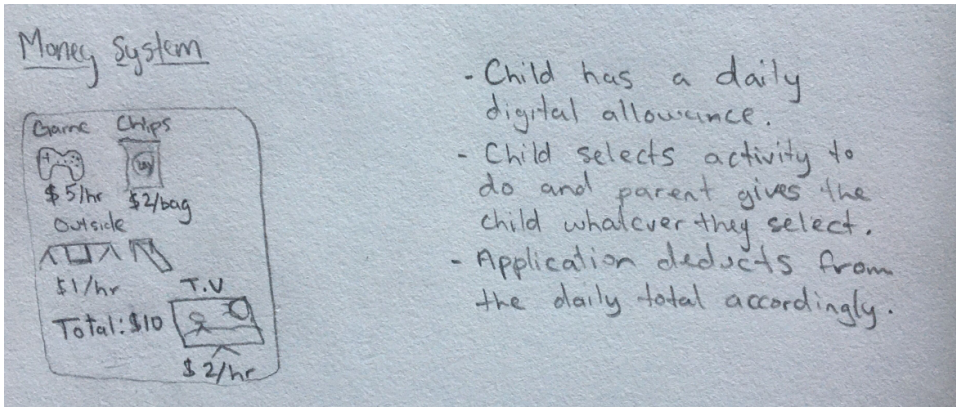


6) **Counter Button**
Here, we had a variation where there would be a counter on the screen, and the counter could be decreased with a button. Our idea here was that the child would press the button to decrease the counter, and visually see the number on the screen go down. The child would then understand (or hopefully come to understand) that when the number hits 0, then they would not be able to ask for anything else. This way, our app then helps

train self restraint and moderation.Joshua created this refined sketch based on the psychological idea we chose.

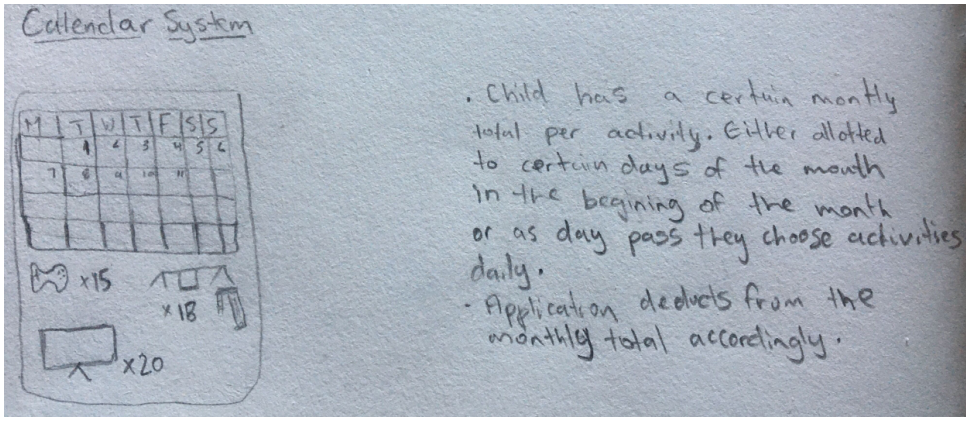


7) **Money System**
In this sketch we use a budget system where the child has a daily total budget which could be set by the parent within the application. The child then needs to monitor their daily budget which decreases based on the activities they choose. The child presses on the activity button and the application deducts from their daily budget accordingly. This idea is based on the NBA team management with a team budget. We did not end up using this idea as it poses complications such as the child misclicking, requires general knowledge and basic math (makes it age specific) and creates application dependent child monitoring, rather than a healthy relationship between parent/guardian and the child. Ali created this refined sketch based on the psychological idea we chose.

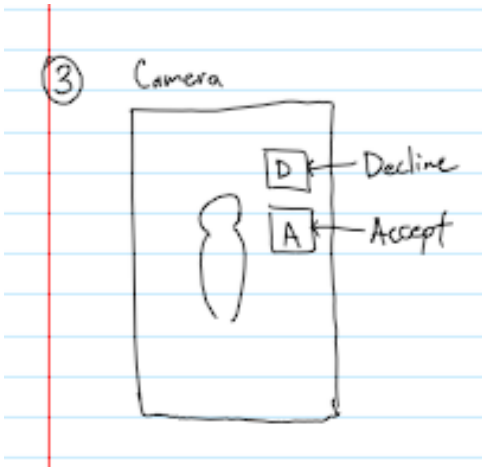


8) **Calendar System**
Similar to the sketch above, this sketch uses a budget system where the child has a monthly total activity budget which could be set by the parent within the application. The child then needs to monitor their monthly activity budget which decreases based on how they choose to spread their activities throughout the month. The child presses on the activity button and the day they would like to spend that activity on. The application

deducts from their monthly activity budget accordingly. This idea is based on student academic assignment schedules. To stay organized and on top of their school work students make monthly schedules and spend their time accordingly. We did not end up using this idea as it poses complications such as when the child uses all their activities too fast, does not end up using activity, and creates application dependent child monitoring, rather than a healthy relationship between parent/guardian and the child where the parent monitors the activities. Ali created this refined sketch based on the psychological idea we chose.



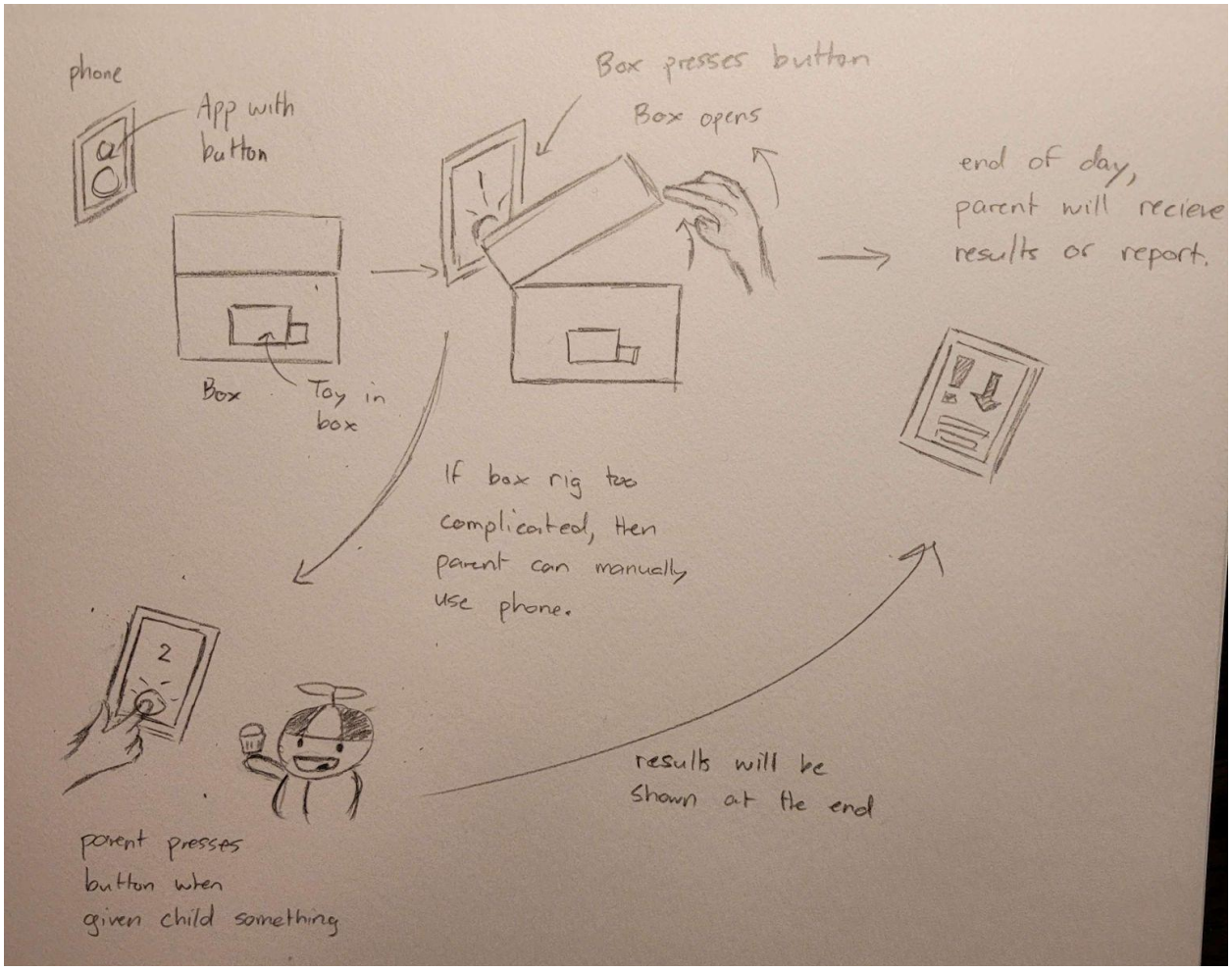
9) **Camera Idea**
This idea was a push to make our idea more interactive, which involves a camera interface where they take a picture of the child, and use the picture of the child as the image for replacement of the “bird’ we had in our earlier designs. It would generally follow the same idea as the manual button pressing idea, but with visuals. Joshua created this refined sketch based on the psychological idea we chose.



Final Project Idea

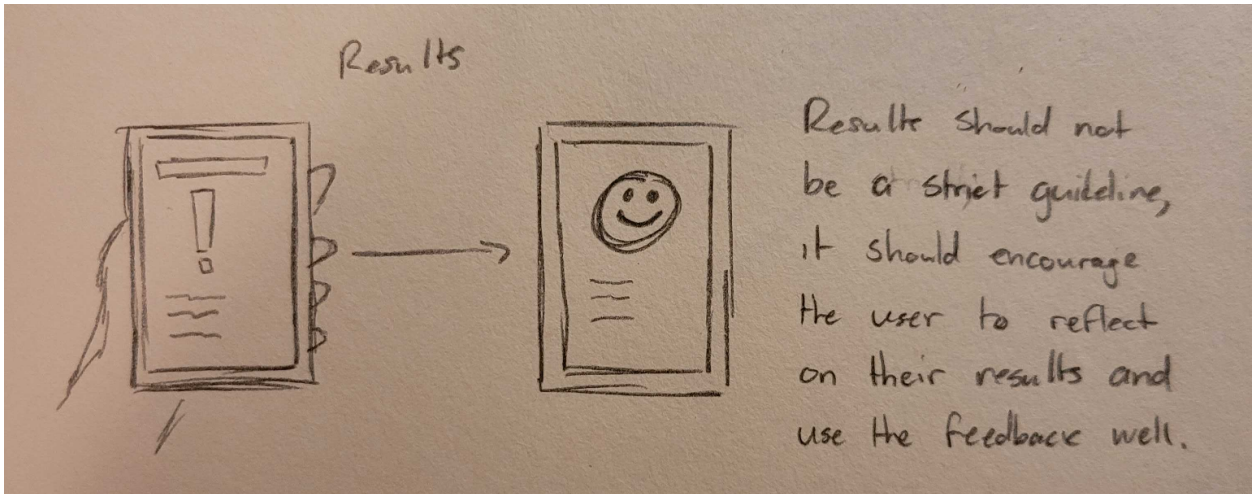
Our ideas then settled on the box idea and manual pressing idea. It came to us that the box idea was set up in a way where the app could be used to do manual presses as well. If the parent doesn’t want to set up the box rig, or maybe the child is too devious to bypass the

system, then the app can be used manually. This allows for flexibility, and we are glad that this flexibility exists for our app's intended usage.



And thus this is how our app came to be developed. Essentially speaking, it is an app that allows a parent to gauge how much they've been spoiling their child to see whether they need to cut down or give a little more. The app will assist in this by tracking the number of button clicks each time the parent presses the button when they spoil their child. The parent will see their results at the end of day or the time period, at which will be indicated by the parent when they hold down the button.The results will tell them either you have been giving them a little bit too much, or not quite enough, or doing just right.

Of course, this is just an app to assist with this type of aspect of life, in the end, we are not laying out a strict schedule of whether to give or not to give a child something when they need it. Our app's intended use is to allow the parent to visually see an estimate of how well they've been spoiling their kid, and can reflect back on their own ways of raising a child with whatever information they are given from the results. We allow our app to be flexible and non controlling, to allow easy usage for the parents that use it.


Results
Results should not be a strict guideline, it should encourage the user to reflect on their results and use the feedback well.