

Design IA2

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Part A - Exploring the Task and Human Centered Design

TASK

How can design solutions promote well-being in retirement?

STAKEHOLDERS

Barb Brown:

- 67 years old
- Lives alone
- Been retired for 4 years.
- Has a daughter + 3 grandkids
- Lives in Australia, QLD in a one story house
- Struggles with arthritis
- Husband is dead.



retired people

Thinking about their emotions + concerns

We are assuming every retired person has the same well-being as Barb for this task.

What is well-being?

One's well-being is defined by their Needs and Wants and 4-Pleasure-Framework.

The mind map helps to figure out what their current mental and physical well-being would be.

What is a retired person?
A person who has retired from work.

Well-being of a retired person... discover through interview questions, 4-pleasure-framework and their needs and wants.



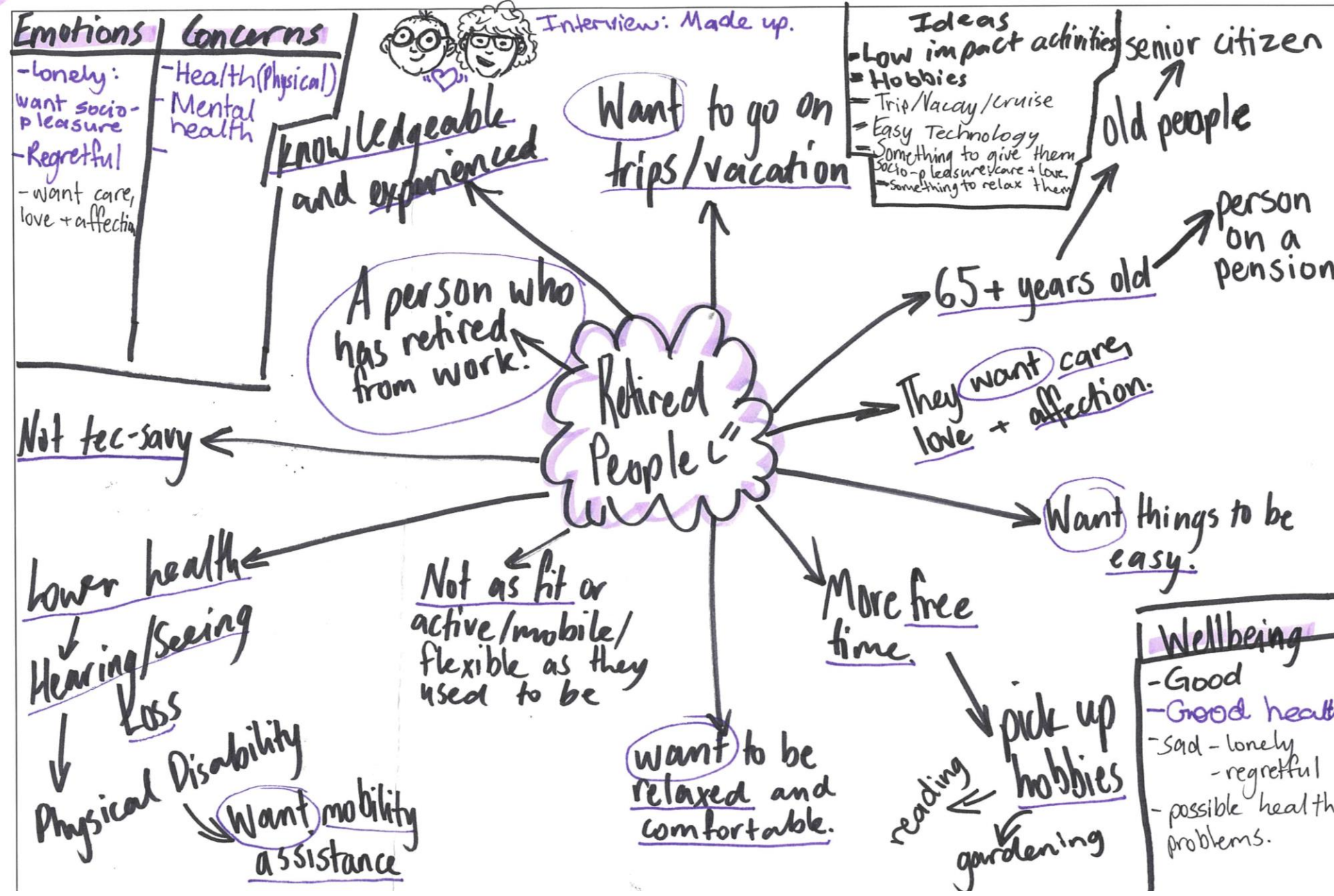
This is a **HCD** project

What is HCD?

Human-Centered-Design:
A problem-solving technique that puts real people at the centre of the development process; therefore, creating products and services that are tailored to your audiences **NEEDS + WANTS**.

Shows stereotypical assumptions about retired people from personal experiences and secondary sources.

Mind Map



Part A – Exploration (Interview Questions)

Interview Questions

Barb 



1. What are your hobbies?

Barb: I really love gardening and playing golf with my friends.

physio-pleasure
socio-pleasure
psycho-pleasure

↳ 2. Do any of these activities cause you physical strain?

Barb: I am not as flexible as I used to be, so golfing can be hard sometimes and leaves me with a sore back and arms. It also affects my hands as I have arthritis.

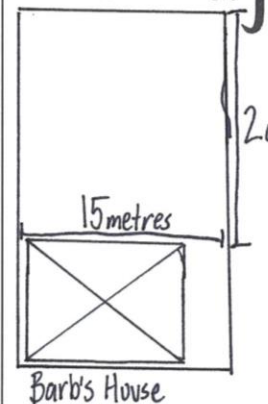
physio-pleasure

3. How do you like retired life?

Barb: Change can be difficult. I have a lot more time now to do all the things I never could but I don't have enough energy or the body I used to have. I need things to be easier for me.

ideo-pleasure
physio-pleasure

4. How big is your backyard?



Barb: I believe I have a pretty spacious backyard. It is 20 metres long and 15 metres wide with some space on the side of my house.

- 67 years old
- Lives alone
- Has arthritis
- Has a daughter and 3 grandkids
- Feels lonely
- Her husband died

- Been retired for 4 years
- Likes:
 - hanging with friends + family.
 - cooking
 - gardening
 - golfing
 - watching TV

5. What things do you like to do?

Barb: I like to cook in my spare time and watch TV. I like spending time with my friends and family. I feel lonely sometimes ever since my husband died.

physio-pleasure
socio-pleasure
psycho-pleasure

6. What are some things you struggle with?

Barb: I struggle with technology, long activities/exercises, and driving; I feel unsafe on the road and would rather walk or have people come to my house.

psycho-pleasure
ideo-pleasure

But I also get worried that people don't want to come to my house because it is not aesthetic enough.

4 Pleasure Framework

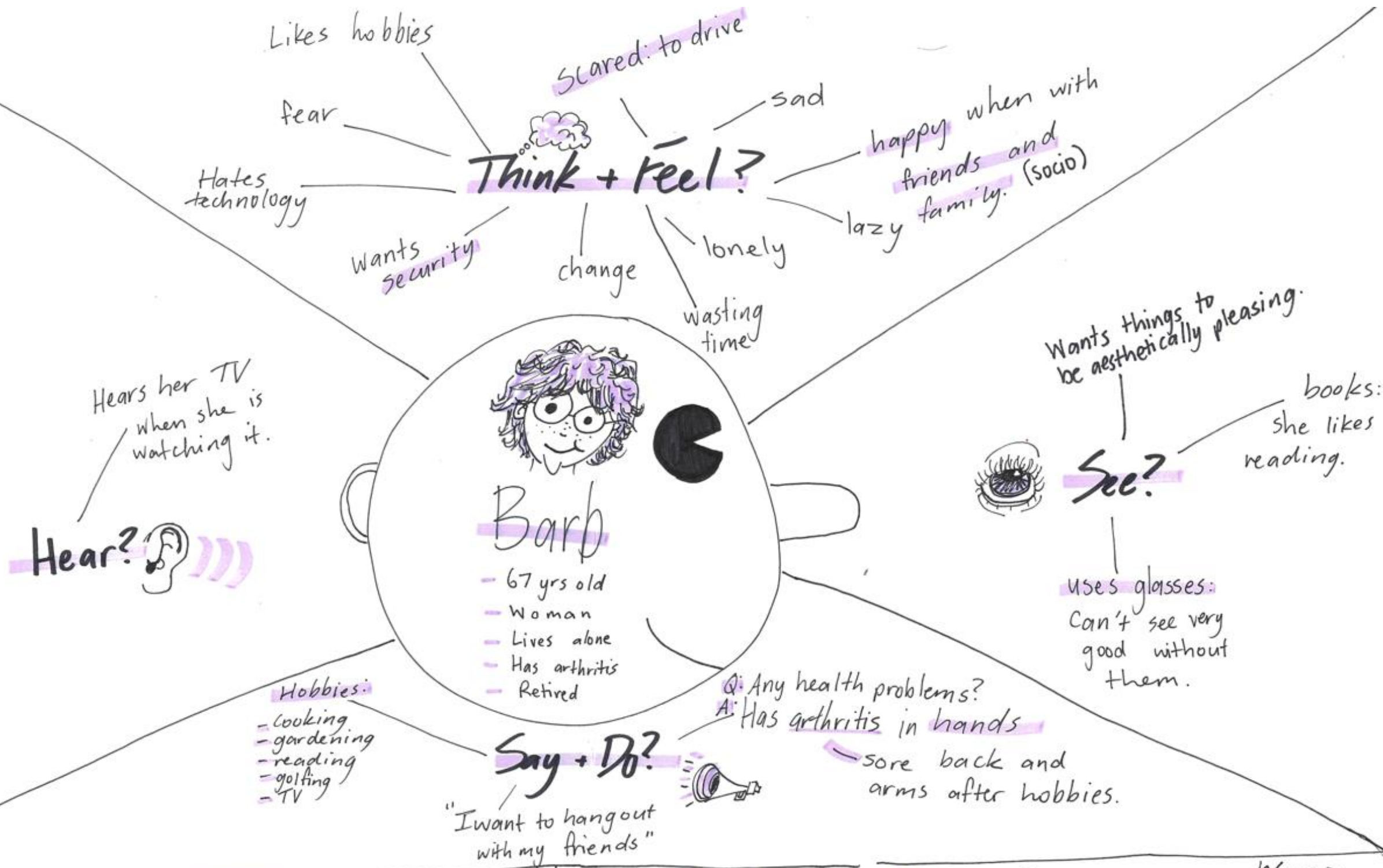
Physio	Psycho	Ideo	Socio
- Isn't as flexible or mobile as she used to be. - Gets a sore back, arms and hands after hobbies due to arthritis. - Needs things to be easier. - Has a lot more time. - Hobbies/Likes	- Lonely. - Sad. - Scared. ↳ to drive. - She feels happy when doing hobbies.	- Sense of security. - Feels fearful of change and the future.	- Hanging out with friends and family. - Her husband died. - She wants to see her daughter and grandkids.

Needs:	Wants:
↳ Things to be more accessible to her. ↳ To spend time with friends and/or loved ones (socio-pleasure). ↳ To feel safe; a sense of security (psycho-pleasure). ↳ The design to be aesthetically pleasing (aesthetic). ↳ Promote Barb's well-being.	↳ Care, love and affection. ↳ To not feel lonely. ↳ Mobility assistance. ↳ To hangout with friends and family.

Principles of Good Design:

- Accessible
- Aesthetically Pleasing
- Useful

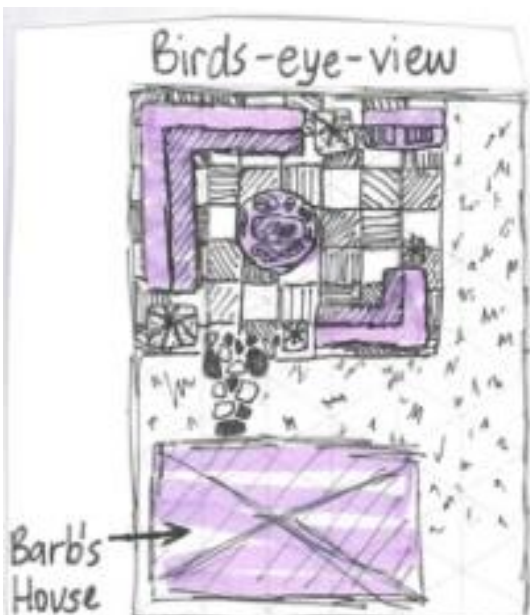
Part A - Exploration (Empathy Map)



Part A – Exploring (Ideation)



A place Barb can hangout with friends and family (socio-pleasure) in the comfort of her own backyard, so she does not need to drive anywhere (psycho-pleasure)



My sketch of an idea



Idea 1: An Outdoor Socialising Area

Features:

- Plants (Barb's hobby: gardening).
- Aesthetic tiles (Dieter Rams: aesthetically pleasing).
- BBQ (Barb's hobby: cooking).
- A table.
- Seating areas (to socialize with friends and family: socio-pleasure).



A golf stick because Barb loves playing golf



COMBINING 2 OBJECTS
(SCAMPER)



A hand grip that will help aid her arthritis, making it easier for her to enjoy playing golf



A customised golf stick that will help with her arthritis when playing golf



Idea 2: A Handgrip for her Golf Stick

SCAMPER (COMBINE)

Features:

- A comfortable hand grip
- A golf stick
- Will help with her arthritis.

Idea 3: A Mini Golf Course for her Backyard

SCAMPER (PUT TO ANOTHER USE)

Features:

- A 5-step mini golf course.
- Aesthetic, colourful flooring.
- Unique courses.
- She can play mini golf with her friends and family (socio-pleasure and physio-pleasure).
- Different leveled grounds and courses to make the game harder.



A mini golf course because she loves to play golf with her friends



Barb's backyard (20m x 15m)



Adding the mini golf course to her backyard





A television because Barb likes to watch the TV in her spare time

COMBINING
2 THINGS
(SCAMPER)



Golf because she likes it



COMBINING the television and golf to create a virtual reality golf game

Idea 4: A VR Golf Game
SCAMPER (COMBINING)
Barb likes to watch television.
Features:

- A fun, interactive golf game that doesn't require her to leave the house (psycho and ideo-pleasure).
- A virtual reality headset.
- She can play with her friends and family (socio-pleasure).



A garden bed because Barb loves gardening

COMBINING
2 THINGS
(SCAMPER)



Knee pads to assist Barb while she gardens (comfort)



Garden beds with knee pads for Barb to garden

Idea 5: A Garden Bed
SCAMPER (COMBINING)
Features:

- Floor knee padding.
- Three garden beds.
- A variety of plants (Barb's hobby: gardening).



A kitchen for Barb to cook in because it is one of her hobbies


Idea 6: Redesign of Barb's Kitchen







Features:

- An open space
- Plenty of room for her to cook
- An island counter
- An eating area to socialise with friends and family (socio-pleasure)
- Aesthetic designs (aesthetic)

To further determine which design will solve the task of promoting a retired person's (Barb's) wellbeing, I will need to discover which two ideas she likes the best. To do this, I have asked her to list her pros and cons of each idea and rate them on a scale from 'dislike' to 'love' on the next page. Then I will evaluate which idea is best suited for her wants and needs by looking at the strengths, limitations and implications of the designs.

Part A: Barb's Rating Chart (Devising)

 = Barb's two most favoured ideas

Idea Number	Pros	Cons	Rating
Idea 1	I love it! This is definitely a place I can see myself hanging out with my friends and family. I love all the plants and and that you put a grill in their too. This will make my backyard look so much better and it is very useful.	I do love gardening, but I can't see many plants in this idea. This could be a problem.	Dislike  Love
Idea 2	This is a good idea. It could really help my golfing if my hand didn't hurt so much. This is a very thoughtful idea.	The design is not very aesthetic. I will also have to drive myself to the golf course to be able to use it and I don't like to drive.	Dislike  Love
Idea 3	It is very unique and eye-catching. I could invite my friends and family to come play this game that I enjoy and love. I really like the idea. The location is perfect and very accessible to me.	Although, I do not like how much space it takes up. I love nature and my grass so covering it all up seems like a waste. I also might get bored playing the same course repeatedly.	Dislike  Love
Idea 4	Woah! I have never thought of this. I think this is a really unique idea and it sounds exciting. I could play this in the comfort of my own home with the girls and the grandkids.	I am not very tech-savy so it could be hard to control.	Dislike  Love
Idea 5	I love gardening! The knee padding is a really good idea because I do find it to be a struggle without them.	The design you sketched is not very aesthetic.	Dislike  Love
Idea 6	I do love to cook so this would be nice.	I like my kitchen the way it is, and I really do not want to change it. I will lose things and it just seems really hard. A good idea but not for me.	Dislike  Love

Part A – Strengths, Limitations and Implications of Idea #3:

A Backyard 5-Step Mini Golf Course

Birds-eye-view



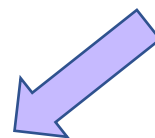
Barb's House

- Features:**
- A 5-Step mini golf course (Barb's hobby: golf)
 - Aesthetic flooring (aesthetic)
 - Flags (aesthetic)
 - Numbers (aesthetic) (useful)
 - Colourful and unique courses (unique)

Barb's Reaction:

It is very unique and eye-catching. I could invite my friends and family to come play this game that I enjoy. I don't like how much space it takes up though. I also might get bored playing the same course repeatedly.

Aesthetically Pleasing	Disagree ✓ Agree
Useful	Disagree ✓ Agree
Accessible	Disagree ✓ Agree



Strengths:

This design is a mini-golf course for Barb's backyard. A strength of this design is that mini golf will not cause as much strain to Barb's hands compared to normal golf. This will therefore be a better alternative for her physical problems (physio-pleasure). The environment will help Barb feel safe because it is located in her own backyard. This is a strength as she will not be required to travel to another destination as she does not feel safe driving (psycho-pleasure). It will bring her socio-pleasure as she will be able to invite her friends and family to play and join in. It follows many of her needs and wants. The design is very accessible, but moderately aesthetical and useful in her opinion. Lastly, it will ultimately promote Barb's wellbeing as it takes into consideration all four of her pleasures.

Limitations:

A limitation to the design is that there is no where to rest or have a break. Barb stated in her interview that she does struggle with long activities/exercise, so this will be a problem. The design lacks ideo-pleasure as there is no prize at the end of the course for whoever wins. This could be a problem when encouraging participation. Another limitation is that there is no where to keep or put away the golf sticks. The courses are also a bit easy for Barb who has been playing golf since she was a kid. She could potentially get bored of the same courses.

Implications:

As a result of the limitations, I have decided I will need to change, add and/or refine some features of this design. I will add a table, chairs and a golf stick holder for Barb to rest and socialise (physio-pleasure and socio-pleasure). A trophy for the winner would be added to increase ideo-pleasure for Barb and her guests. I will refine the design by making the obstacles moveable, to make the course more unique and interesting.

Part A – Strengths, Limitations and Implications of Idea #1:

An Outdoor Social Area



Features:

- Plants (Barb's hobby: gardening)
- Aesthetic tiles (aesthetic)
- BBQ (Barb's hobby: cooking)
- Seating areas (socio-pleasure)
- Table (useful)

Barb's Reaction:

I love it! This is definitely a place I can see myself hanging out with my friends and family. I love all the plants and the grill too.

Aesthetically Pleasing	Disagree ✓ Agree
Useful	Disagree ✓ Agree
Accessible	Disagree ✓ Agree

Strengths:

A strength of this design is that the space will bring her socio-pleasure as there is plenty of room to hangout with friends and family. She will also feel safe here as she will not need to drive anywhere (accessible). This design will mean she is surrounded by plants, aesthetics designs, her family and her friends. This environment will allow her to enjoy her other hobbies too, like cooking on the grill or gardening her many new plants. From her reaction, it is clearly shown that she finds the design to be very aesthetically pleasing, accessible and useful. The design incorporates and takes into consideration all of Barb's 4-Pleasure Framework and needs and wants. Lastly, this is the best solution to the problem as it will improve Barb's well-being.

Limitations:

Barb loves spending time gardening but there aren't many plants or variety, this is a limitation. The environment lacks any entertainment resources besides socialising and eating. This is a limitation because it won't fully promote Barb's wellbeing and her guests might potentially get bored. Her grandchildren are young and will want some entertainment.




Implications:

As a result of the limitations, I have decided to make the following changes, additions and/or refinements to my design environment. I will add three garden beds for Barb to plant a variety of things, whatever plants she wants. There will also be padded mats in front of the garden area, so she doesn't hurt her knees. I have also decided I will add more plants near the seating area. I have refined these plants to be more aesthetic and versatile with a wider range of plant species for Barb to enjoy. Barb likes watching the television and it is a good source of entertainment for everyone, so I will add a television to the design. Incorporating all of the following implications to the design will improve Barb's well being.




Part A - Barb's Decision

Comparing Barb's opinion on how well Design Idea #1 and #3 apply the Principles of Good Design:

Design Idea #3: Backyard 5-Step Mini Golf Course

Aesthetically Pleasing	Disagree  Agree
Useful	Disagree  Agree
Accessible	Disagree  Agree

Design Idea #1: Outdoor Social Area

Aesthetically Pleasing	Disagree  Agree
Useful	Disagree  Agree
Accessible	Disagree  Agree

Through ideation, critical evaluation and coinciding with Barb, we have discovered the two designs that are best suited to solve the task and promote her well-being.

Barb's reaction to both the designs show that she clearly liked the Outdoor Social Area (idea #1) more than the Backyard Mini Golf Course (idea #3). She thought it was more aesthetically pleasing and useful than idea #3, but they were both equally accessible as they were both located in her backyard.

Now I can create a design criteria against the Outdoor Social Area.

Design Brief

The stakeholder of this task is retired people, generally aged 65 and above. I identified my neighbour, Barb Brown, as a retired person who I could help. She is 67 years old and lives alone. I needed to design a solution to help promote her well-being. I interviewed her and identified nine different needs and wants. A problem I identified through the interview questions is when Barb mentioned she is worried that her house is too boring, and her friends and family don't want to see her because of this. She used to hang out with her friends and family much more but as she has gotten older, she does not feel as safe on the roads and feels scared when driving. To promote Barb's well-being, I will need to design a solution that will improve her socio-pleasure without her needing to drive.

I have decided to design an environment that will suit a retired person, like Barb's, needs and wants. The design will focus on improving her socio-pleasure by creating a space that's enjoyable, aesthetic and her friends, family and herself will want to hang out. The problem is defined by her fear of driving, that is why I have chosen her backyard as the location for this environment.

Design Criteria:

Must:

1. Allow her to spend time with friends and family (socio-pleasure)
2. Be aesthetically pleasing to Barb (aesthetic)
3. Promote Barb's well-being (useful and 4-pleasures)

Should:

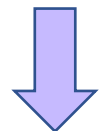
4. Be accessible to Barb (accessible)
5. Be located in Barb's backyard (sense of security: psycho and ideo-pleasure, accessible)

Must Not:

6. Require her to drive; therefore, she will feel safe (psycho-pleasure)

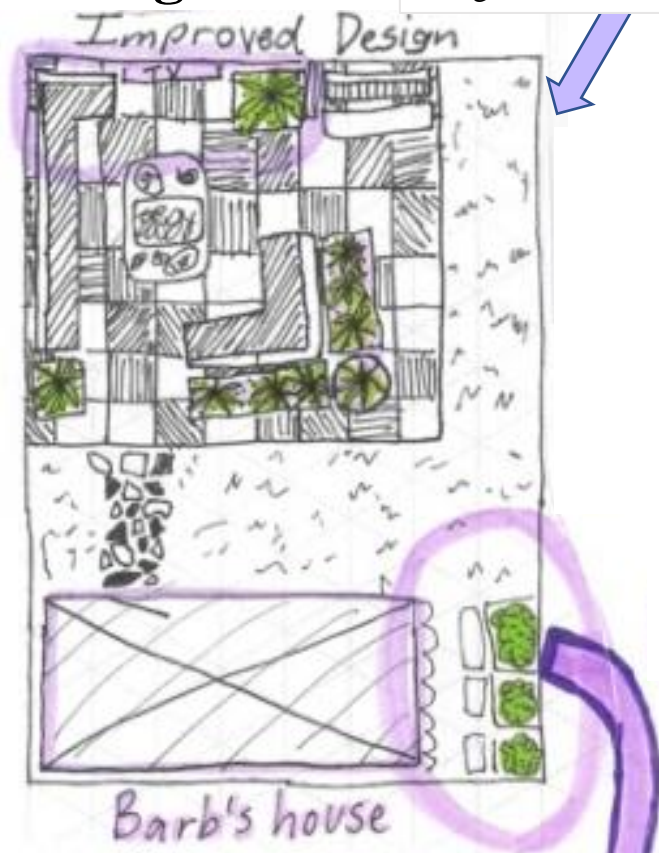
Part B – Exploring/Devising

This is a sketch of the improved design which includes the additions



Evaluating the initial idea against design criteria:

Design Criteria	Rating 1-5 ticks
1	✓✓✓✓✓
2	✓✓✓
3	✓✓✓✓
4	✓✓✓✓✓
5	✓✓✓✓✓
6	✓✓✓✓✓

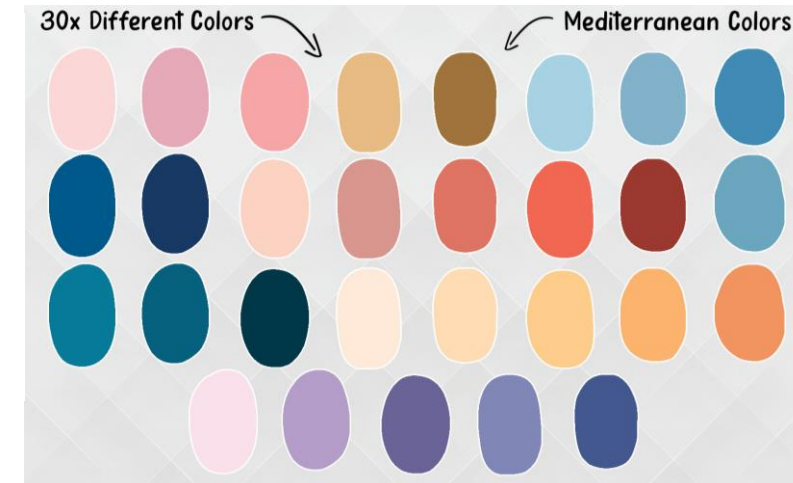


To determine what colours and styles I should use throughout this design, I interviewed Barb:

Question: What are your favourite colours?

Barb: Purple is my favourite colour. I also like blues, yellows and other Mediterranean colours.

Research on Mediterranean colours:



Question: What is your style? Do you want your design to be unique, colourful, simple?

Barb: I would love a colourful, unique and inviting area. Different shapes and sizes would be great. I would also like to still be able to see my grass.

Question: What kind of plants do you want in your garden area?

Barb: I would love some colourful flowers like daisies and lavenders, and an orange tree!

To improve this design, I will need to make it more aesthetic and modify it to promote Barb's well-being better. To do this I will need to make certain modifications to the design. The changes I suggested in my implications for this idea will be implemented to suit Barb's design criteria.

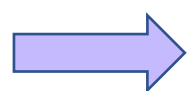


- Features:**
- 3 garden beds
 - Aesthetic icons on each garden bed
 - Knee pad mats

COMBINING ideas #1 and #5:
 Adding the garden and other plants throughout the design will help promote Barb's well-being as it will include more of her hobbies.
 Barb: Wow! I love the look (aesthetics). It will be a great addition to my backy ar.d. Gardening makes me happy.

Additions to the design :

- ✓ A garden bed
- ✓ Colours
- ✓ A television
- ✓ More plants



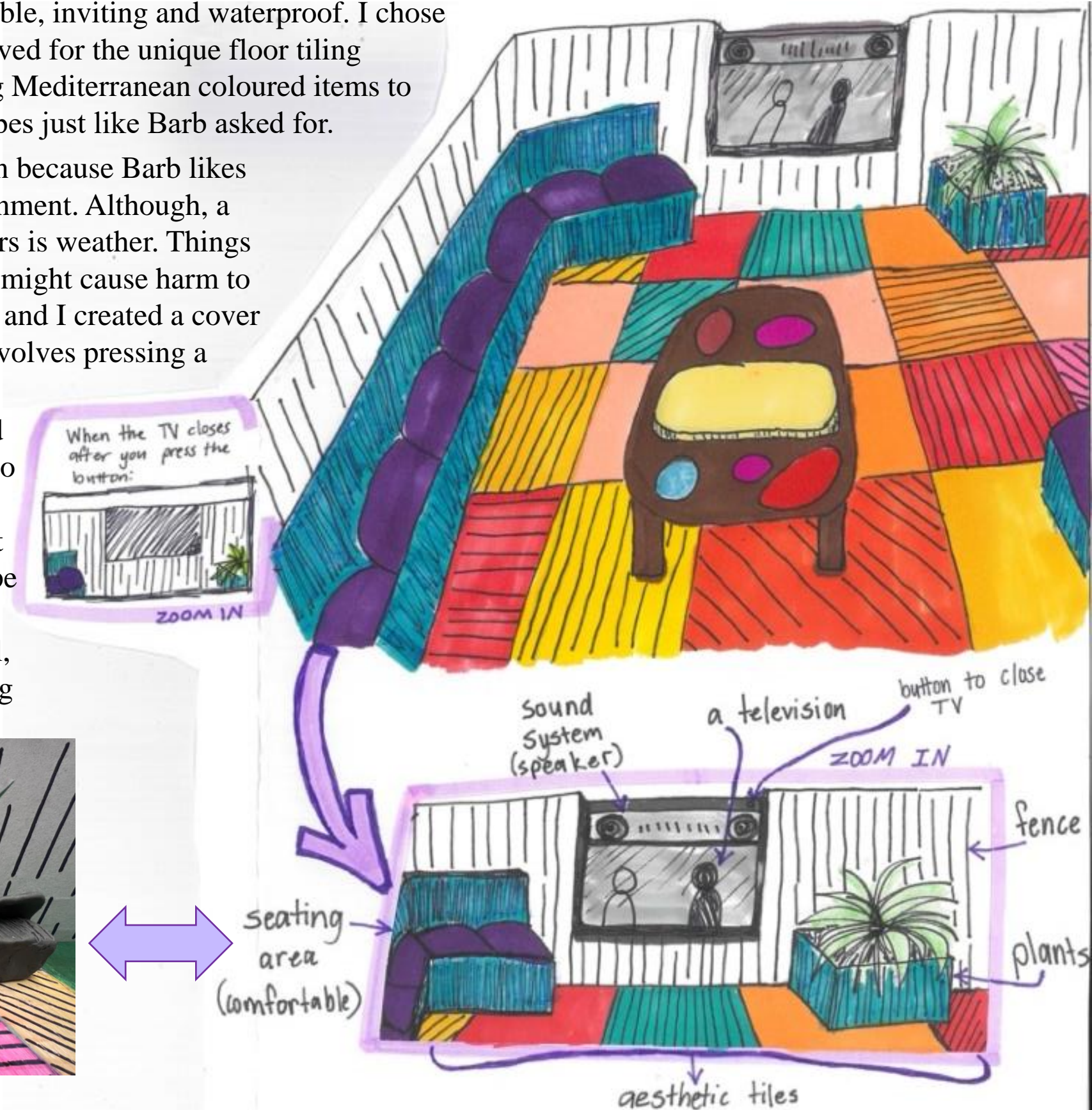
From the interview above I discovered Barb's favourite colours. This allowed me to create the final garden area idea on the left of the page. I decided to make the garden beds yellow because Barb really likes the colour. To make the design more aesthetic I added unique icons to each container to differentiate between each plant: a flower for the daisies, an orange for the orange trees, and a leaf icon for the lavenders.

Part B - Devising

When devising I took into consideration the questions I had recently asked Barb. I decided to make the seating options and plant pots her favourite colours: purple and blue (aesthetic). The seating area will be comfortable, inviting and waterproof. I chose a range of Mediterranean colours Barb said she loved for the unique floor tiling (aesthetic). The table will be brown, also featuring Mediterranean coloured items to place Barb's cooking on. They feature unique shapes just like Barb asked for.

The television is a necessary addition to the design because Barb likes to watch it and it will be a good source of entertainment. Although, a problem I found when placing a television outdoors is weather. Things like rain, snow, wind and other weather concerns, might cause harm to the television. I chose a water-resistant television, and I created a cover to protect the TV when Barb is done using it. It involves pressing a button just above the television in the top right corner, then a following cover will slide down and fully protect the TV when not in use (useful). I also added speakers to the TV for a better sound system. Barb said she wanted unique and different shapes, so I changed the table from a circular shape to a soft-edged rectangle for contrast. All of the outdoor items (e.g. plant pots, outdoor couch, grill, table, etc) can handle the rain and other weathering issues.

A sketch of Barb's social area and its potential Mediterranean colours:



This is an image of part of my prototype:

Part B – The Prototype



The view of the TV

TV and closing button

Plant

BBQ grill



The variety of plant species and sizes for Barb

Seating (comfortable)

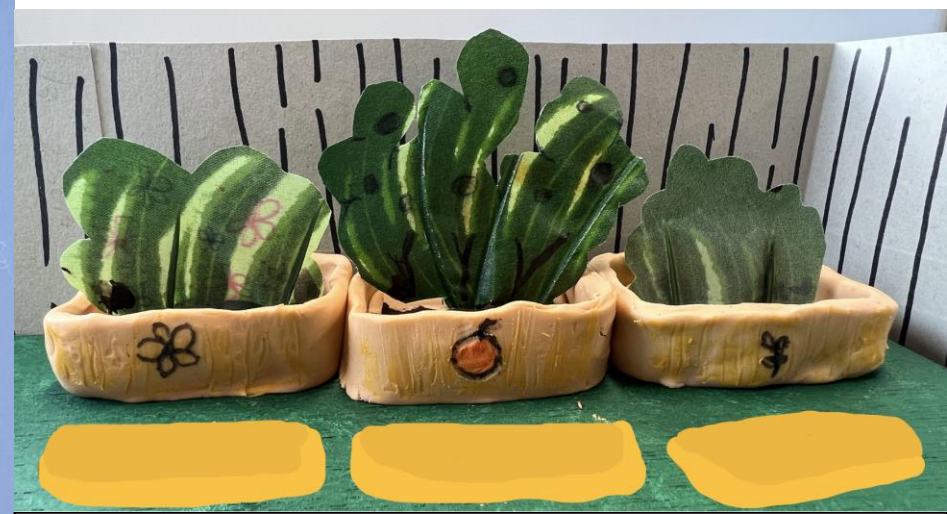
Dining Table

The gathering area



Barb's House

Birds-eye-view of the design



The garden area (daisies, orange trees and lavender)



Plants

This tangible prototype shows the final design concept.

Part C - Final Concept

Birds-eye-view

The final concept against the design criteria:

Design Criteria	Rating 1-5 ticks
1	✓✓✓✓✓
2	✓✓✓✓✓
3	✓✓✓✓✓
4	✓✓✓✓✓
5	✓✓✓✓✓
6	✓✓✓✓✓



This shows that this design will promote Barb's well-being and meets the task.



Barb's House

Features of the garden area:

- 3 garden beds with unique iconography for each one (aesthetic).
- Knee Padding (physio-pleasure and useful).
- Barb's favourite things to garden: daisies, oranges and lavender (psycho-pleasure).

Barb: I cannot wait to invite my family and friends to see this amazing design. I love it, I love the colours, it's perfect! This will improve my well-being.



Features of the outdoor social area:

- Plenty of comfortable, waterproof seating options to socialise with friends and family (useful, socio-pleasure and physio-pleasure).
- A television with a sound system (speaker) and a button to optionally close (useful and innovative).
- Colourful and unique tiles (aesthetic)
- A brown dining table featuring Mediterranean coloured mats to place Barb's cooking on (aesthetic and useful).
- Blue and purple plant pots and holders (aesthetic)
- Aesthetic stones leading from Barb's back door to the outdoor social area (aesthetic).
 - A range of plant species and sizes for Barb to garden (psycho-pleasure).
 - A BBQ grill for Barb to cook on (psycho-pleasure).
 - All outdoor items are water resistant and weather-proof (long-lasting and useful).

Part C - Design Proposal



Barb's
Personal
Design



Welcome, today I will be talking about my design: The Outdoor Social Area. I designed this gathering area for my neighbour and retiree Barb Brown.

The task has asked me to find out if design solutions can promote well-being in retirement. This design has been personalised for Barb; a woman who has been retired for four years now. So, for the purpose of this task, Barb will represent all retired people. Like most elderly people she has children, grandchildren and friends but is scared to drive. She wants to see her friends and family more, but she is afraid her house isn't aesthetic enough. This has previously made it hard for her to see her loved ones but not anymore. With my design she can stay in the comfort of her own home and socialise with whoever she wants in her new, aesthetic Outdoor Social Area. This makes it very accessible. She can host dinners, parties, get together with her friends or even just go outside herself. The design is very versatile and multi-purposeful.

The strengths of my design are its uniqueness and aesthetics. I have designed it to be an inviting and comforting environment; a place to socialise with others. Everyone needs to socialise in order to increase their sense of happiness and well-being. This design is perfect for socio-pleasure. It features many comfortable seating options and activities to do. There are many plants to take care of and flowers or oranges to pick. There's also a television for entertainment. You could even cook on the BBQ grill and wonderfully present your food on the colourful dining table. As you can see the design offers all of your four pleasures: psychological, physiological, social and ideological. It is useful because the design caters for your needs and wants.

A limitation to this design could be that it might not suit everyone. While Barb wanted Mediterranean colours and a garden area, others might not. To solve this, the retired person could choose their own colour scheme and the garden area would not be included for them as it would not be useful.

In conclusion, the Outdoor Social Area design is perfect for any retired person wanting to socialise in the comfort of their own home. It is aesthetic, useful, very accessible and will promote retired people's well-being.

That is my design, thank you for listening.