



International
School of London
Qatar

G7

MY DESIGN PORTFOLIO

Using Digital technology to give
a voice to the Elderly

KHUSHI

Teacher: **Mr Gale**

Homeroom: **7B**



STATEMENT OF INQUIRY

As humans age, modes of communication may be adapted to fulfill the function of maintaining dignity.

INQUIRY QUESTIONS

- **Factual:**
 - What medical conditions can cause people to lose the ability to speak as they age?
 - What are the basic programming skills that I need to learn to create my product?
- **Conceptual:**
 - How significant is this problem globally?
 - How are programming languages similar and is developing skills with one language a waste of time as each one is unique?
- **Debatable:**
 - The universal declaration states "All human beings are born free and equal in dignity and rights". Given the technological innovations of the modern world, failure to assist the elderly in communicating breaches this right.

LEARNER PROFILE

During your work you will have the opportunity to be inquirers, knowledgeable, communicators and open minded.

Concept: Communication

Global Context: Identities and Relationships- Human nature and human dignity

DESIGN TASK

You will **Research**, **Design**, **Make** and **Evaluate** a digital product to help elderly people that have lost the ability to speak, to communicate with their carers and family.

AREAS OF ASSESSMENT

A: Inquiring and Analysing

- i. Explain and justify the need for a solution to a problem
- ii. Construct a research plan, which states and prioritises the primary and secondary research needed to develop a solution to the problem
- iii. analyse a group of similar products that inspire a solution to the problem
- iv. develop a design brief, which presents the analysis of relevant research.

B: Developing Ideas

- i. develop a design specification which outlines the success criteria for the design of a solution based on the data collected.
- ii. present a range of feasible design ideas, which can be correctly interpreted by others
- iii. present the chosen design and outline the reasons for its selection
- iv. develop accurate planning drawings/diagrams and outline requirements for the creation of the chosen solution.

C: Creating the Solution

- i. construct a logical plan, which outlines the efficient use of time and resources, sufficient for peers to be able to follow to create the solution
- ii. Demonstrate excellent technical skills when making the solution.
- iii. follow the plan to create the solution, which functions as intended
- iv. explain changes made to the chosen design and the plan when making the solution.

D: Evaluating

- i. Describe detailed and relevant testing methods, which generate accurate data, to measure the success of the solution
- ii. explain the success of the solution against the design specification
- iii. describe how the solution could be improved
- iv. Describe the impact of the solution on the client/target audience.

A: Inquiring and Analysing

THE PROBLEM

- i. The problem is that a part of the elderly community cannot speak so, they are in need for something that can convey their feelings and emotions to other people.
- ii. That elderly people, mostly ones who have suffered from a stroke, lose their ability to speak. The medical name for this illness is Aphasia.

"Aphasia Definitions." *National Aphasia Association*, www.aphasia.org/aphasia-definitions/.

- iii. We need to build an app that suits these people's needs which are to speak and communicate their wants, needs and basic speech. This app will be their solution. This app will be their means of communication.

SIGNIFICANCE/PREVALENCE

- i. Around 70 million are mute and 360 million people are deaf.
- ii. In my research i found that, around 180,000 Americans get Aphasia each year.
- iii. Although this disorder is more common than Muscular dystrophy, some cerebral palsy and Parkinson's disease, Many people have not heard about it

"What Percentage of People in the World Are Mute?" *What Happens to the Planets When a Star Dies? - Quora*, www.quora.com/What-percentage-of-people-in-the-world-are-mute.

National Aphasia Association, www.aphasia.org/aphasia-faqs/.

CAUSES

- i. Some elderly people lose their ability to speak after a stroke. Around 25% to 40% of stroke survivors acquired aphasia.
- ii. AOn Aphasia FAQs, It says that People can also acquire Aphasia from head injury, brain tumor or other neurological causes.
- iii. They could also suffer from an injury to the vocal cords or the throat or a speech disorder.

Mr. Gale, our lesson on 23 sept

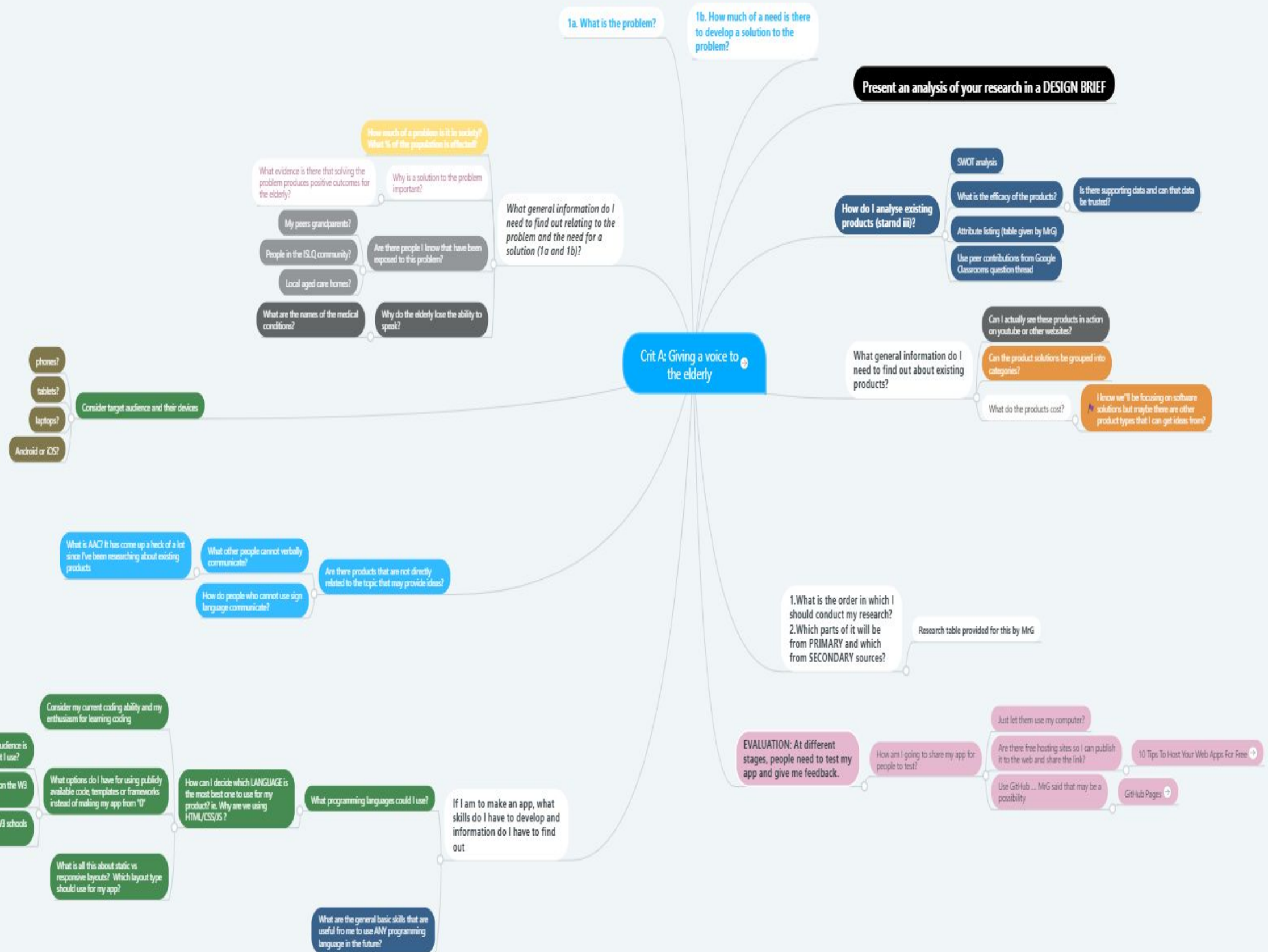
"Aphasia Definitions." *National Aphasia Association*, www.aphasia.org/aphasia-definitions/.

"Aphasia Fact Sheet." *National Aphasia Association*, www.aphasia.org/aphasia-resources/aphasia-factsheet/.

CONSEQUENCES

- i. They need an assistant to help them with their problems, such as the need to go to the bathroom.
- ii. They also cannot communicate with their relatives which has a physiological impact on them.
- iii. Elderly people that have earned respect and dignity can lose it because they will become so dependent.
- iv. Other people will have to do more work in order to understand them and fulfil what they want.
- v. More people will be reluctant to talk to the seniors.

Mind-Map of ideas, questions and research areas arising from teacher posed questions and other classroom activities



Research Table

informed from the mind-map, showing the WHAT, HOW, WHY, AND WHEN for my research questions

GIVING A VOICE TO THE ELDERLY: Template to support the development of a research plan

Priority #	Category	Sub category	Questions the research is answering (WHY)	Information source Primary Secondary Both	Links to resources (see research in <u>appendix</u>)
1	Problem	medical	1. Why do various ages of people lose the ability to speak? 2. Can this medical condition be fixed? What is AAC? Are there different types of Aphasia?		https://www.webmd.com/brain/aphasia-causes-symptoms-types-treatments#1 https://www.nhs.uk/conditions/aphasia/treatment/
		Health/mental	What are the mental impacts on the affected people? Could this condition affect the generation after (Is it a Hereditary disease)?		https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4802646/ https://www.goodtherapy.org/blog/psychpedia/aphasia
		social	How do people with <u>this condition</u> communicate in public to people they <u>dont</u> know? How can people with <u>this condition</u> make themselves be heard/taken seriously?		
		family	Does this condition affect the family members mentally?		https://www.asha.org/public/speech/disorders/FamilyAdjustmentAphasia.htm https://www.ncbi.nlm.nih.gov/pubmed/27681315
2	Need for a solution	General	What evidence is there that solving the problem produces positive outcomes for the elderly?		
		dignity	What if people take people with this condition for granted? Would an old, dignified person like to have to lean on an app to live?		
		quality of life	Will the app decrease the <u>quality of life</u> for the elderly? Will the app make people embarrassed to use it? Will it be awkward in situations to be using the app?		

			can get ideas from?		
		basic skills	What elements of programming are shared across all languages? Can i use different website's code to help me? Are there websites that help me with code?		
		device types - phones, tablets, computers	How can i be sure that my product works on all devices? Is there an app/website that can help me put my app on different devices? Does it use a link? Can my app fold so that it looks good on Phones, laptops and tablets? Do my icons maintain their sizes on different devices?		
		browser considerations	How can i make my ap to work on multiple web browsers? (Google, internet explorer, firefox) How do i ensure that my app works on all browsers? Is there an app/website that can help me do this?		
		pre-built templates/Frameworks	Where can i find ready-made templates/Frameworks that i can modify so that it will fulfil my objective? Are there any apps that i can use to do this?		
	Evaluation		Can i test my product out somehow?		
	Product testing	Storage	How do I allow people to access my product to test it and give feedback at different stages? Where can i save and edit my program whenever i want?		
			Who can host my product? Are there any free Public hosting websites/ apps.		

Rough Research Notes

as evidence that the questions in my research table, were actually researched

A communication disorder that results from damage or injury to language parts of the **brain** is called Aphasia. It's mostly affects older adults, more commonly those who have had a **stroke**.

Problem-

Medical-

1. Why do various ages of people lose the ability to speak?

Aphasia is usually caused by a stroke or brain injury to the language part of the brain. Sometimes aphasia can be a result of a brain tumor or even dementia (memory loss). According to WebMD, 'In some cases, aphasia is a symptom of **epilepsy** or other neurological disorder.'

2. Can this medical condition be fixed?

There is no real medical cure for aphasia. This condition can improve if intensive speech therapy is provided. Mostly these disorders take a long time to heal

3. What is AAC?

It stands for Agenesis Corpus Callosum . it is the Partial of complete absence of the corpus callosum which is the

4. Are there different types of Aphasia?

Yes, there are main 5 types of Aphasia.

- Receptive aphasia (fluent):
- Anomic aphasia
- Global aphasia
- Expressive Aphasia (non-fluent)
- Primary progressive aphasia

Rough Research Notes

as evidence that the questions in my research table, were actually researched

Health/mental-

What are the mental impacts on the affected people?

Effective communication is an important part of day-to-day functioning, people with aphasia may experience social difficulties, feelings of frustration and distress, and **depression**. It is guessed that around 25% of people with aphasia are diagnosed with depression. People who are having social difficulties usually isolate themselves, this can lead to loneliness. Although Aphasia does not directly cause mental health issues, it does have an impact on the patient's emotional well-being. 'This can be especially frustrating as the body responds to physical rehabilitation, but the language skills are still affected' (RetireAtHome).

Could this condition affect the generation after (Is it a Hereditary disease)?

40-50% of people that have acquired Aphasia have other people in their families that are also affected by the disorder.

Social-

How do people with this condition communicate in public to people they don't know?

Most people suffering from Aphasia have a Caregiver who fulfills their needs. But other alternatives are apps, flip boards and sign language. Mostly, people employ caregivers to aid the Seniors but, it is becoming increasingly popular to use other devices to communicate.

How can people with this condition make themselves be heard/taken seriously?

Family-

Does this condition affect the family members mentally?

There may be tension among family members and feelings of frustration and helplessness. The condition may seem hopeless. In multiple families, it is seen that Children feel neglected and not-taken care of.

Family members may also feel strong emotions-anxiety, anger, confusion, depression, despair. The marriage changes, and partners may feel a sense of loss. According to FATA, It is natural for family members to go through a grieving process when someone close to them develops aphasia. Most families need to be guided through this process.

<https://www.asha.org/public/speech/disorders/FamilyAdjustmentAphasia.htm>

- Involve the person in family decision-making as much as possible.
- Give the person time to talk. Don't speak for them.
- Simplify sentence structure, and reduce your own rate of speech.
- Use natural gestures to help the person with aphasia understand you.
- Communicate through touch.
- Acknowledge and verbalize the frustration your loved one feels at not being able to communicate effectively.

These are some pointers that doctor think families find helpful found from FATA.

Need for Solution-

General-

What evidence is there that solving the problem produces positive outcomes for the elderly?

Obviously, Solving the problem will mean that the elderly can at least express themselves although their quality of life won't be the same. Their quality of life will decrease significantly because they won't be able to communicate that fast anymore and that will be frustrating. Many elderly people will find themselves in a dependent situation.

Dignity-

What if people take people with this condition for granted?

Would an old, dignified person like to have to lean on an app to live?

Most people affected by Aphasia found it hard to get used Having an assistant or using an app to communicate. Most seniors felt embarrassed or conscious when they were in public.

Quality of life-

Will the app decrease the quality of life for the elderly?

Will the app make people embarrassed to use it?

Will it be awkward in situations to be using the app

<https://www.webmd.com/brain/aphasia-causes-symptoms-types-treatments#1>

<https://www.aphasia.org/aphasia-resources/aphasia-factsheet/>

<https://www.retireathome.com/communication-breakdown-the-effects-of-aphasia/>

<https://rarediseases.info.nih.gov/diseases/8541/primary-progressive-aphasia>

<https://www.webmd.com/brain/aphasia-causes-symptoms-types-treatments#1>

<https://www.retireathome.com/communication-breakdown-the-effects-of-aphasia/>

How can i be sure that my product works on all devices?

Github

Is there an app/website that can help me put my app on different devices? Does it use a link?

Github provides a link that u can put onto all devices. This is our way of spreading the app

Can my app fold so that it looks good on Phones, laptops and tablets?

U have to use a certain code to do that. There is a veiwing place on google where u can see how ur app looks on different devices.

A demonstration: <https://www.useloom.com/share/5b5954505ba2408187e8bf705cb37c0c>

Do my icons maintain their sizes on different devices?

Yes but they can change their layout.

Can i use different website's code to help me?

Yes there are websites that help you in coding. You can also use Mr Gs foxy app templete.

Are there websites that help me with code?

W3shools is a great website!

How do I allow people to access my product to test it and give feedback at different stages?

Codepen

Where can i save and edit my program whenever i want?

Codepen and codewriter and sublime

Who can host my product?

Are there any free Public hosting websites/ apps.#

Github is a good webiste to host ur product for free!

Where can i find ready-made templates/Frameworks

That i can modify so that it will fulfil my objective?

Are there any apps that i can use to do this?

Bootstrap?

What is a SWOT analysis?


https://www.mindtools.com/pages/article/newTMC_05.htm.

S=Strenght W=weaknesses O=opportunities T=threats. This analysis helps you identify all the previous things, Many buisnesses and product makers use this test to analze their prodict.

What is an analysis listing table?

How do I use the app evaluation rubric?

Student App Review Rubric
Reviewer: _____
App Reviewed: _____



	4	3	2	1	0	Score
Appeal Looks & Sounds	Excellent graphics and sound. Very appealing. Enhanced my experience.	Good graphics and sounds. Enhanced my learning.	Average sound and graphics. Limited appeal, but a little distracting.	Low quality graphics and sounds. Distracted from app's purpose.	Boring and unappealing.	
Engagement/ Motivation	This app kept me highly motivated and engaged throughout my time with it.	This kept me motivated and engaged most of the time.	Somewhat engaging, but lost motivation after a short time.	Barely motivated.	Boring	
User Friendly Directions & Instructions	Very easy to learn and directions are clear and simple to follow	Easy to learn and direction can be followed.	Kind of difficult to learn. Directions are limited.	Very complex to learn. No directions available	What am I supposed to do with this app?	
Performance/ Ease of Use	Performs and loads quickly. No issues and very reliable	Performs and Loads quickly. Some minor technical issues.	Loads and performs slowly. Sometimes Crashes.	Crashes fairly often and takes multiple times to open.	Won't open. Won't run. Filled with bugs.	
Differentiation in Learning	I can customize the app for myself. Four or more levels difficulty	Some customization. Three levels of difficulty	Little customization and two levels of difficulty.	No customization and one level of difficulty.	Ughhhhh.	

Scoring: **Great** 20-17 **Good** 16-13 **Average** 12-10 **Needs Work** 9-6 **BAD** 5-0

Highlight: _____
Lowlight: _____

/20
Total

© Graphics Created by The 3AM Teacher <http://the3amteacher.blogspot.com/> & Third Grade Gridiron for the Chevron Background Rubric by digitaldivideandconquer.blogspot.com

Currency

How current is the app? When was it developed? Last updated?

Relevance

How relevant is the app to your educational purpose or learning outcome?

Authority

Who created the app? Who is the author, publisher, or source? What is their expertise?

Purpose

What is the purpose of the app? Is the information fact, opinion or propaganda?

Privacy

Does the app have privacy statement or setting? Does the app share information on social networks? Does it use location services?

Intuitive

Is it easy to use? Can you use it without instructions?

Easy

How easily can you find (needed) information?

Stable or security

Does the app crash? How secure is the app?

https://docs.google.com/presentation/d/1arPb0STM_DosbKNX-gncwKJkBFqFfhoghcqZeJryPzfs/edit#slide=id.g1a09fdb5_1_10

Attribute Listing Table to compare at least 4 existing products

Product name	Type	Price	Compatibility	Availability	Menu options	Icon categories	Icon size	Contrast	Other information
SALTILLO 42 BASIC FLIPCHART	Flipchart	Free	NA	Print from website	NA	A full range - from directions through to emotions	User choice	High	
LET ME TALK	software	Free	Android iOS	Play Store Apple Store	Can add own images, categories and search for images	General food drinks clothes disease, feelings, tools, toys, colours, numbers, alphabet, shapes	Tablet - 2.5cm x 2.5 cm single page Phone - 1.5cm x 1.5cm	Low - gray background, white buttons, clipchart dull coloured graphics	Images on buttons much smaller than the buttons themselves
GRACE 4	software/ app	32.99	IOS	Apple store	Categories, folders, pictures can be added	Sentence makers, shapes and numbers, food items, preferences, necessities, body parts, places and colours	Phone - 1.8cm x 1.5cm	Icons have colourful pics	Comes in many languages. 4.7/5 rating
PROLOQUO 2GO	software/ app	249.99	IOS	Apple store	Can customize, add more actions, pictures. Can record, words, sound	clothes, food and drinks, bathroom, holidays, countries, colours, conversation, vocab, emotion, people, home,	Phone - 1cm x 1cm	Congested, colour icons	Can increase volume-shout mode

					add more actions, pictures. Can record, words, sounds and emotions. Can type as well. More symbols	bathroom, holidays, countries, colours, conversation, vocab, emotion, people, home, community places	1.cm	icons	volume-shout mode
JABTALK	app	Free!	Android	Play store	Can take your own pictures and label them	Quick phrases, questions, food and drink, play, learning/school, sport	Phone - 2cm x 23cm	Orange background, quite dark, green icon background	

SWOT Analysis

as additional method of comparing the existing products from my attributes table

LetMetalk

Strengths	Weaknesses
Simple and basic-will have bare needs buttons/icons Supports many languages Free Can search up words Can form full sentences	Doesn't have advanced phrases 12+ Needs IOS 8 or later
Opportunity	Threats
To provide different voices	App on a device- can cause youngsters to spend too much time on the app

Proloquo2go

Strengths	Weaknesses
Customizable, actions and pictures. Can be added Can record words ,sounds and emotions. More symbols Typing is also possible	Is difficult to navigate since many, many icons can be added Can be overwhelming for some users since there can be a lot of vocab and actions
Opportunity	Threats
To make the app for Android	Might weaken eyesight Battery of devise may run out

JABtalk

Strengths	Weaknesses
Easy to use Can take pictures for icons Has simple phrases	Can take a long time to record all words manually as the generated voice is not easy to understand
Opportunity	Threats
To give instructions since beginners can find it confusing at first	Battery of devise may run out

Basic Flipchart

Strengths	Weaknesses
Easy to interpret Clear pictures and labels Is self-explanatory Can be used with different ages Colourful with writing	Will become very big and heavy Can get lost Cant put all the words you need
Opportunity	Threats
To add complex vocabulary	Papercuts Waste of materials/resources Can be torn/cut/stamped upon

Grace 4

Strengths	Weaknesses
<ul style="list-style-type: none">Can create personal categoriesHas many icon categoriesCan change setting to different languagesVibrant and simple iconsHas sentencing making provisions	<ul style="list-style-type: none">Is very basicThere's no voice output
Opportunity	Threats
<ul style="list-style-type: none">Add custom word icons under pre-made categoriesBe able to change icon image	<ul style="list-style-type: none">AddictionVirusBroken laptop

Research Summary giving a overview of my research on the problem and existing products that attempt to solve the problem

Now, after all our research, we know that 70 million people of different races, genders, sizes and ages suffer from a disorder called Aphasia. Aphasia is a condition where a patient cannot speak. The most common cause of Aphasia is a stroke, many senior/elderly people suffer from strokes. Elderly people need assistants to communicate their needs, some of these assistants have been replaced by apps of flip charts that are simple and effective to use. There are many existing apps that have many facilities including: Sentence makers, Basic Needs, Complicated phrases and many categories.

Design Brief for my product

1. I am programming an app to help elderly people who have lost their voices due to medical conditions or stroke. I will make this software so the elderly can communicate and express themselves through this app. My app will include audio, images and hyperinks

I plan to start programming in november and finish by the start of december

I plan to make this app for old people, people who have lost their voices

- general details about the product as a result of your thorough research

- basic functioning

I would like to add Buttons that play audio when they are clicked on,

- the programming language being used

JS, HTML, CSS

- if basic frameworks will be used or if most of the code will be unique or if you are undecided at this stage

I will use other app's basic framework and adjust it to fit my needs and to make it do what i want. I will also use all of Mr G's example templates.

- the device types that your product should be compatible with*

I want my product to be compatible with phones,tablets and computers

- the web browsers that your product should be compatible with*

I would want my product to be compatible with Google, internet explorer.

B: Developing Ideas

Design Specifications as a list of Success Criteria (1)

Category	My app should ...	My app could ...
Functionality	<ul style="list-style-type: none"> • have buttons with dimensions of at least 1.5-2 x 1.5-2 cm • allows user to select common everyday words and actions • have urgent needs/necessities separately <ul style="list-style-type: none"> • have buttons that play audio when clicked/pressed • have clear graphics on buttons • Have simple vocabulary <ul style="list-style-type: none"> • have buttons that physically respond on hover or click (size/colour change) 	<ul style="list-style-type: none"> • allows user to select from word/action categories • Have a picture taking function • could have typing function <ul style="list-style-type: none"> • Could Have a medicine section (for the elderly) • Have complex vocabulary (emotions, questions, etc..) • Have sentence making tools (be able to put words together then click on them to play)
Aesthetics	<ul style="list-style-type: none"> • have clear graphics on buttons • Be responsive to different screen sizes • Have a theme of bright and relevant colors. Eg. Green button for 'Green'. • Have big and clear labels/words • Have simple and readable font 	<ul style="list-style-type: none"> • have clear graphics and words on buttons • Change colour for each category (to make it simple to connect colour to category) • •
Target audience	<ul style="list-style-type: none"> • have responsive buttons that are able to be easily pressed by fragile people • Buttons Should be wide enough for people who do not have refined motor skills • Should have easily recognizable icons (either words or pictures) • Have elderly needs 	<ul style="list-style-type: none"> • Could Have a medicine section

Design Specifications as a list of Success Criteria (2)

Category	My app should ...	My app could ...
Accessibility/compatibility	<ul style="list-style-type: none">● operate on android devices (table and phone)●	<ul style="list-style-type: none">● have buttons that play audio
Programming level	<ul style="list-style-type: none">● involve coding skills that we've learned/will learn in class	<ul style="list-style-type: none">● involve more advanced coding that I've had to learn through research

Proposed category/menu items for my app (1)

Category	Subcategory	Audio Buttons		
URGENT	-	Toilet Vomit Medicine My foot/hand/head/stomach/ eg/arm Hurts		
Basic Needs	Basic Questions Basic Responses Hygiene	Pee Poo Shower Wash Hair Bath Scrub Wash: Hands Face Feet Body	No I'm not in pain I can't hear you I can't speak No thank you Yes please Thanks Have a great day Im fine thanks Please leave me alone Home	How are you feeling today? How is the weather outside? Can i have food? Can you please take me out? Can you make me sleep/put me to bed? What time is it?
Colours	-	Red Blue Yellow Green Purple Pink Black Dark Blue Orange		
Food/Drinks	-	Water Coffee Tea juice Fruits vegetables Breakfast Sandwich Fast food Healthy food		
Feelings	-			
Sentences	-			

Category	SubCategory	Audio Buttons
Feelings	-	I am Happy Sad Excited Nervous Worried Scared/frightened Tired Angry
Sentences	-	Sit Stand Wheel Walk Run Eat Sleep Drink Sleep Nap

Design No. 4 = Talk For Me
 (composed of earlier designs best features)



title

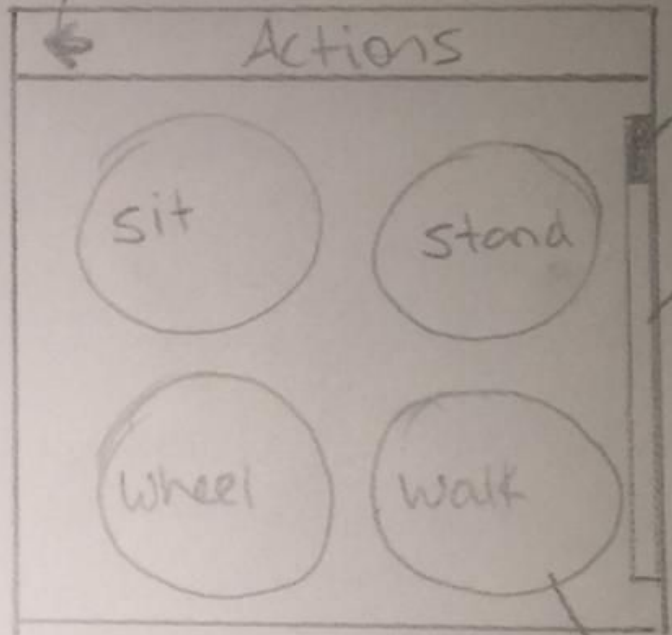
Search Bar (for quick accessibility)

Code can be found in W3schools

Squares to save space

pressed

maybe bigger



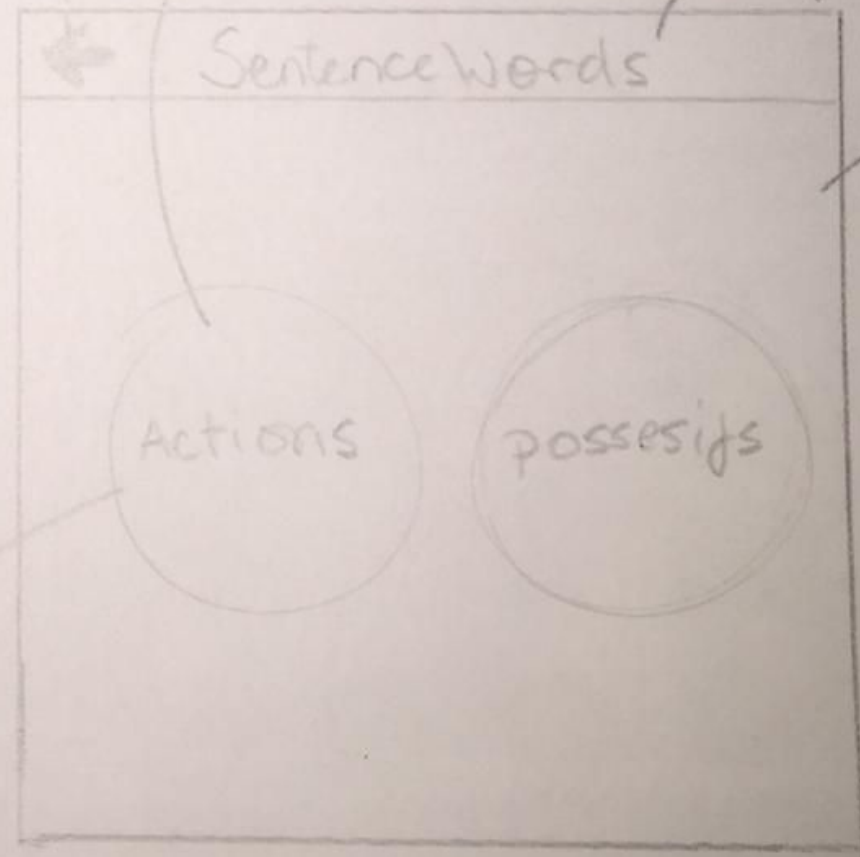
takes you to sentence words

scrolls down

will be used a lot

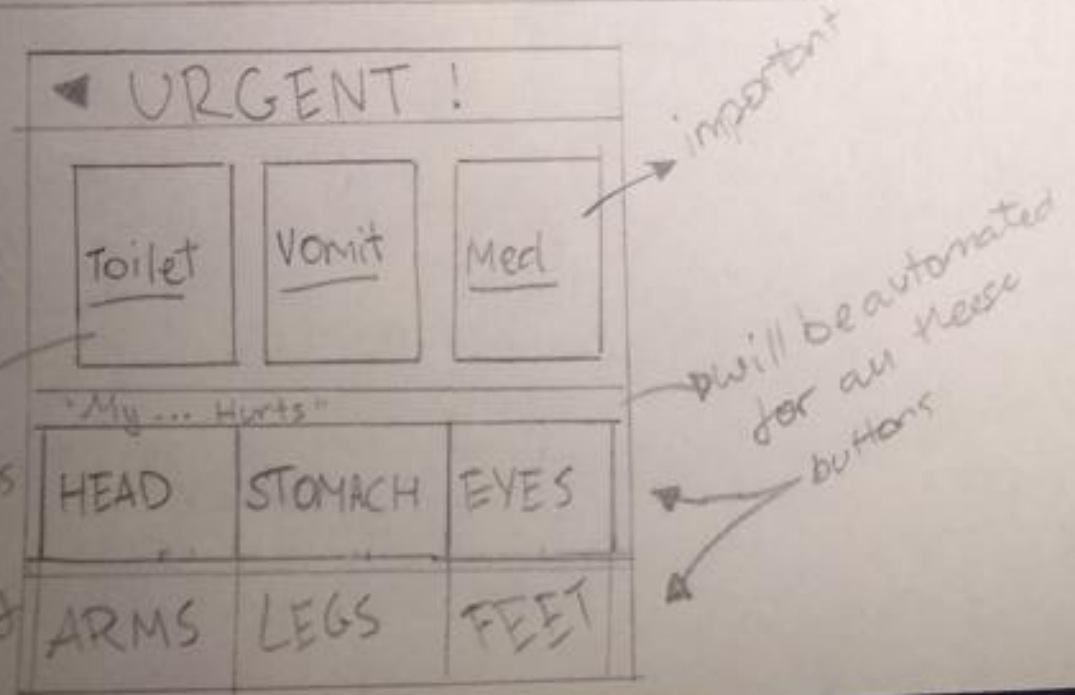
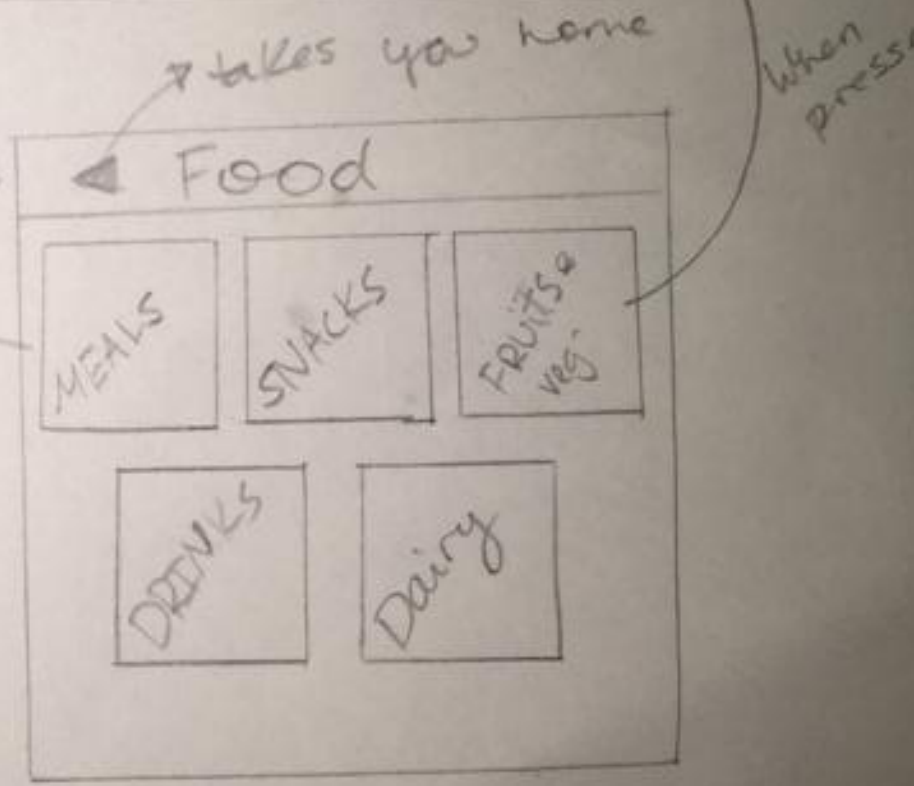
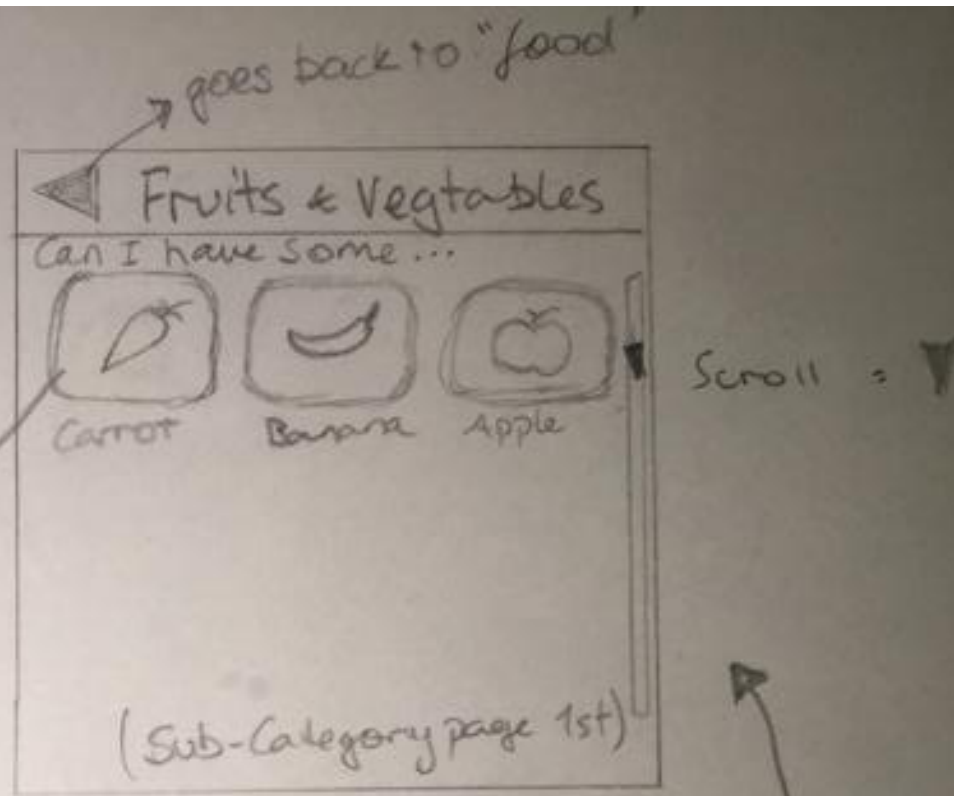
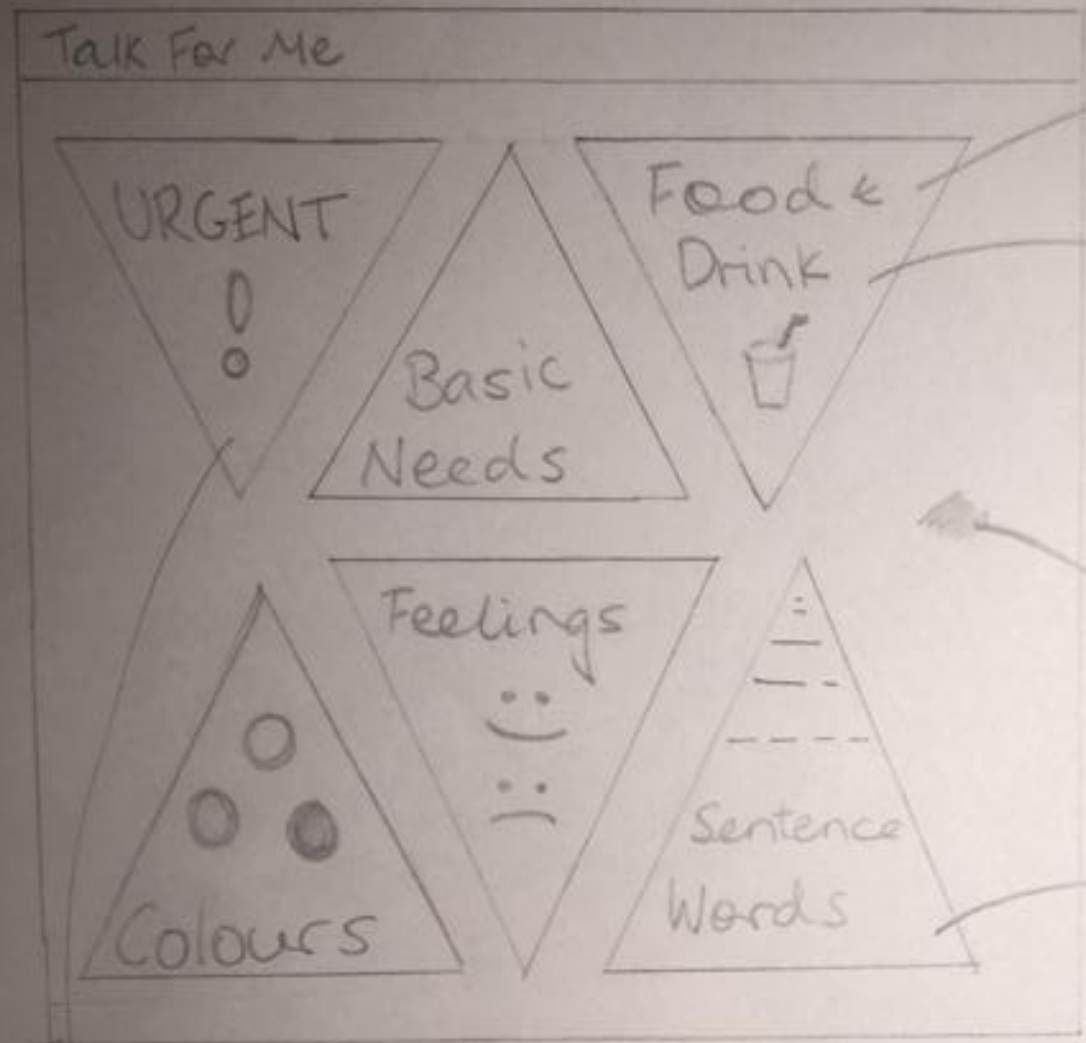
category name

Big icons



Simple to understand

Design No. 3 - Talk for Me / Talk4me



if pressed

white

white fill & Coloured outline

Shape Variation

important

will be automated for all these buttons

Large icons for more accessibility

goes back to "food"

takes you home

when pressed

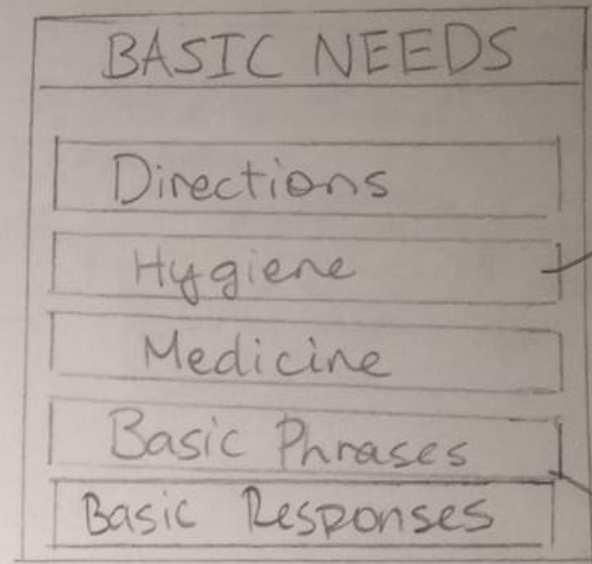
Design No. 2 - (still) TALK FOR ME (old people)



Grey

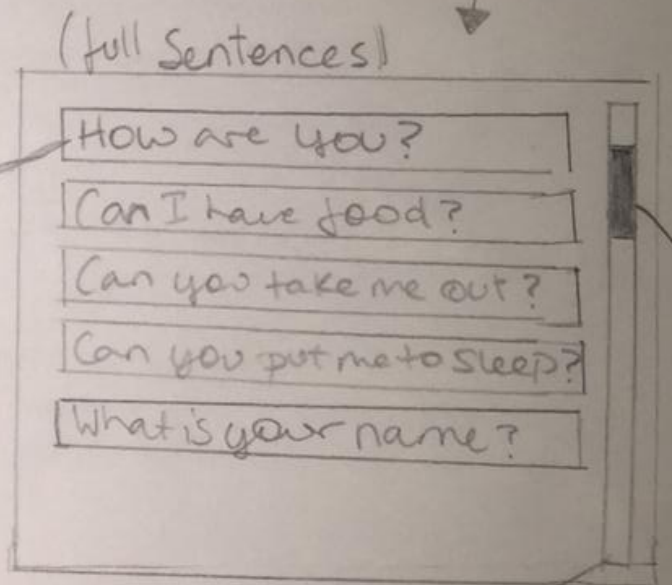
outline will be different colours, fill will be white

if pressed



horizontal Buttons for + 2

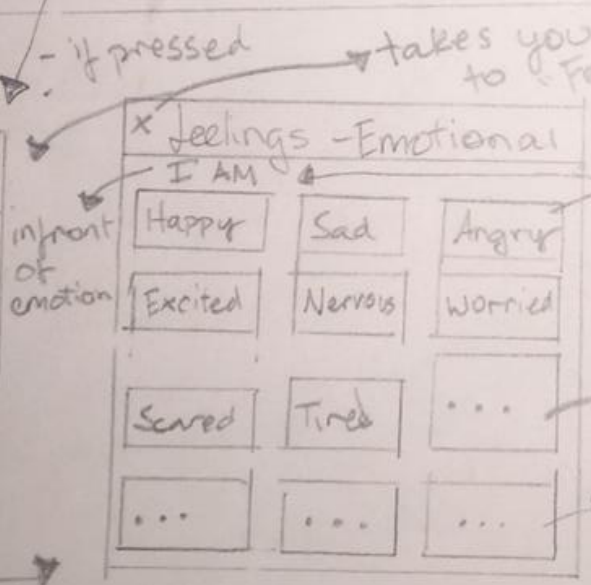
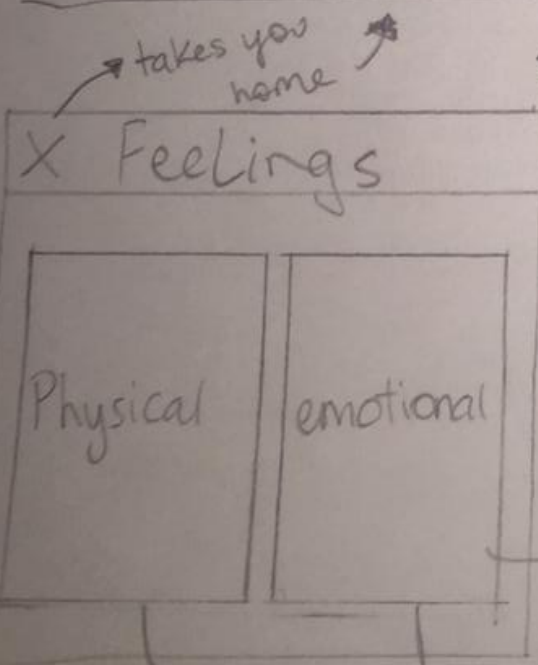
if pressed



when pressed will play entire sentence

Scroll for more sentences

only for categories that have many audio Buttons



when pressed will play audio "I AM Angry"

try to make more space

Boxes will be the same size

vertical : if there is only 2 sub-categories.

Design No. 7 - TALK FOR ME

Homepage

Talk For Me

Search Bar

- ① = Sub categories:
- Directions
 - Hygiene
 - medicine
- ②
- Dairy
 - fruits/vegetables
 - Snacks
 - meals
- ③
- Common Phrases
 - physical
 - emotional

①

Basic Needs

URGENT

②

Food & Drink

③

colours

Feelings

Sentence words

verbs/actions

Adjectives

white

to go back to home

category name

Key Board - Typing

old people will probably not use.

If you press it

Buttons will be Black with white writing to stand out.

Colours

press & audio plays

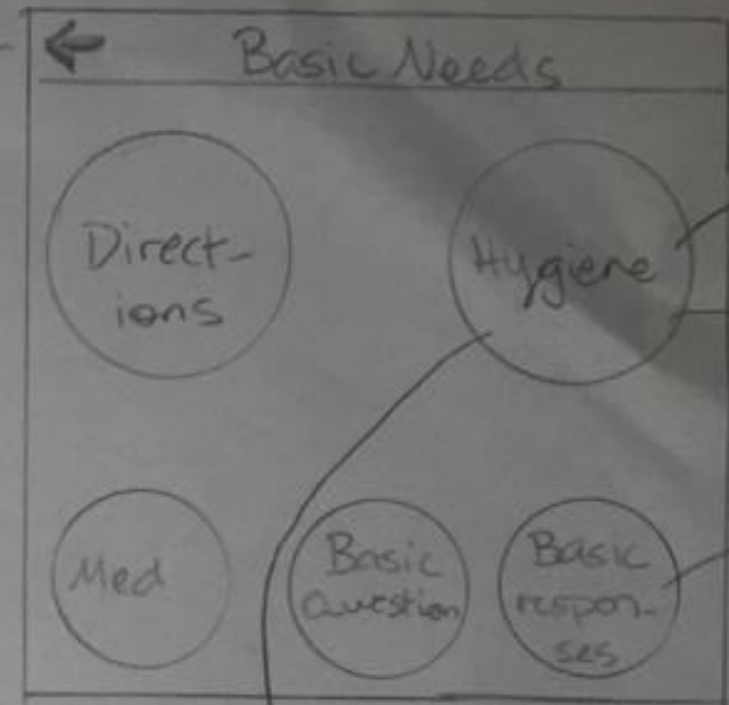
			
Pink	Red	orange	Blue
			
green	yellow	white	Black
			
Brown	purple	grey	cream

Design 4 - Final design



rounded "squares"

Pressed



takes you home

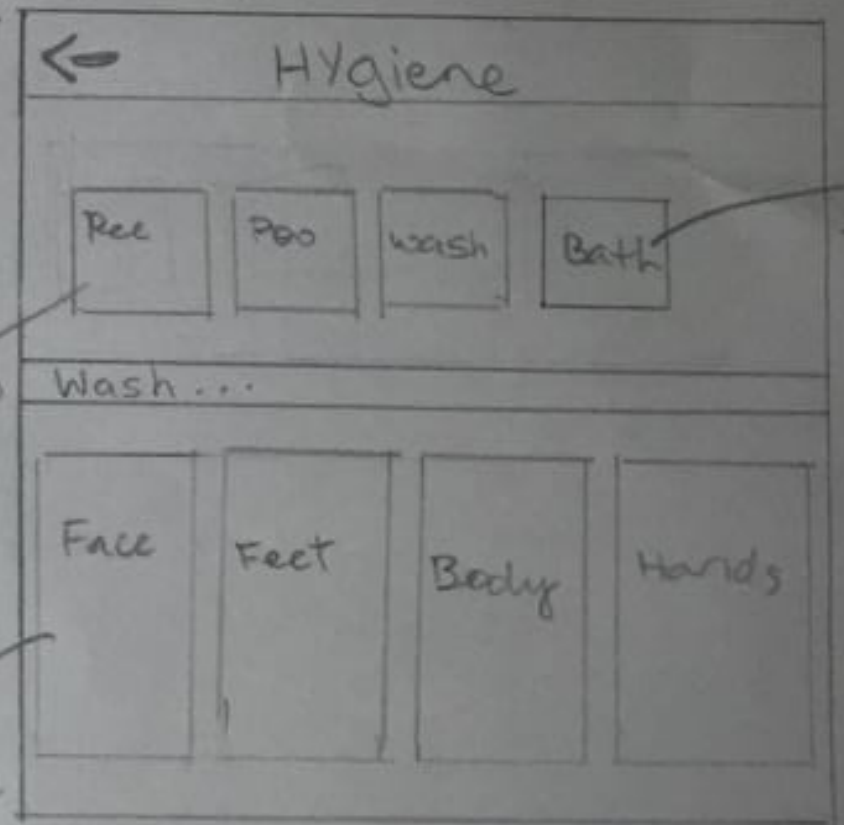
more important

x3

x2

takes you back

Pressed



x2

will play audio

will be horizontal

Design No.7 - TALK FOR ME

Search Bar

- ① = Sub categories:
- Directions
 - Hygiene
 - medicine
 - Common phrases
 - physical
 - emotional

- ②
- Dairy
 - fruits/vegetables
 - Snacks
 - meals

Homepage

Talk For Me

①

Basic Needs

URGENT

Food & Drink

③

colours

Feelings

Sentence words

verbs/actions

Adjectives

white

to go back to home

category name

Key Board - Typing

old people will probably not use.

If you press it

Buttons will be Black with white writing to stand out.

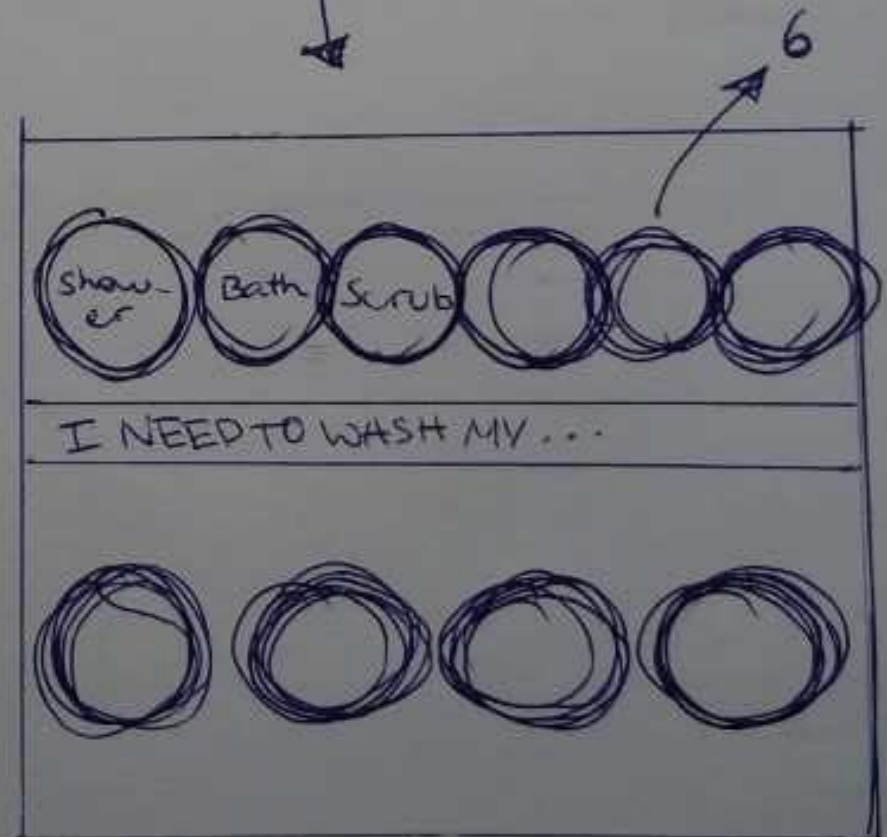
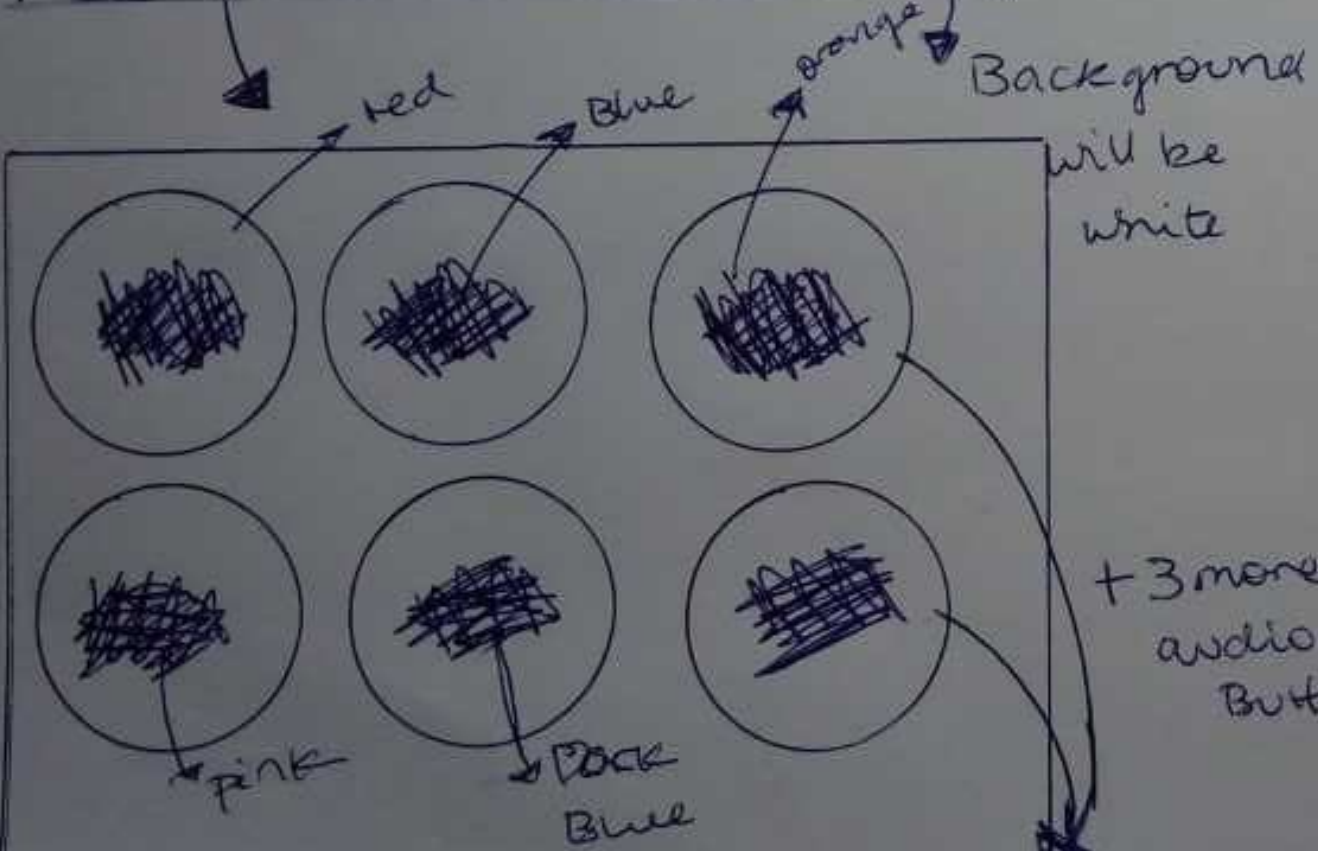
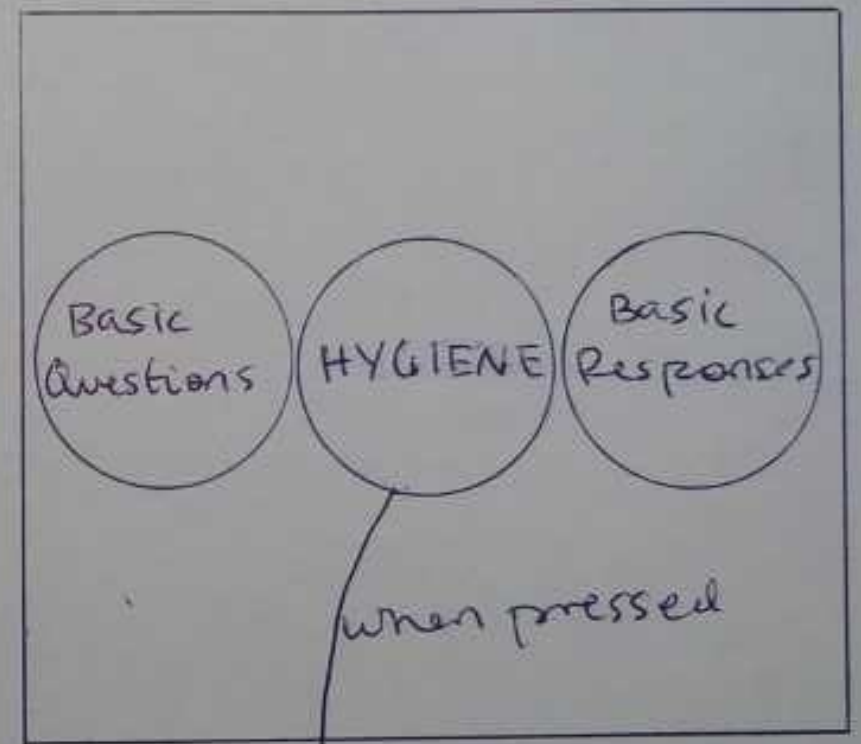
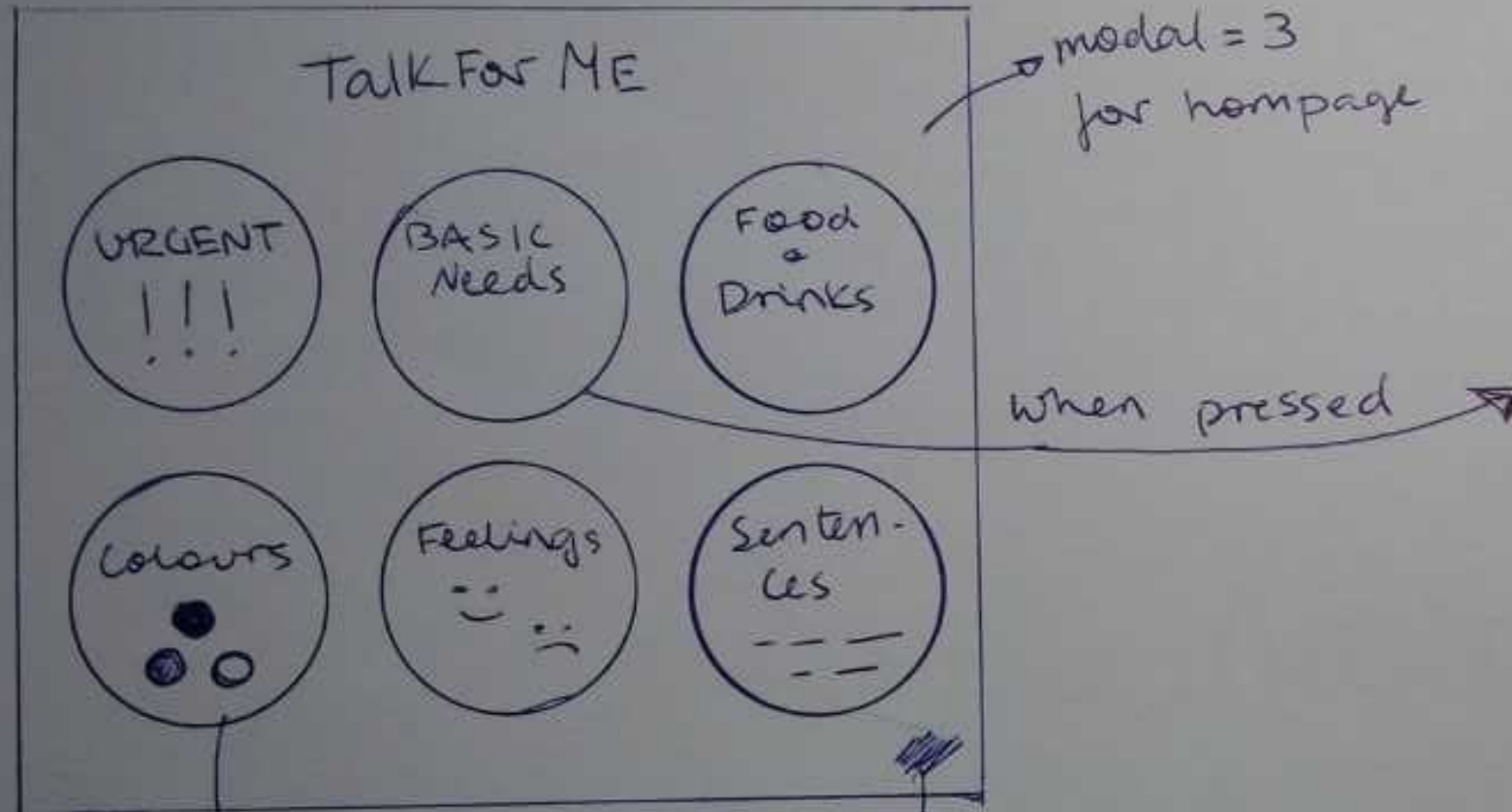
Colours

Pink	Red	orange	Blue
green	yellow	white	Black
Brown	purple	grey	cream

press & audio plays

Success Criteria	Idea 4	Idea 3	Idea 2	Idea 1
have responsive buttons that are able to be easily pressed by fragile people	✓	✓	✓	✓
Have elderly needs	✓	✓	✓	✓
Should have easily recognizable icons (either words or pictures)	✓	—	—	✓
Buttons Should be wide enough for people who do not have refined motor skills	—	—	—	✓
involve coding skills that we've learned/will learn in class	✓	✓	✓	✓
use cards as an appealing background	✗	✗	✗	✗
Use cards to have the starting parts of the icons	✓	✓	✓	—
Attach audio to cards	✓	✓	✓	✓
have clear graphics on buttons	✓	—	—	✓
Have big and clear labels/words	—	✓	—	✓
Have a theme of bright and relevant colors. Eg. Green button for 'Green'.	✓	✓	✓	✓

Be responsive to different screen sizes	✗	✗	✗	✓
have clear graphics and words on buttons	—	—	—	✓
Have simple and readable font	✓	✓	✓	✓
have buttons with dimensions of at least 1.5-2 x 1.5-2 cm	✓	✗	✗	✓
Have simple vocabulary	✓	✓	✓	✓
have clear graphics on buttons	✓	—	—	✓
<ul style="list-style-type: none"> • have buttons that play audio when clicked/pressed 	✓	✓	✓	✓
<ul style="list-style-type: none"> • have urgent needs/necessities separately 		✓	✓	✓
allows user to select common everyday words and actions	✓	✓	✓	✓
<ul style="list-style-type: none"> • involve more advanced coding that I've had to learn through research 	✗	✗	✓	✓
<ul style="list-style-type: none"> • Have a picture taking function 	✗	✗	✗	✗
<ul style="list-style-type: none"> • could have typing function 	✗	✗	✗	✗
<ul style="list-style-type: none"> • Change colour for each category (to make it simple to connect colour to category) 	✓	✗	✓	✗



Success Criteria	Completed tick
have buttons with dimensions of at least 1.5-2 x 1.5-2 cm	✓
Have simple vocabulary	✓
have clear graphics on buttons	✓
have buttons that play audio when clicked/pressed	✓
have urgent needs/necessities separately	✓
allows user to select common everyday words and actions	✓
have clear graphics on buttons	✓

Have big and clear labels/words	✓
Have a theme of bright and relevant colors. Eg. Green button for 'Green'.	✓
Be responsive to different screen sizes	✓
have clear graphics and words on buttons	✓
Have simple and readable font	✓

have responsive buttons that are able to be easily pressed by fragile people	✓
Have elderly needs	✓
Should have easily recognizable icons (either words or pictures)	✓
Buttons Should be wide enough for people who do not have refined motor skills	✓

involve coding skills that we've learned/will learn in class	✓
use cards as an appealing background	✓
Use cards to have the starting parts of the icons	✓
Attach audio to cards	✓

'Could' Design specifications	Tick
<ul style="list-style-type: none"> allows user to select from word/action categories 	✓
<ul style="list-style-type: none"> have clear graphics and words on buttons 	✓
<ul style="list-style-type: none"> Could Have a medicine section 	✗
<ul style="list-style-type: none"> involve more advanced coding that I've had to learn through research 	✓

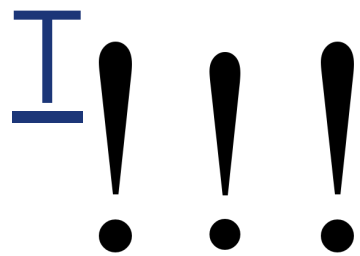
<ul style="list-style-type: none">• Have a picture taking function	✓
<ul style="list-style-type: none">• could have typing function	✓
<ul style="list-style-type: none">• Change colour for each category (to make it simple to connect colour to category)	✗
<ul style="list-style-type: none">• Have sentence making tools (be able to put words together then click on them to play)•	✗
<ul style="list-style-type: none">• Have complex vocabulary (emotions, questions, etc..)	✓



**The next section of slides is
the FIRST mock-up of
what my final app will look
like**

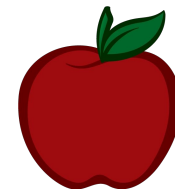


URGEN



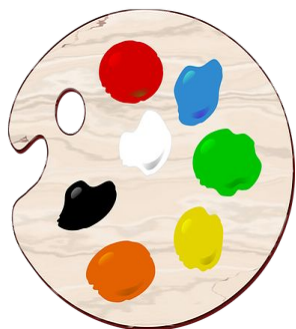
Basic
Needs

Food &
Drinks



Colour

S



Feelings



Sentence
words

URGENT!

TOILET



VOMIT



MEDICIN
E



My Hurts

Head



Stomach



Eyes



Arm

S



Legs



Feet



Basic Needs

Directions

Hygiene

Medicine

Basic
Questions

is

Basic
responses

is



Directions



Right

Left

Up

Dow
n

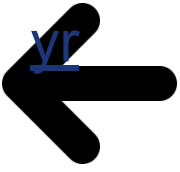
Top Right

Top left

Map

Which
way?

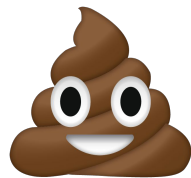
Hygiene



Pee



Poo



Wash



Bath



Wash
-Cloth



Scrub



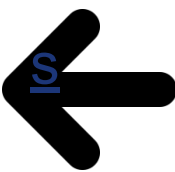
Wash....

Face

Feet

Body

Hands



Medicine

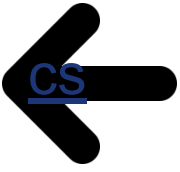
I need my.....

Diabetes
pills

Arthritis
pills

Bone
pills

Cancer
medica
tion



Basic Questions

How are you feeling today?

How is the weather outside?

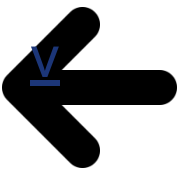
Can i have food?

Can you please take me out?

Can you put me to bed?

What time is it?

I want to go home.



Basic Responses

No I'm not in pain

I can't hear you

I can't speak

No thank you

Yes please

Thanks

Have a great day

Im fine thanks

Please leave me alone

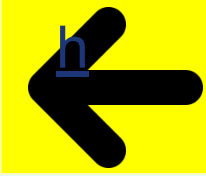
Home

I like it

I love it

I hate it

I want that



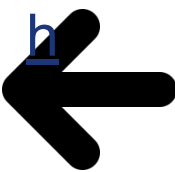
Food and Drinks

Meals

Fruits &
vegetable
s

Snacks

Drinks



Meals

Pasta



Pizza



Salad

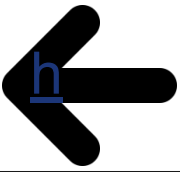


Chicken



Eggs



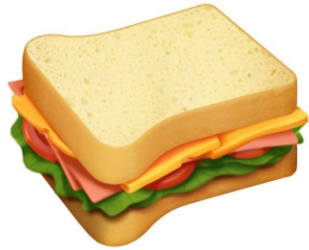


Snacks

Can I
have...

Sandwiches

s



sweets



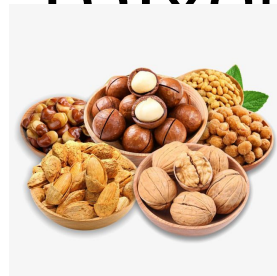
Veggie
sticks



Pretzels

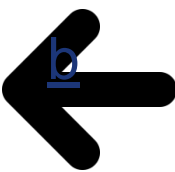


Nut
mixes



cereal





Fruits and vegetables

Can I have....



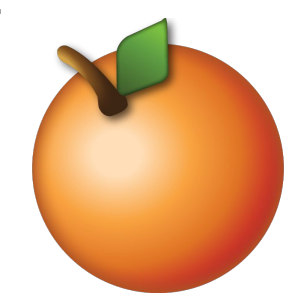
Apple



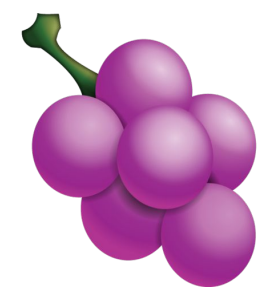
Banana



Orange



Grape

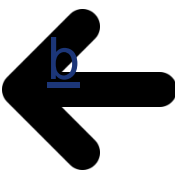


Watermelon



Mango

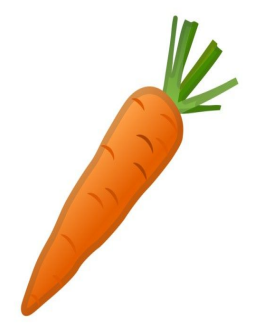




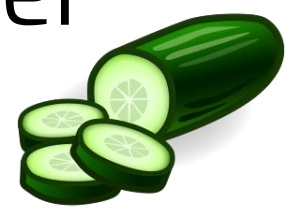
Fruits and vegetables

Can I have...

Carrots



Cucumber



lettuce



Peppers

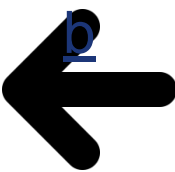


Onion



Broccoli





Drinks

Can I have...

Tea



Coffe

e



Juice



water

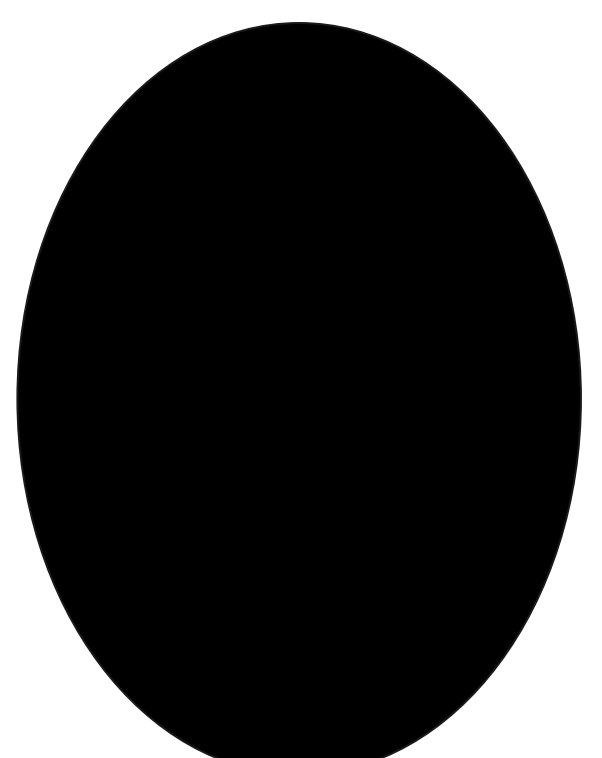
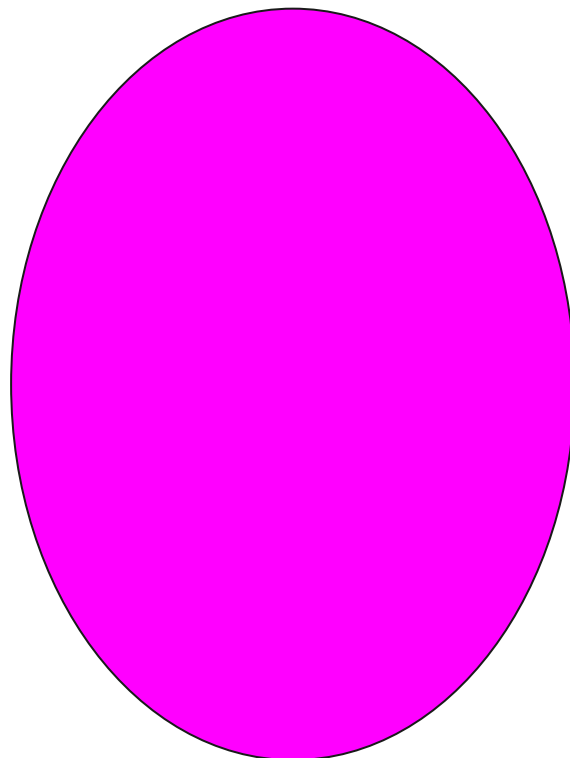
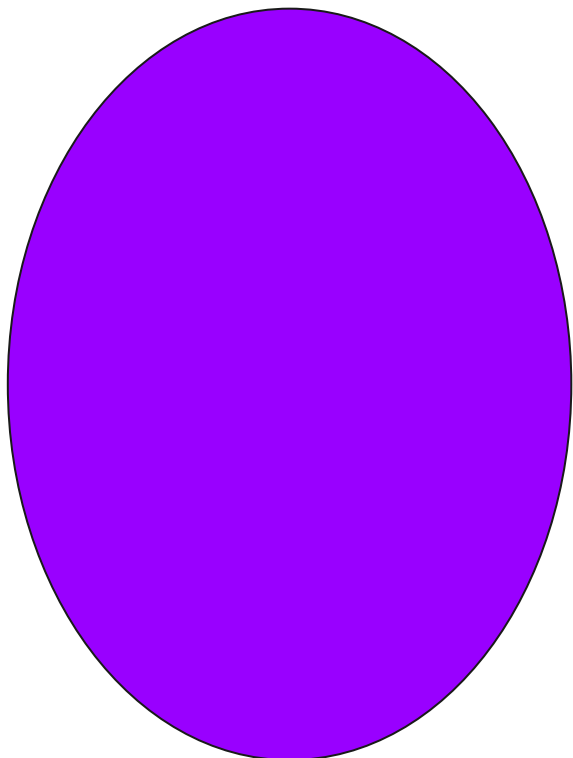
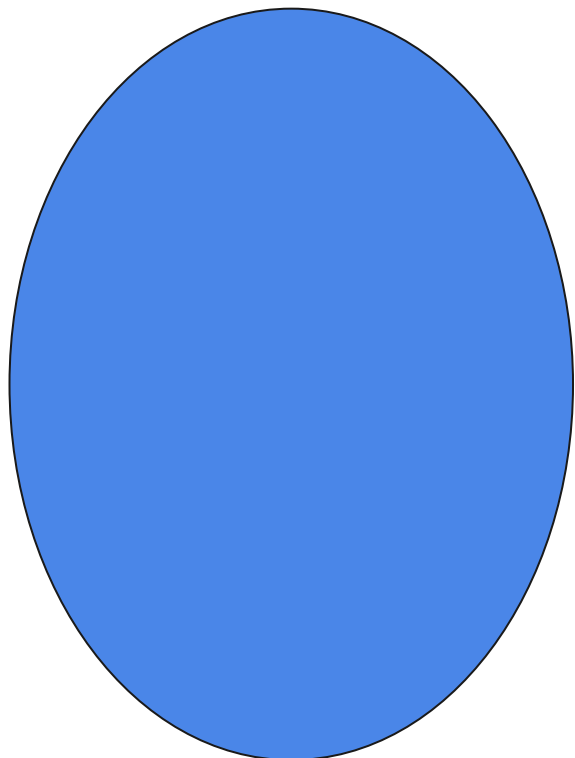
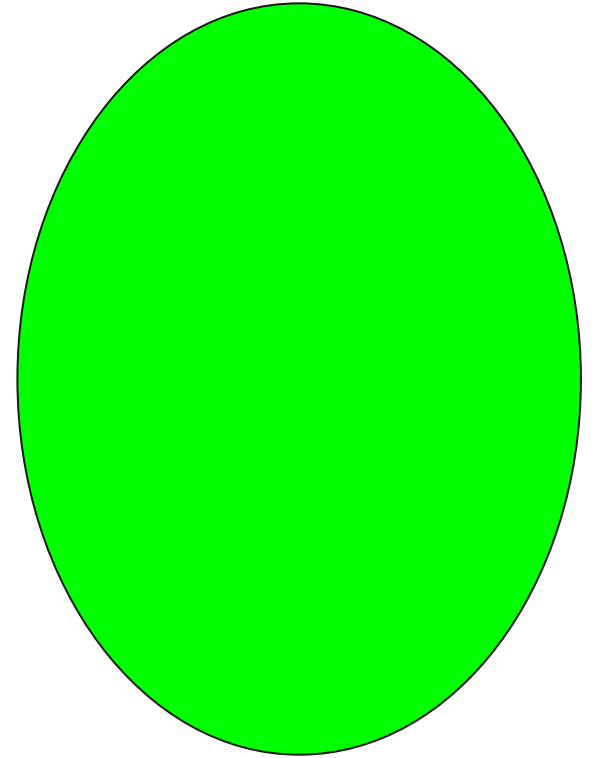
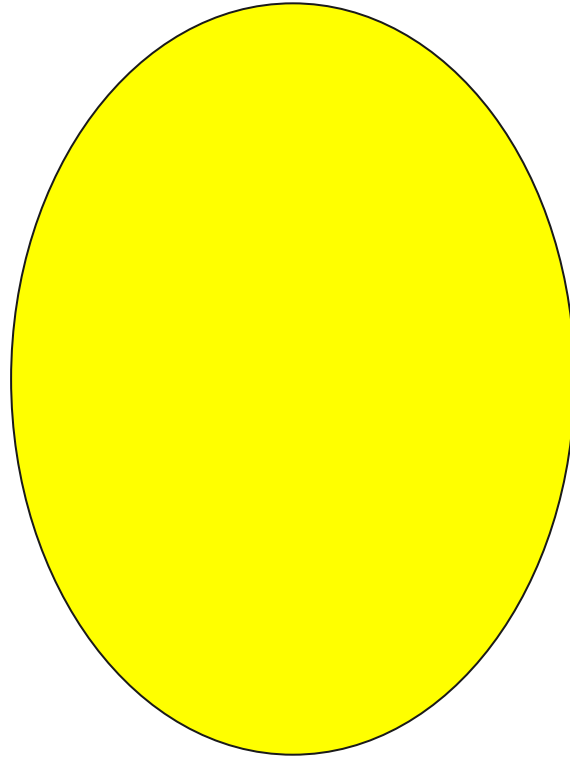
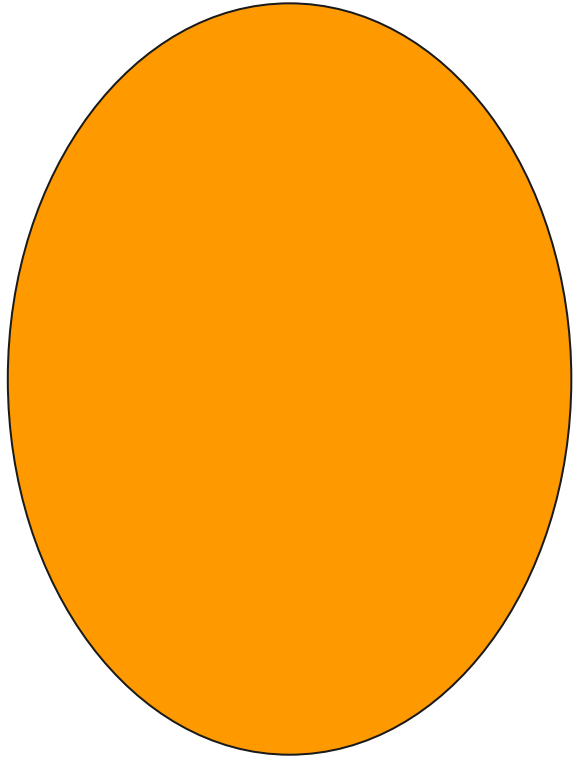
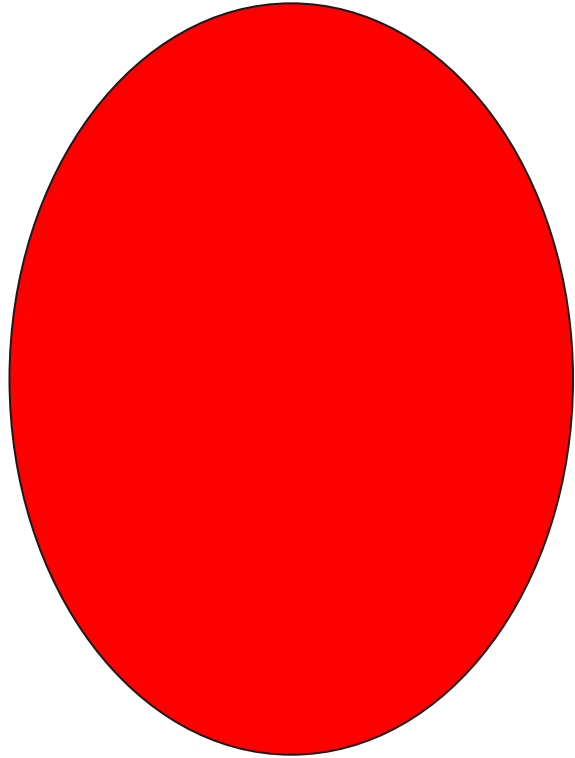
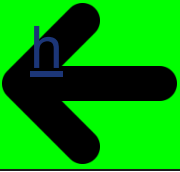


Hot



Cold

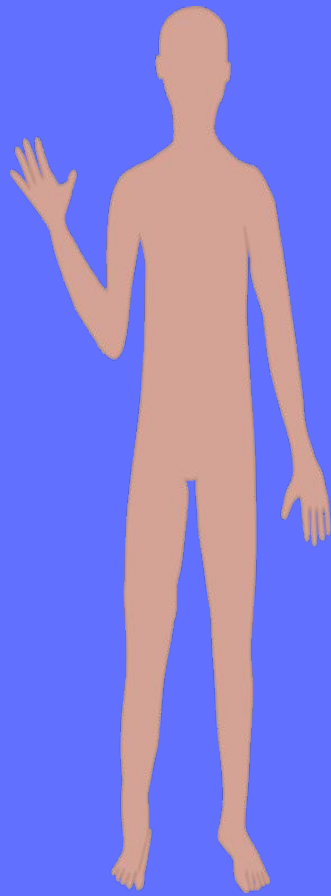
Colours





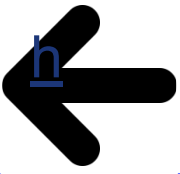
Feelings

Physical



Emotional





Physical

I am



Sore

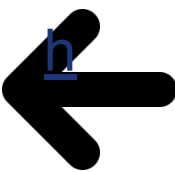
light-headed

Nauseas

Sleepy

Stiff

Dead



Emotional

I am

Happy



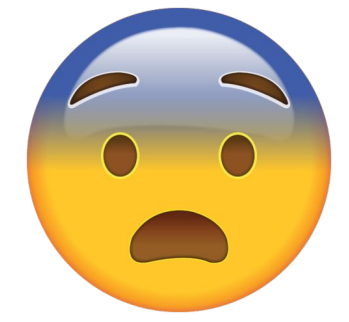
Sad



Tired



Scared



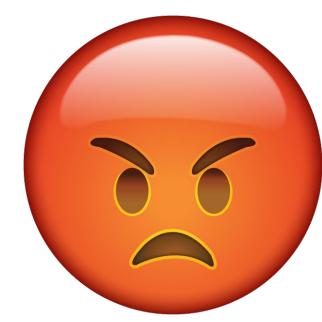
Excited



Nervous



Angry



Worried



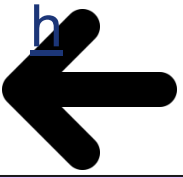
Sentence Words

Verbs/Actions

Possessifs

Yes

No



Verbs/Actions

Can I



Sit

Stand

walk

nap/sleep

eat

wheel

Can I

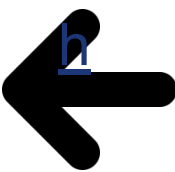


run

drink

Talk

h



Possessifs

Me

He

she

They

You

It



Mine

His

Hers

Theirs

Yours

Our

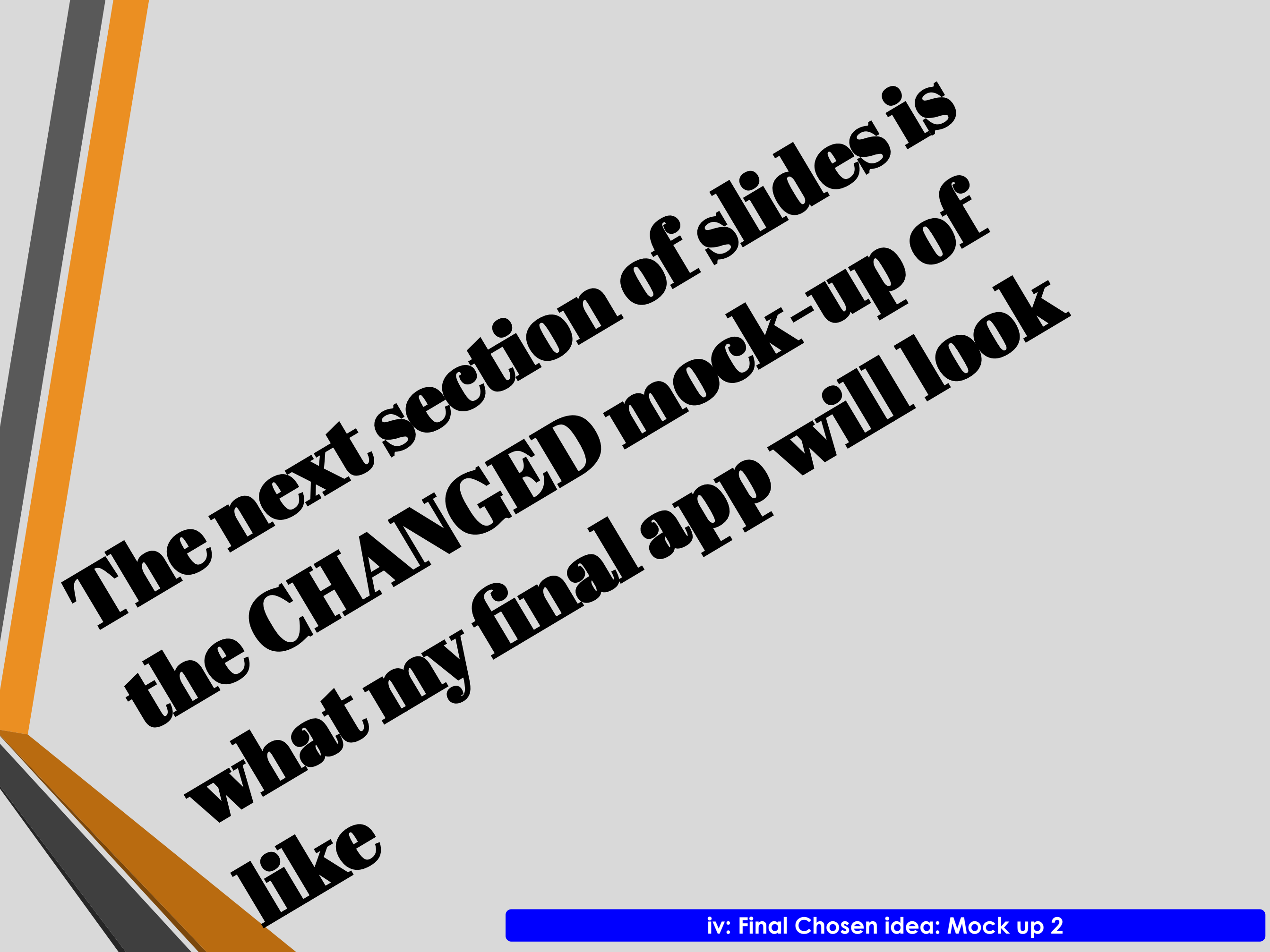


When you click the buttons audio will play

Next slide is my homepage

Scroll hyperlinks work

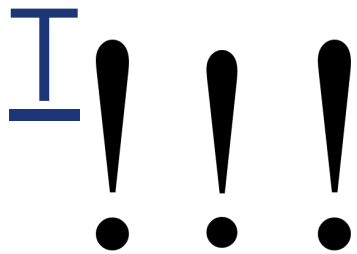
Back arrow hyperlinks also work



**The next section of slides is
the CHANGED mock-up of
what my final app will look
like**

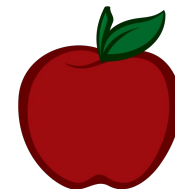
Talk For Me

URGEN



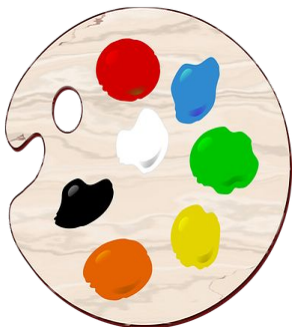
Basic
Needs

Food &
Drinks



Colour

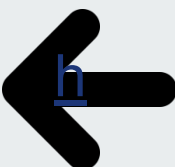
S



Feelings



Verbs/
Actions



URGENT!

TOILET



VOMIT



MEDICIN

E



My Hurts

Head



Stomach



Eyes



Arm

S



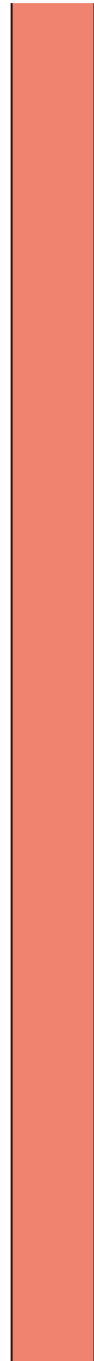
Legs



Feet



h



Basic Needs

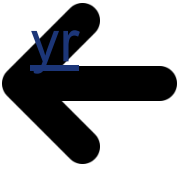


Basic
Question
S

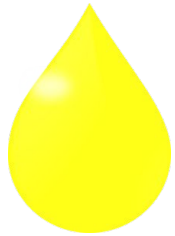
Hygiene

Basic
response
S

Hygiene



Pee



Poo



Wash



Bath



Wash
-Cloth



Scrub



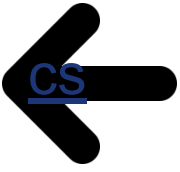
Wash....

Face

Feet

Body

Hands



Basic Questions

How are you feeling today?

How is the weather outside?

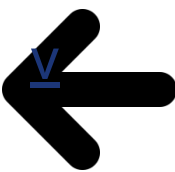
Can i have food?

Can you please take me out?

Can you put me to bed?

What time is it?

I want to go home.



Basic Responses

No I'm not in pain

I can't hear you

I can't speak

No thank you

Yes please

Thanks

Have a great day

Im fine thanks

Please leave me alone

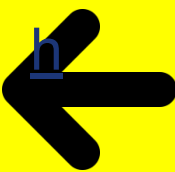
Home

I like it

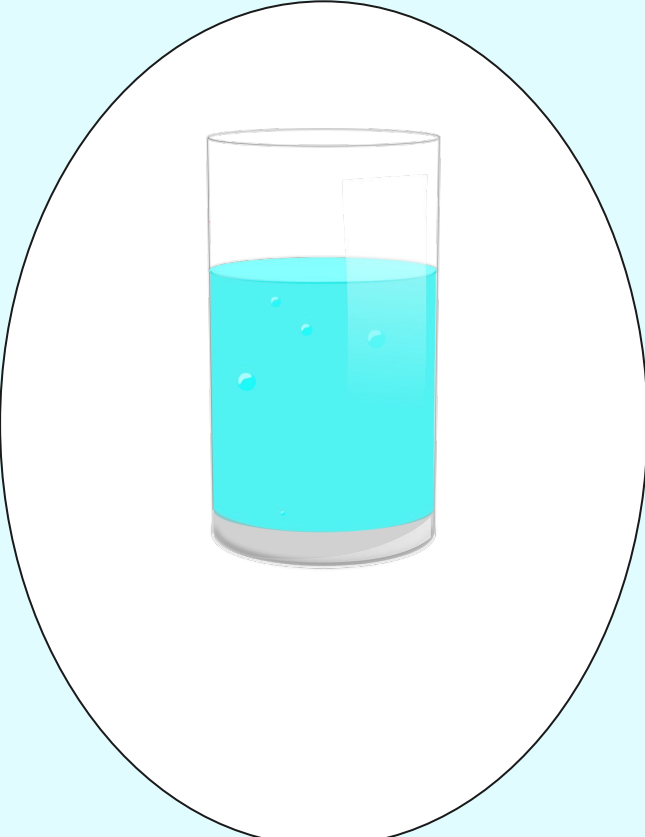
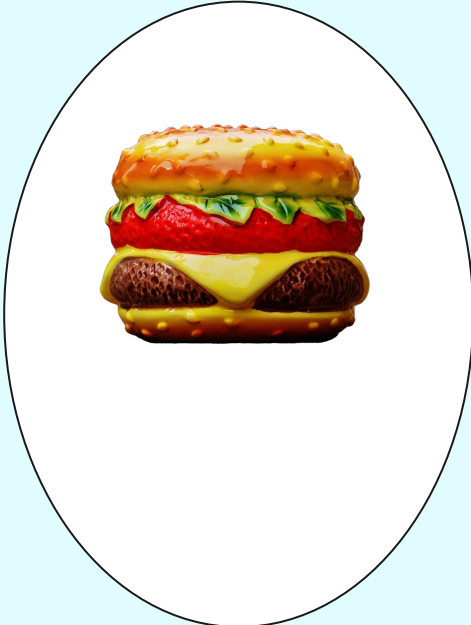
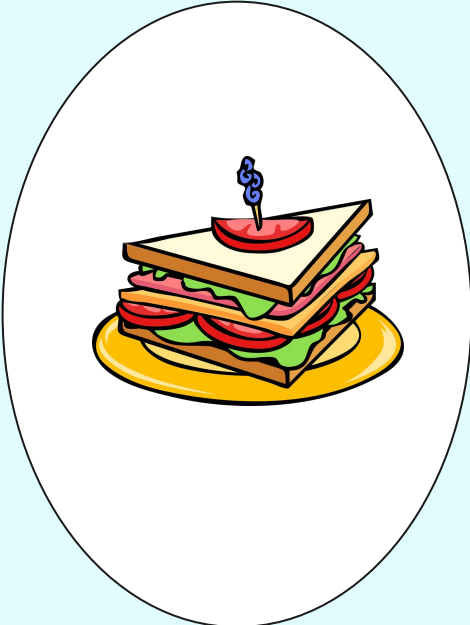
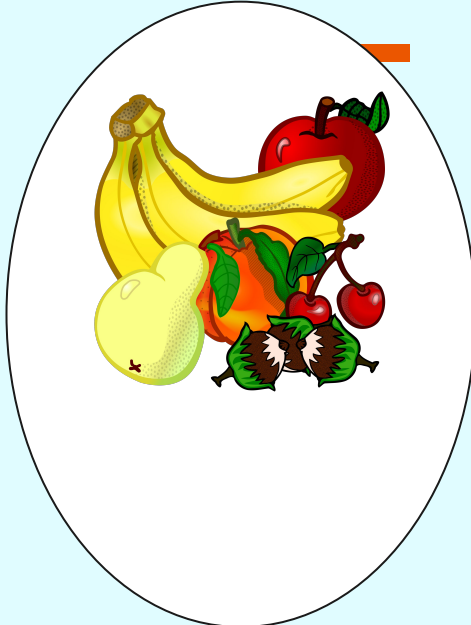
I love it

I hate it

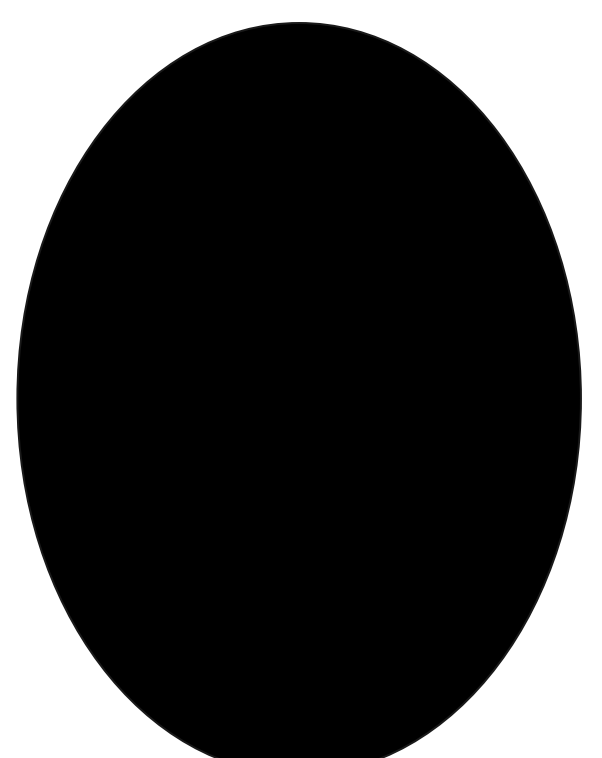
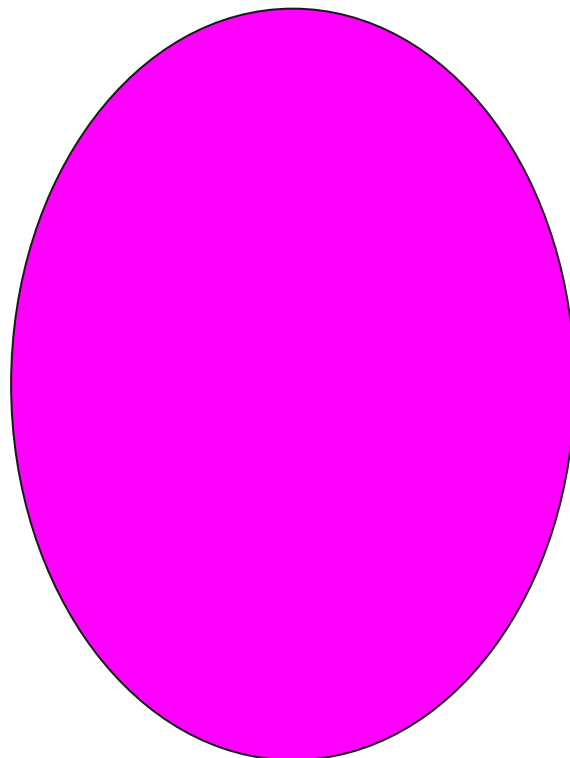
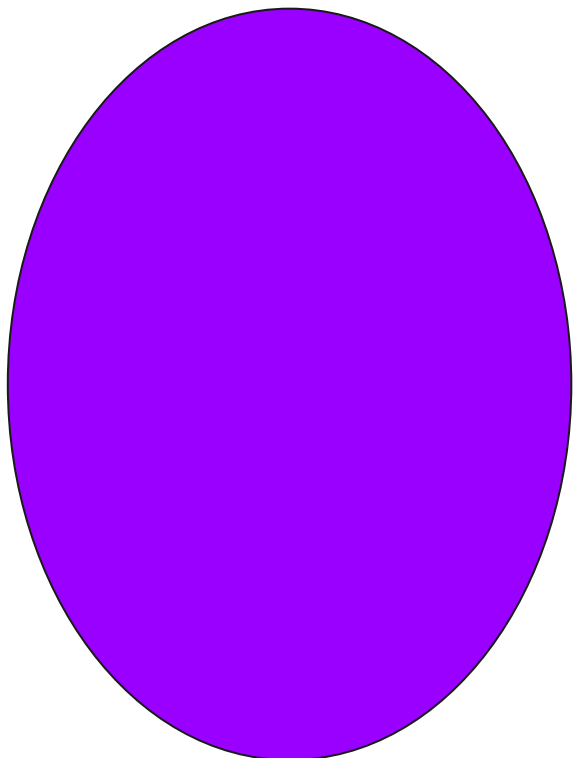
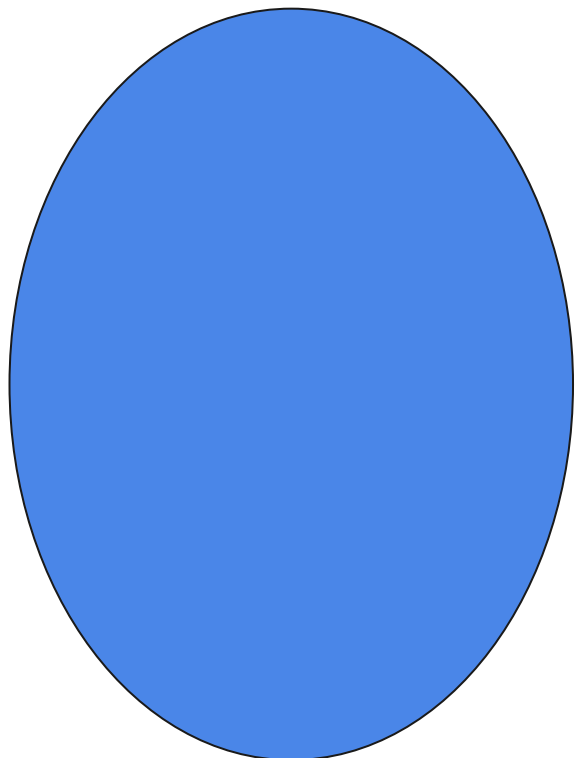
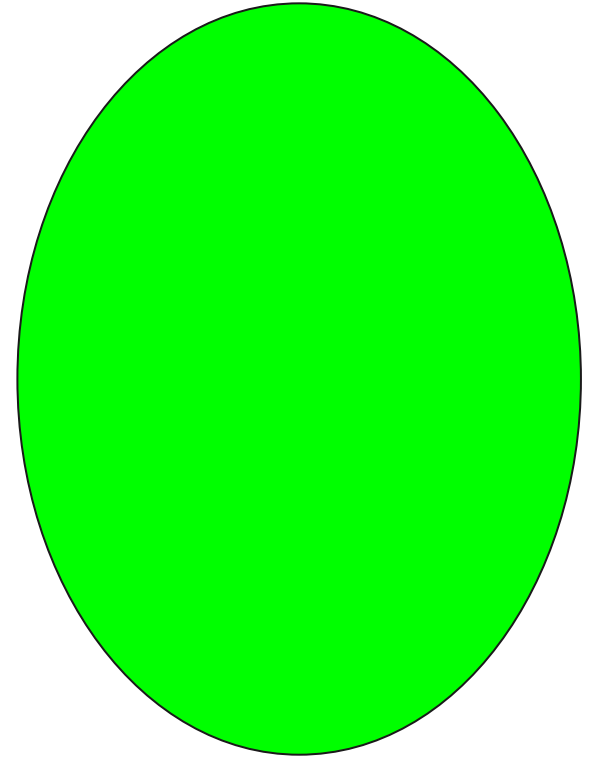
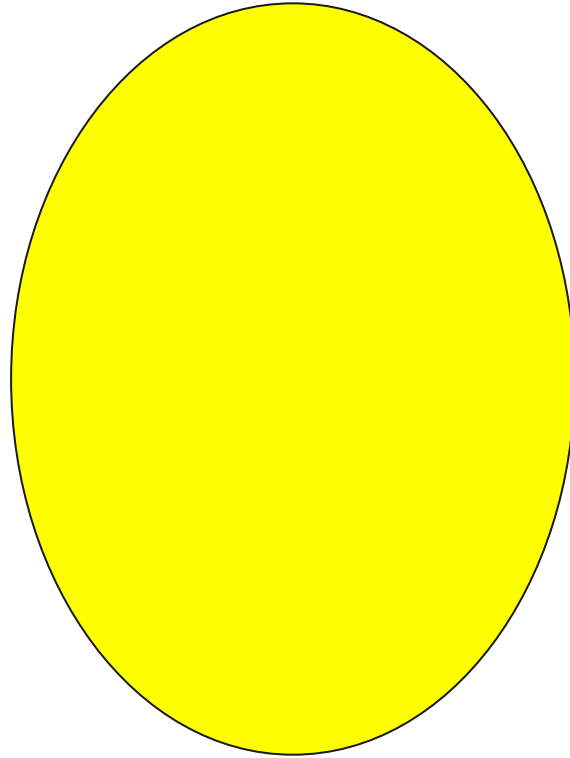
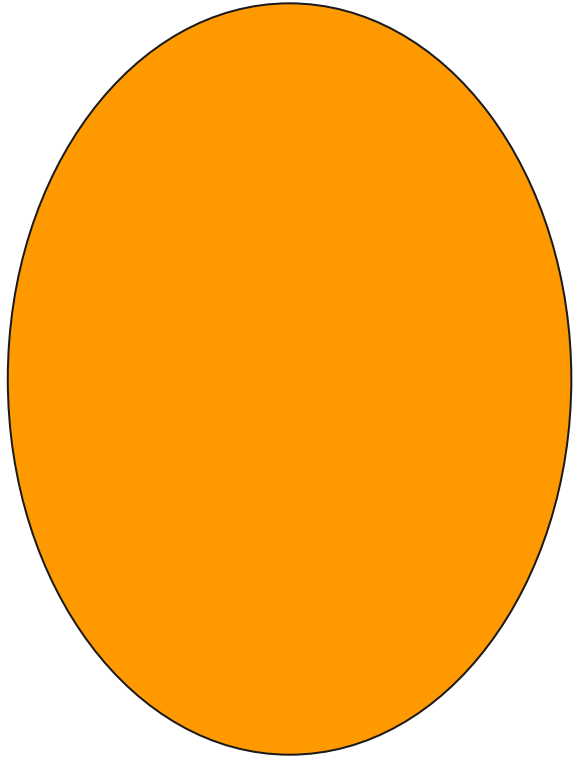
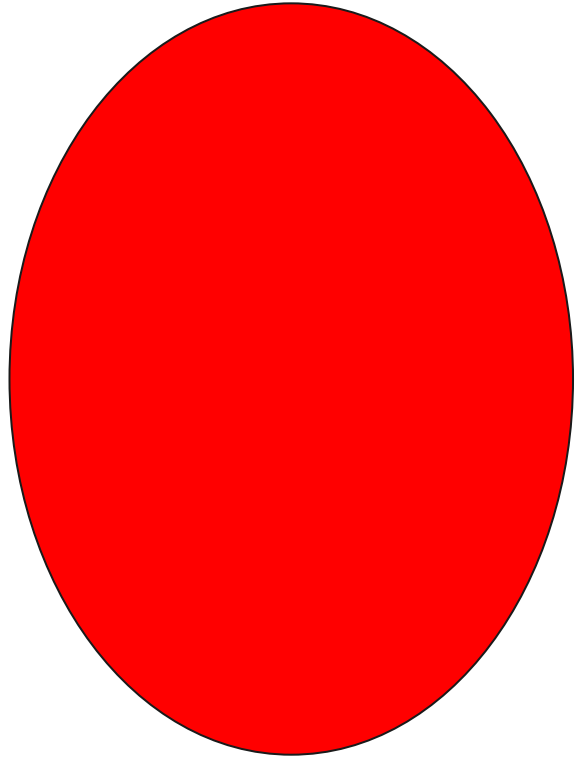
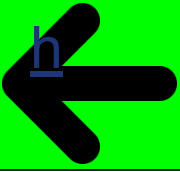
I want that

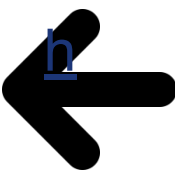


Food and Drinks



Colours





Feelings

I am

Happy



Sad



Tired



Scared



Excited



Nervous

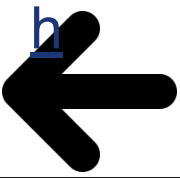


Angry



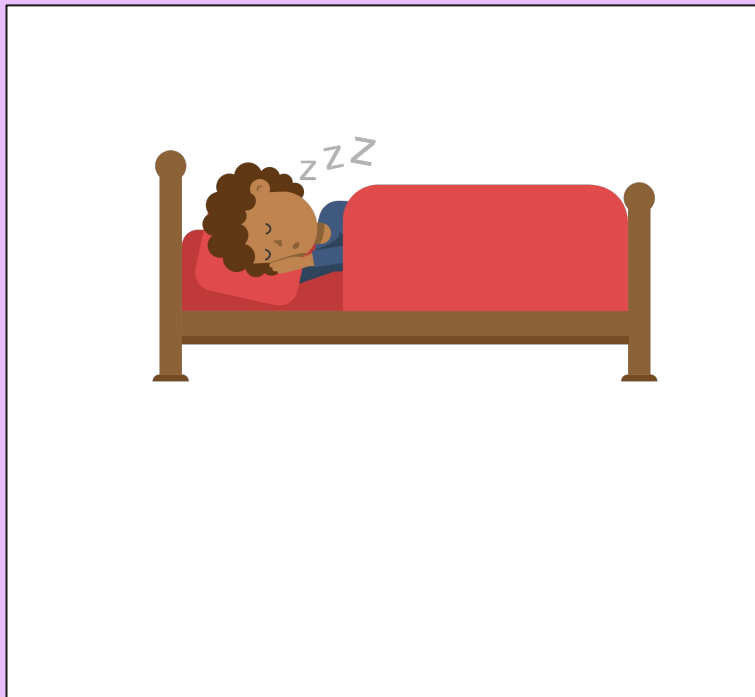
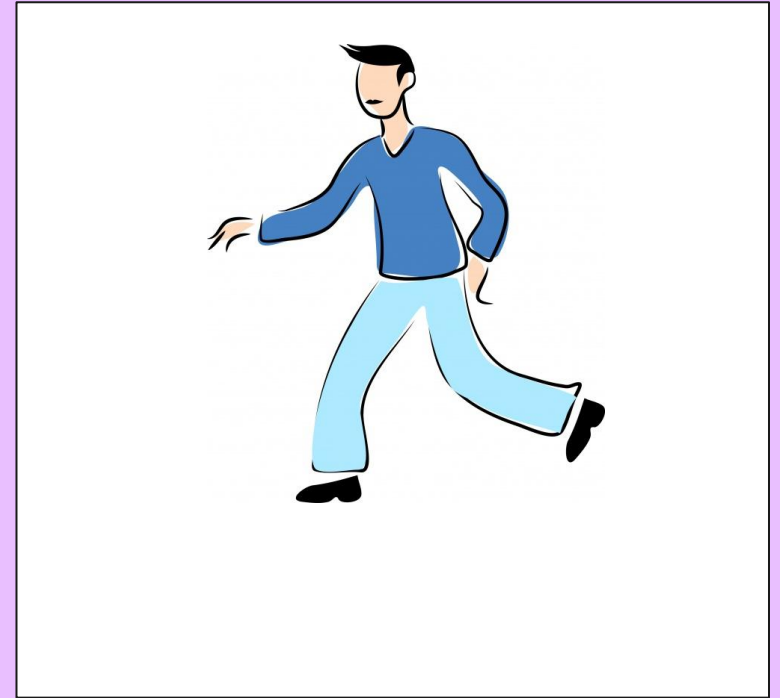
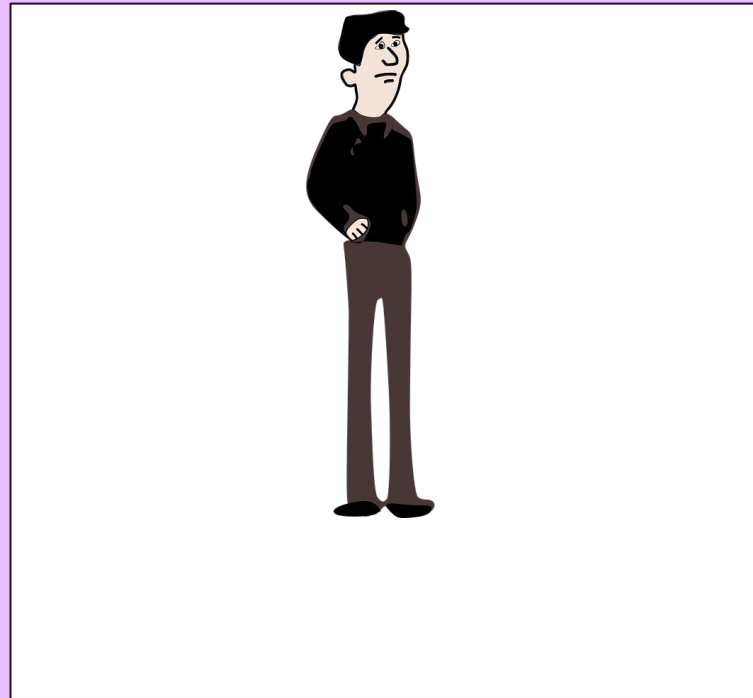
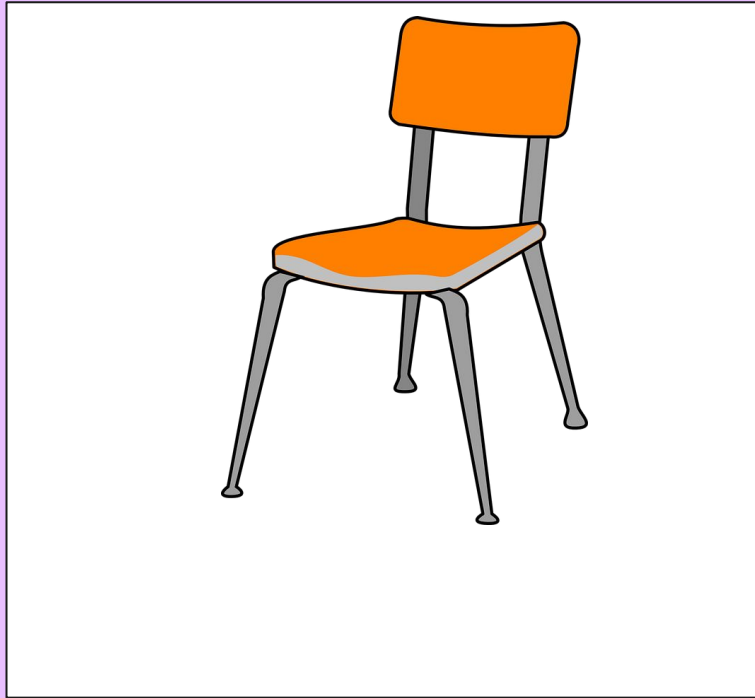
Worried





Verbs/Actions

Can I



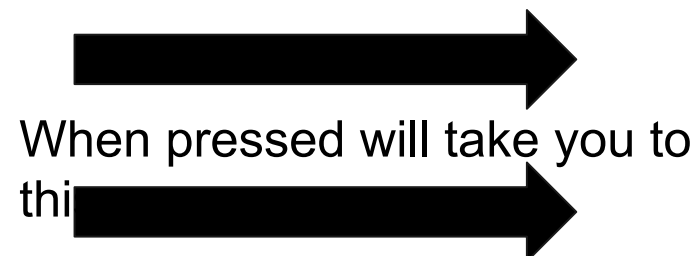
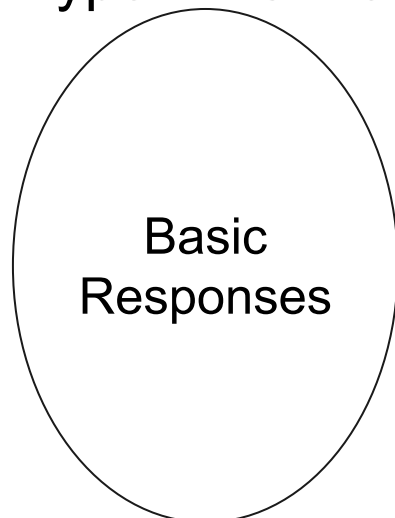
When you click the buttons audio will play

My app will include scrolling so, i will also include headers where there will be buttons to go back to the homepage. All the buttons will take you back to the homepage. It will look like this:



To the top ↑

All the menu categories will take you to their respective categories through Hyperlinks. For eg.



How r u?



C: Creating the Solution

DESIGN TASK

You will **Research**, **Design**, **Make** and **Evaluate** a digital product to help elderly people that have lost the ability to speak, to communicate with their carers and family.

AREA OF ASSESSMENT

C: Creating the Solution

- i. construct a logical plan, which outlines the efficient use of time and resources, sufficient for peers to be able to follow to create the solution
- ii. Demonstrate excellent technical skills when making the solution.
- iii. follow the plan to create the solution, which functions as intended
- iv. explain changes made to the chosen design and the plan when making the solution.

Task Breakdown		Resources		Timeline (week starting ...)							
Task	Task Description	Tools	Materials	Nov 14	Nov 18	Nov 30	Dec 2				
1. Grid layout and responsiveness	<p>Check I can make the proposed grid layout and responsiveness</p> <p>Make the basic section layout of my app - main menu</p>	Code	Font								
2. Download all category icons	<p>Download all the category icons i need from a icon website such as FlatIcon or Icons8.</p> <p>Make sure they are all SVG</p>	Icon websites	-								
3. Make Icons (categories)	<p>Create a 3x2 (icon) Homepage with the correct pictures and words</p> <p>Use an image src tag:</p> <pre> <div class="w3-col m4"> </div> </pre>	<p>W3Schools</p> <p>Fox template</p> <p>Code</p>	<p>Font</p> <p>Pictures</p> <p>Color codes</p> <p>Hyperlink codes</p>								

4. Make sub-Categories	<p>Make circle icons as my sub-categories that will be displayed after their main category is pressed. Use this code:</p> <pre><div class="w3-col m4"> </div></pre>	Code from w3schools	Font/writing Images Hyperlink code						
5. Make hyperlinks to the sub-categories	<p>Add hyperlinks to the sub-categories from the main categories look at (3) we can use these codes:</p> <pre> </pre> <p><i>(the code in black is the image, that is not part of the hyperlink)</i></p>	Codes from the previous web pages we experimented on W3schools	Hyperlink codes						

6. Record all audio	<p>Use a phone or laptop app to record all audios. If the audio is M4A or anything else convert it to mp3 using this website:</p> <p>https://online-audio-converter.com/</p>	App on phone/laptop (I used voice recorder)							
7. Add Audio	<p>Add audio to icons when pressed,</p> <p>Add a code that loads up the audio and then one that calls it up.</p> <ol style="list-style-type: none"> 1. <pre><audio id="weather" preload="metadata"> <source src="Howistheweather (name of audio in your folder) .mp3" type="audio/mpeg"> Your browser does not support the audio element. </audio></pre> 2. <pre>div class="w3-col m3"> </div></pre> 	Code from fox template	Audio file Audio id Code that calls audio up						

8. Add all cards	Use the codes from w3 schools and add it to your own code. Change the colours and add the text This is an example of a code: <code><div class="w3-panel w3-card-4 w3-pale-red"><p>I cant speak</p></div></code>	Card code from w3schools	Colour codes Font codes						
9. Add colours. Pictures, text etc to the word icons	-	Codes from different places	Font Colour						
10. Make all headings	Use this code to make heading and give ids to your category sections: <code><div class="w3-content w3-container w3-padding-64" id="FoodandDrinks"></code> <code><div class="w3-row-padding w3-center"></code> <code><h2 class="w3-center">Food & Drinks</h2></code> Use codes like (<code><h2.....</h2></code>) to create headers & use codes like <code><h4.....</h4></code> to have normal writing.	Code from w3schools	Writing size codes						

My final product

1. Demonstration of my product: (provide LOOM video link)
<https://www.useloom.com/share/633aa3366c7e407fbaf4cfb638afe2ed>
1. Live hosting of my product: (provide link to your GitHub site or OneDrive hosted ppt)
<https://kmgale.github.io/Khushi.github.io/>

Changes I made from my Crti B final design choice

<https://www.useloom.com/share/1e25398ba15648ec9f5a04f2ae8c7a21>

D: Evaluating

My testing method(s) ... paste from draft

I am going to interview and survey multiple people who have experience or people that can put themselves into the shoes of our old people. I will also try and use this app for 2 hours to see if this app really, fully covers my needs for that short time. I will also get my family to use this app for 30 mins each and then fill out a survey if the app fulfilled the design specifications. The data i collect from both mine and my family's tests will be presented to you in strand 3. Throughout doing my test i will carry a checklist of the design specifications with me and tick them off when the app fulfils them. I have 3 test subjects.

Data type produced My testing method(s) will produce data that is... *(paste from draft)*

My data will mostly produce quantitative data. Most of my survey questions are yes and no questions.

Data analysis I will analyse the raw data produced from my testing method(s) by *(paste from draft)*

I am planning to make a survey and collect data from there. it will also include my checklist.

Testing Participants The participants in my testing procedure were *(paste from draft)*. They were chosen because *(paste from draft)*

I tested this on my mom because she has a paralytic father that she has taken care off. I chose my father because he has taken care of both his parents for a long time. I chose my brother because he understood my project and was willing to take part

Testing results (eg "Survey questions used to test my app")

Check List for my app:

- x x Audio clear?
- ✓✓ Images Big & Understandable?
- ✓✓ Covered your Basic Needs?
- ✓✓ URGENT ICONS valid? (were they urgent)
- - Big words?
- ✓✓ Buttons are wide?
- ✓✓ Operated on your device?

Overall rating for app:

1 2 3 4 5

(circle pls) ♣ = 4.25
 ♠ = 4.5

✓ ✗ -
~~fulfilled~~ NOT +half way
fulfilled done

♣ = Papa
♠ = Mummy
● = Brother

Checking my product against the success criteria from Crit B

Design Specifications	Completed OUT OF 10	Evidence from app
<ul style="list-style-type: none"> • have buttons with dimensions of at least 1.5-2 x 1.5-2 cm 	8	The real dimensions are 1.8 x 1.9cms. The pixel dimensions are Laptop: 283.98x283.98
<ul style="list-style-type: none"> • allows user to select common everyday words and actions 	10	My app has 5 common actions and a separate section for both Basic needs and Basic questions
<ul style="list-style-type: none"> • have urgent needs/necessities separately 	10	I have a whole category that's dedicated to 'Urgent'
<ul style="list-style-type: none"> • Have sentence making tools (be able to put words together then click on them to play) 	0	I do not have a sentence making function because I did not find code for that
<ul style="list-style-type: none"> • have buttons that play audio when clicked/pressed 	10	My app has audio for all my buttons except for
<ul style="list-style-type: none"> • have clear graphics on buttons 	9	My app has clear graphics
<ul style="list-style-type: none"> • Have simple vocabulary 	7	My app has simple vocabulary
<ul style="list-style-type: none"> • allows user to select from word/action categories 	9	I have an action/verbs category
<ul style="list-style-type: none"> • have buttons that physically respond on hover or click (size/colour change) 	8	I have hover capacity and I also have zoom-in. I do not have a colour change option
<ul style="list-style-type: none"> • Have a picture taking function 	0	I do not have a picture taking function
<ul style="list-style-type: none"> • could have typing function 	0	I do not have a typing function
<ul style="list-style-type: none"> • Could Have a medicine section (for the elderly) 	0	I do not have a medicine section
<ul style="list-style-type: none"> • Have complex vocabulary (emotions, questions, etc..) 	0	I do not have that

• Be responsive to different screen sizes	9	My app looks good on most devices except for Samsung S5's
• Have a theme of bright and relevant colors. Eg. Green button for 'Green'.	10	I have a theme of pastel-esque colours and have the colour icons according to the colour
• Have big and clear labels/words	6	The font size on my app can be bigger especially on my cards
• Have simple and readable font	9	My font is not cursive or hard to read
• Change colour for each category (to make it simple to connect colour to category)	2	My app is not colour-coordinated
• have clear graphics and words on buttons	10	I have clear graphics and picture icons

• have responsive buttons that are able to be easily pressed by fragile people	10	My app has responsive buttons
• Buttons Should be wide enough for people who do not have refined motor skills	10	My buttons are wide enough, they are
• Should have easily recognizable icons (either words or pictures)	9	Most of my icons convey the message
• Have elderly needs	10	My app is for the elderly
• Could Have a medicine section	0	I did not include a medicine section because i found that it was too vague,
• Could have a category for younger children that can't talk.	7	Most of my icons can be reused for younger children

<ul style="list-style-type: none"> operate on android devices (table and phone) 	10	My app operates on any device with wifi
<ul style="list-style-type: none"> Operate without wifi 	-	On an iphone there is a option to save to read later that way you can still use the app with the github link.

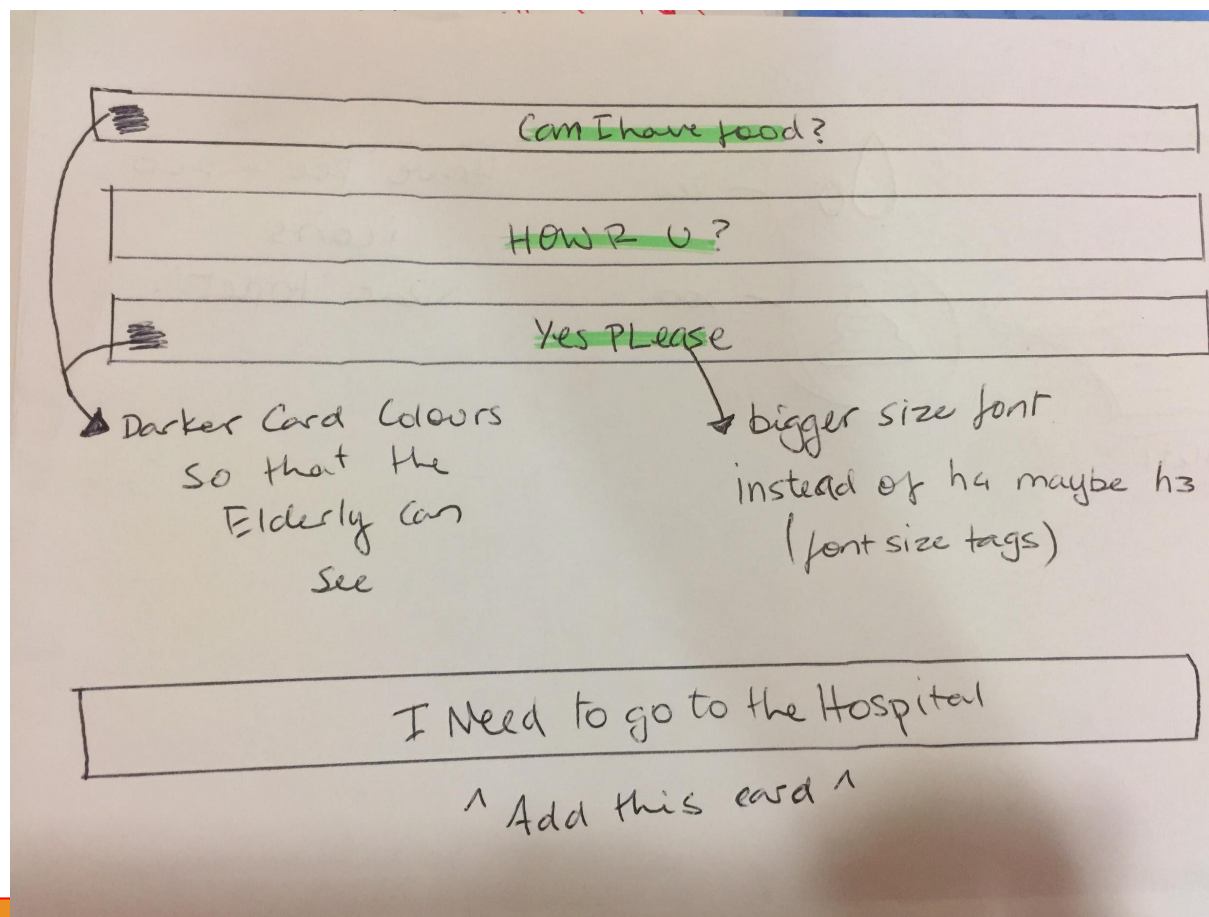
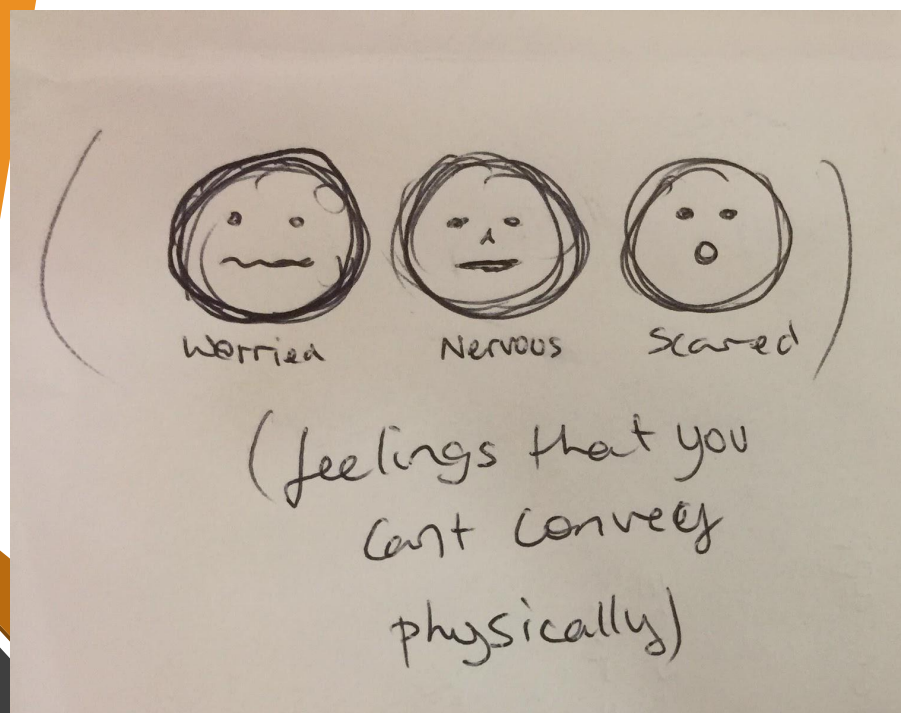
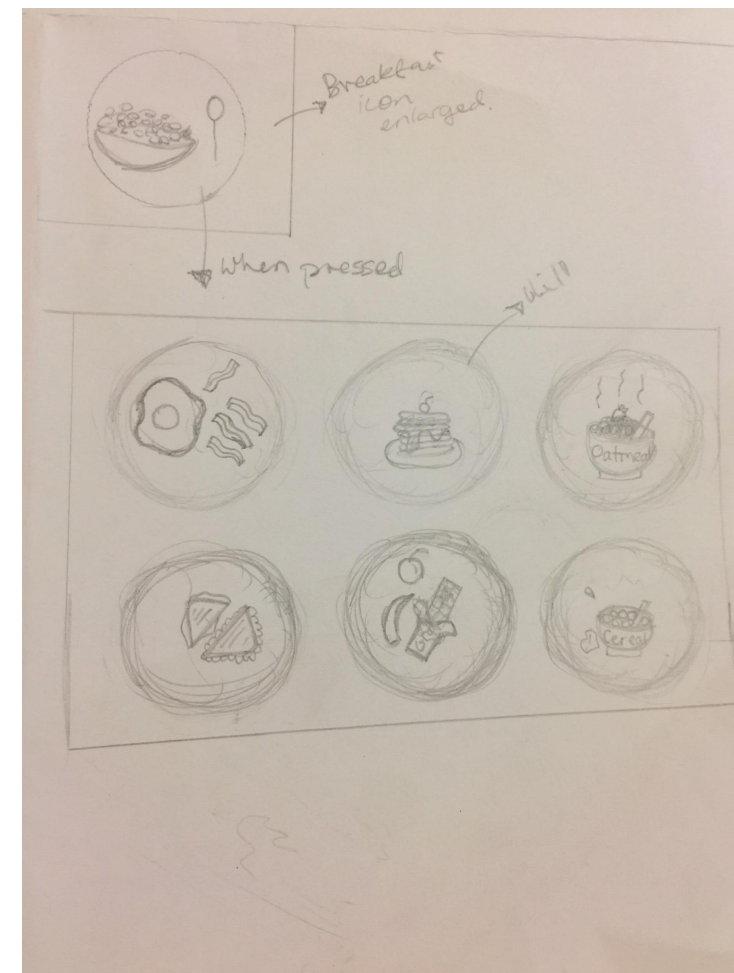
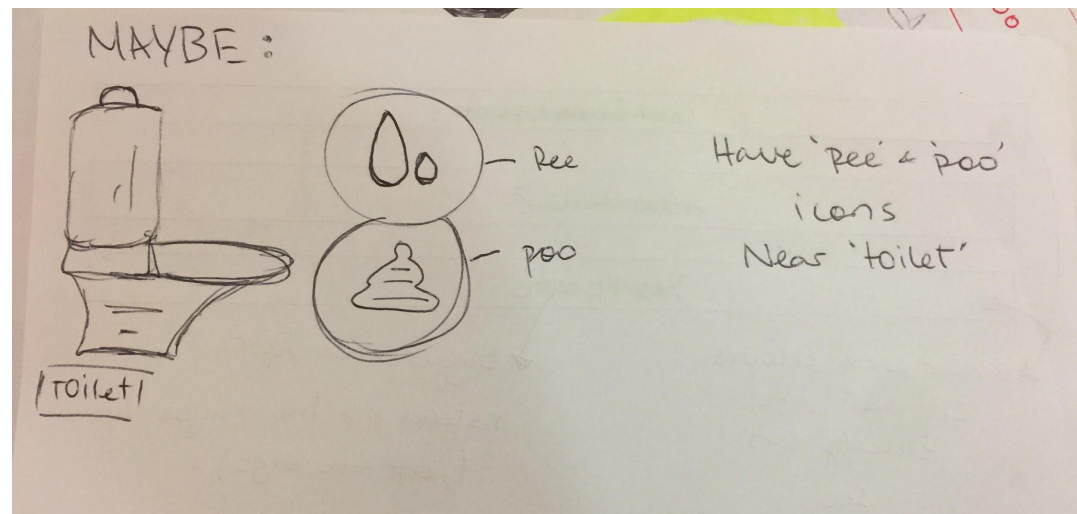
<ul style="list-style-type: none"> involve coding skills that we've learned/will learn in class 	10	My app has audio, pictures and hyperlinks
<ul style="list-style-type: none"> involve more advanced coding that I've had to learn through research 	8	I attempted to add a search bar but included cards that played audio. I also made a card layout theme for my app.

Concluding statement on the success of my product

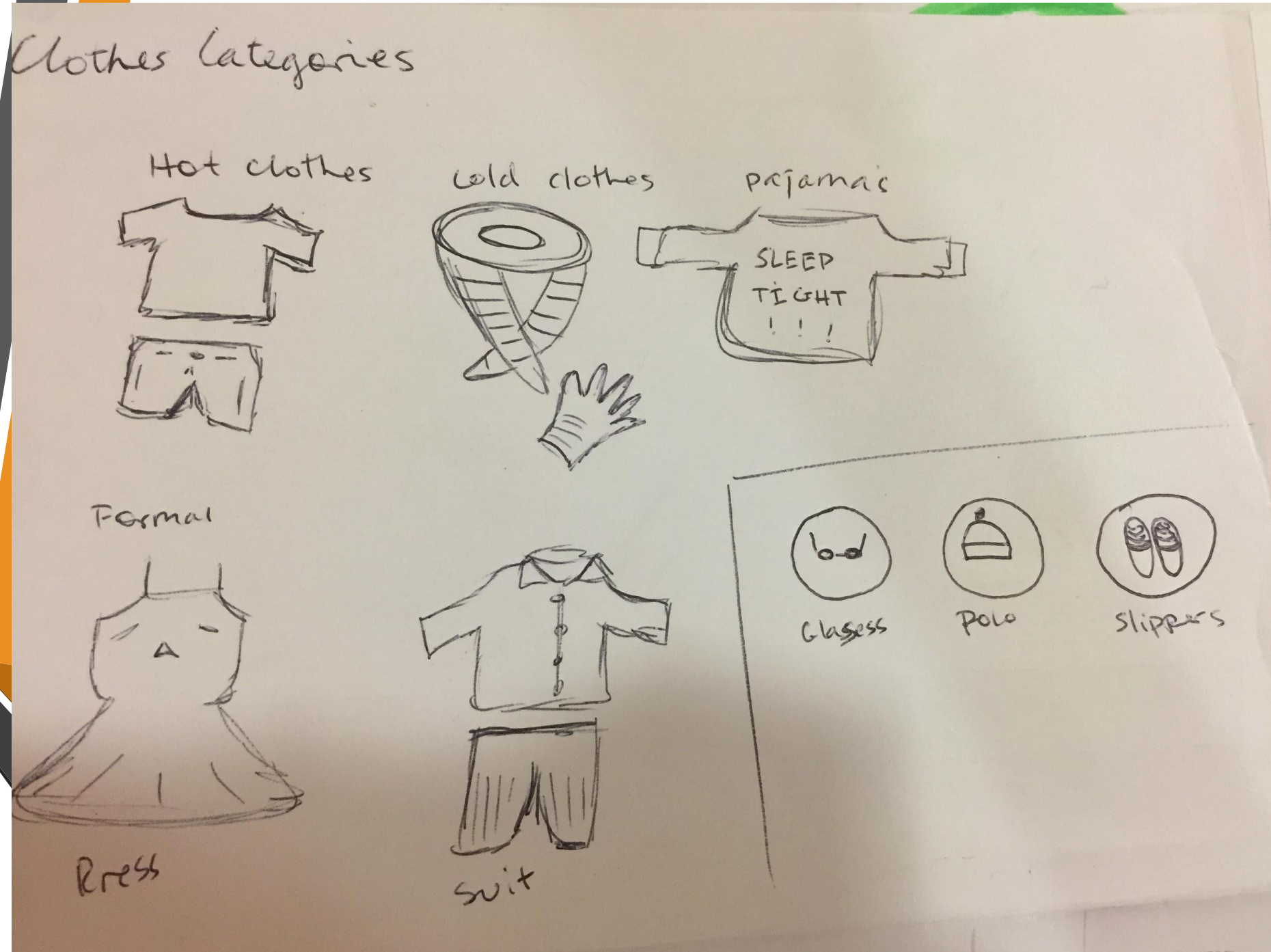
I have completed most of my design specifications. The 'my app could...' one's are not completed because i think those points were optional for me.

Making my product better: Improvement details

These diagrams are improvements that my family suggested



The clothes category replaces the colours category because my test subjects told me that the colour category was unnecessary.



STRENGTH	WEAKNESS	IMPROVEMENT
Has an aesthetically pleasing theme	Audio was semi-clear	To record my audios on my phone so the quality would be better
Has bright and bold icon picSWI analysis of my final App can't see very well	Background noise	using an audio editor I could improve my audios. I could also record in a quiet room.
Is very concise and clear	Has a colour category	Because old people do not use colours much, I can replace it by a clothes category that has Hot clothes, Cold clothes etc...
Image icons convey the message	Less physical feeling icons	I could have more Physical emotions options; like Sore, Stiff and Nauseous
Is very easy to use. All categories have been kept to a minimum	My app doesn't look good on a Samsung 5	Add a card that says 'I need to see the doctor'.
Bars that have 'to the top' make the app very easy to use	I have some problems with the audio and black image pop ups. Some of my icons do not show up on the black modal class screen.	Instead of having happy/excited icons (physically expressible icons), include feelings that the elderly cannot physically communicate by using facial expressions/body language.
	Card colours are too pale and faded. Although my theme was pastel, my surveyees thought that the colours were too dull.	I can change my dull colours to bolder ones that pop. I can use red and dark blue instead of pale-red and light-blue
	Vague fruit and veggie icons, can add detail to breakfast menu	I can add more breakfast icons like; 'Toast', 'Eggs', 'oatmeal' etc..
	5 audios don't work	I can improve that by adding the code for the audios to all those cards and icons that's audio don't work

A statement about the impact of my product on the target audience.

My app provides the opportunity to communicate with basic words and vocabulary. My app allows users to communicate their needs like they weren't able to before. The biggest limitation is that i do not know if my app works offline.

My app improves the situation of the elderly with the inability to speak greatly. With this app, they are able to convey their most basic thoughts and needs. Some Basic thoughts include, colours. Feelings, pain and Although the app does not cover all areas that the elderly may need to talk about such as, their clothes, weather, family etc. , but it is simple and not-confusing to use.