CROCHETING

CACD FINAL PRESENTATION

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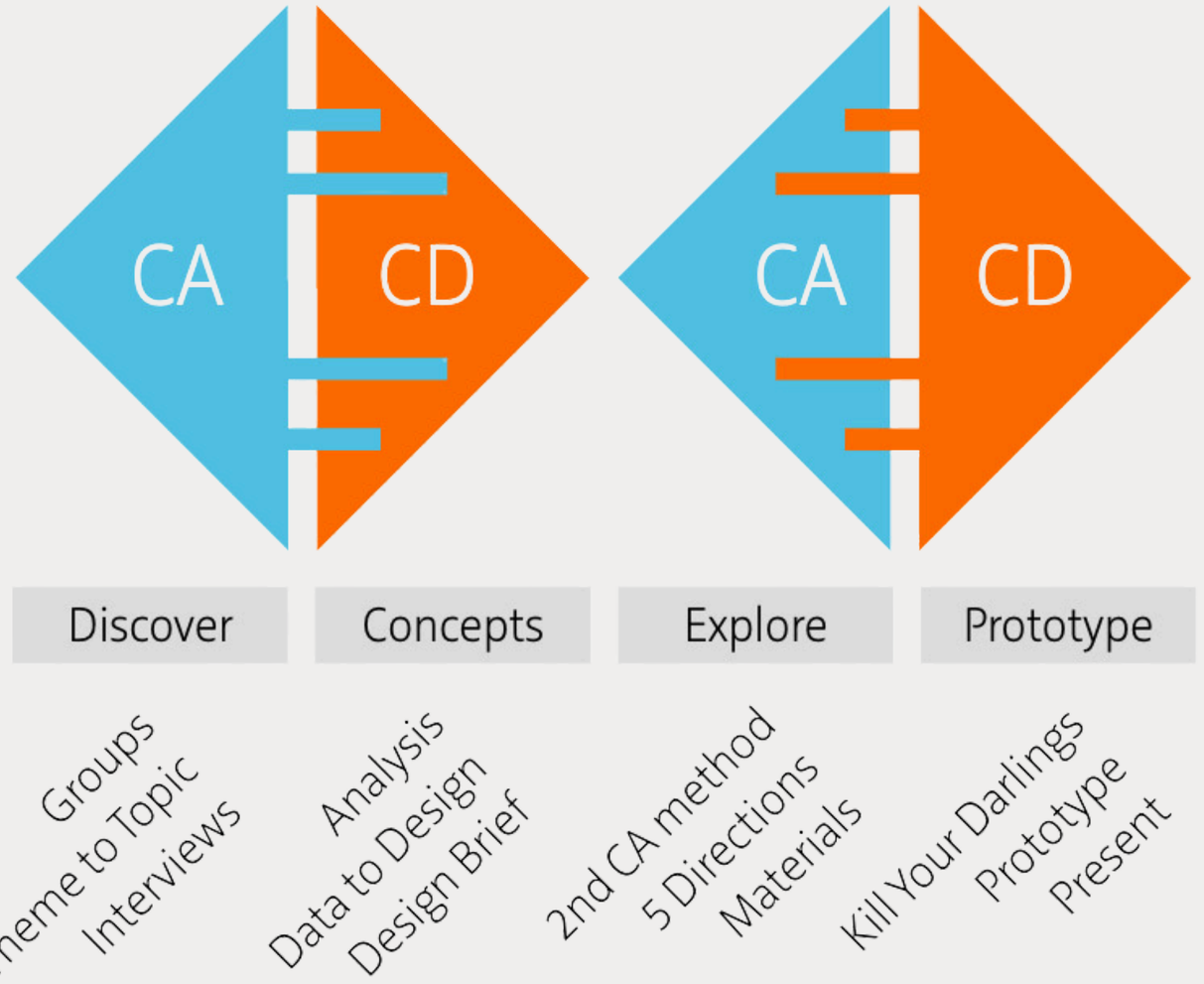
THE PROCESS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Discover
Concepts
Explore
Prototype
Groups
Theme to Topic
Interviews
Analysis
Data to Design
Design Brief
2nd CA method
5 Directions
Materials
Kill Your Darlings
Prototype
Present

DISCOVER

CONCEPTS

EXPLORE

PROTOTYPE

TOPIC - CROCHETING

- traditional craft with growing popularity for younger generations
- interlocking loops of yarn with a hooked needle.
- crocheting is not fully replicable by machines => it is not possible to mass produce it => unique

What did we do?

- **Ideation** - Lotus diagram
- Market and academic paper research

PROBLEM

DISCOVER

CONCEPTS

EXPLORE

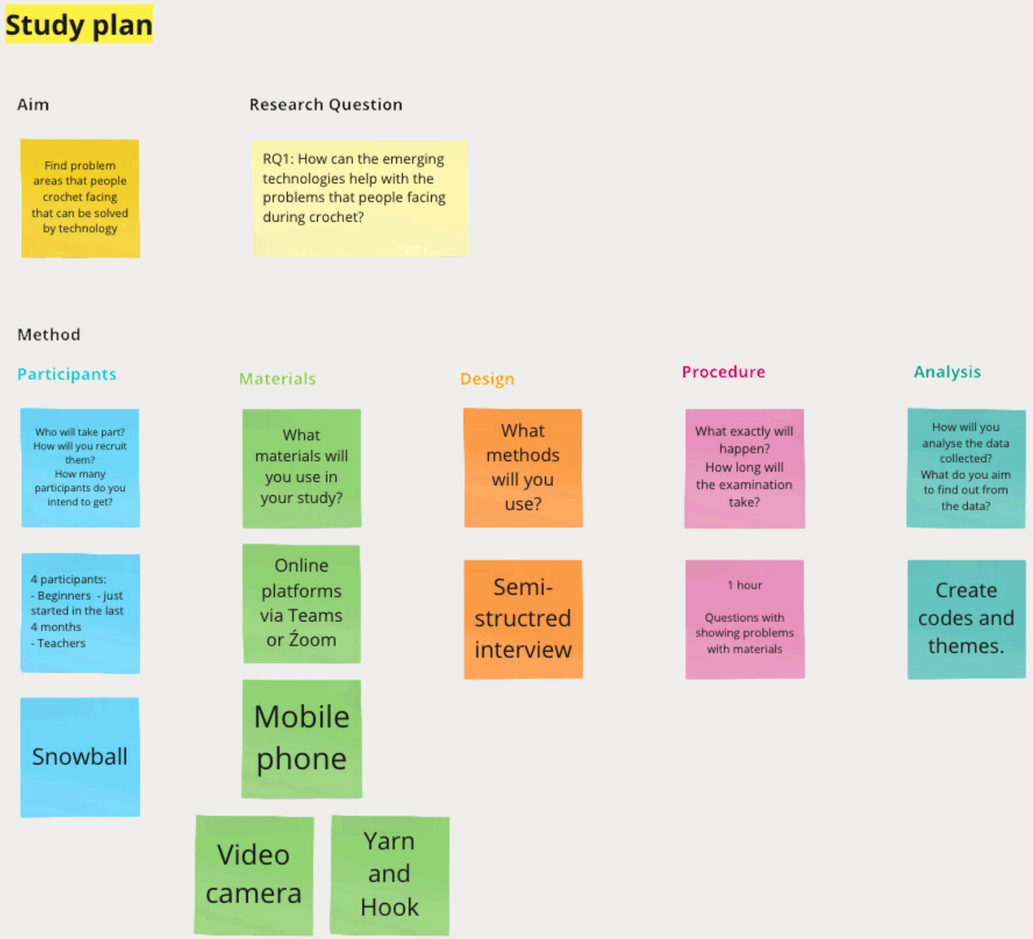
PROTOTYPE

- The learning process could be quite overwhelming for beginners
- Every person's needs are different => the need for personalization
- No generally used technology helps you through learning crocheting
- There is much terminology and many patterns of different qualities
- Opportunity to implement emerging technology to enhance the crocheting process and learning

PROBLEM

“How can we use emerging technologies to enhance the crocheting crafting process and propel it into the digital age?”

INTERVIEWS



- semistructured interviews
- asking about motivation, struggles, and experience
- 4 participants:
  - 2 beginners
  - 2 teachers
- online, 40-50 minutes

THEMATIC ANALYSIS

DISCOVER

CONCEPTS

EXPLORE

PROTOTYPE

Our themes:

1. Crocheting as a part of other activities
2. Crocheting is expected to be cheap
3. Struggling with choosing yarn and hooks
4. Crocheting can cause pain
5. There is no universal learning strategy
6. Tutorials need to be doable and explain every step
7. Written instructions need special knowledge
8. People need help with following the pattern
9. Technology can be a part of the crocheting process

THEMATIC ANALYSIS

Implications

- Make the results predictable.
- Prevent missing stitches and guide through the pattern.
- Adaptable to skill level and the desired thoroughness of the explanation.
- Address the risk of pain while crocheting.

Questions we had for future research

- With which areas of life does crocheting intersect?
- What methods help the most with the visualization of the process (3D, audio instructions, videos, etc.)?
- How much technology are they willing to incorporate in the process?
- What are the existing solutions to the pain caused by crocheting?

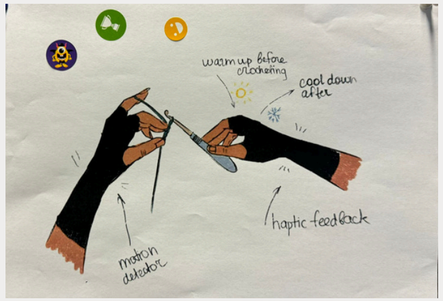
Limitations

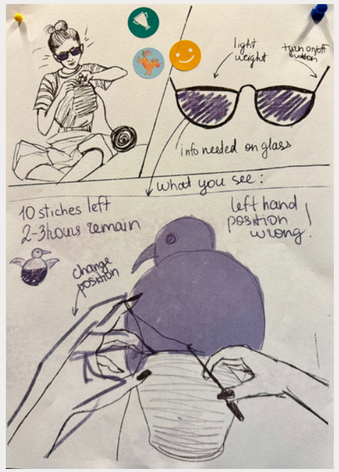
- The design should keep crocheting cheap
- Crocheting needs to stay portable

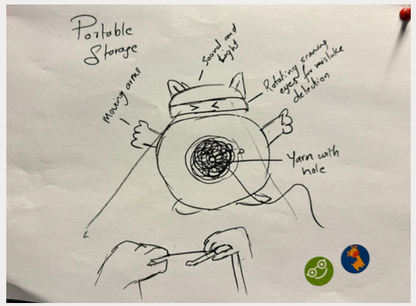
DESIGN BRIEF

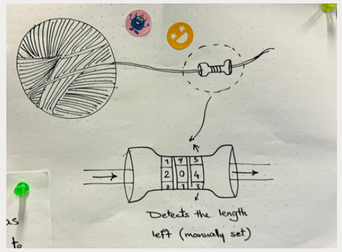
“We will design a **smart** and **portable technology** that will provide a **personalized crocheting experience** for both experts and beginners. This smart technology should also be **time efficient**. This technology will **help with learning new techniques** and patterns and **correcting mistakes**. It should be more than an educational tool and should be **an everyday companion** in crocheting process.”

5 DESIGN DIRECTIONS





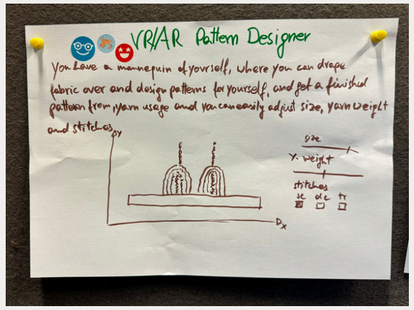


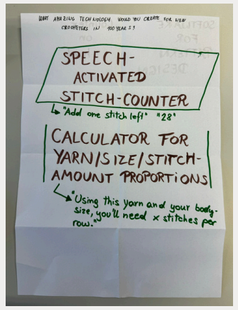


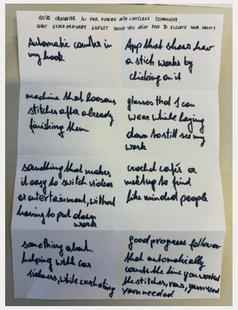
1. XR crocheting guide
2. Wearable support during crocheting
3. Crocheting Hooks
4. Crocheting “translator”
5. Storage Helper

CO-DESIGNING WORKSHOP

- DISCOVER
- CONCEPTS
- **EXPLORE**
- PROTOTYPE







CO-DESIGNING WORKSHOP

- DISCOVER
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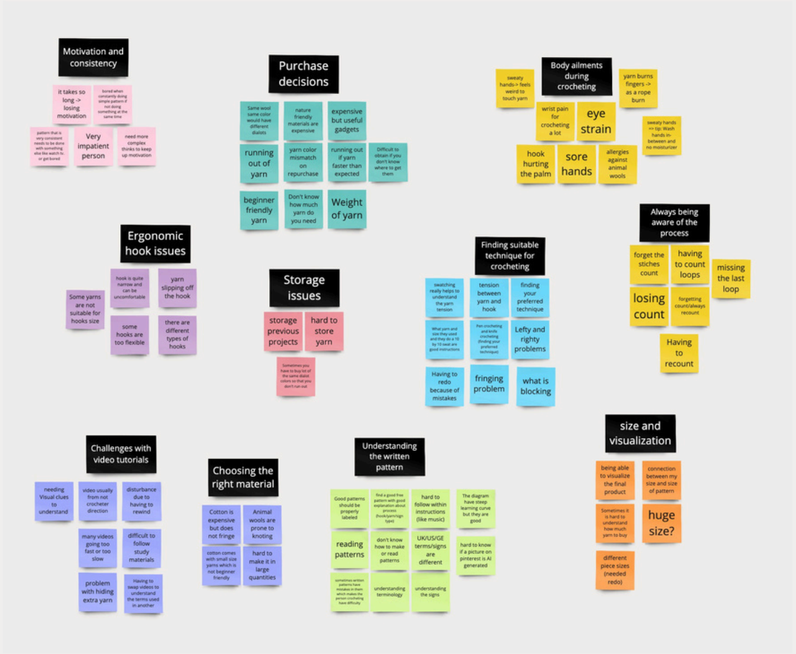
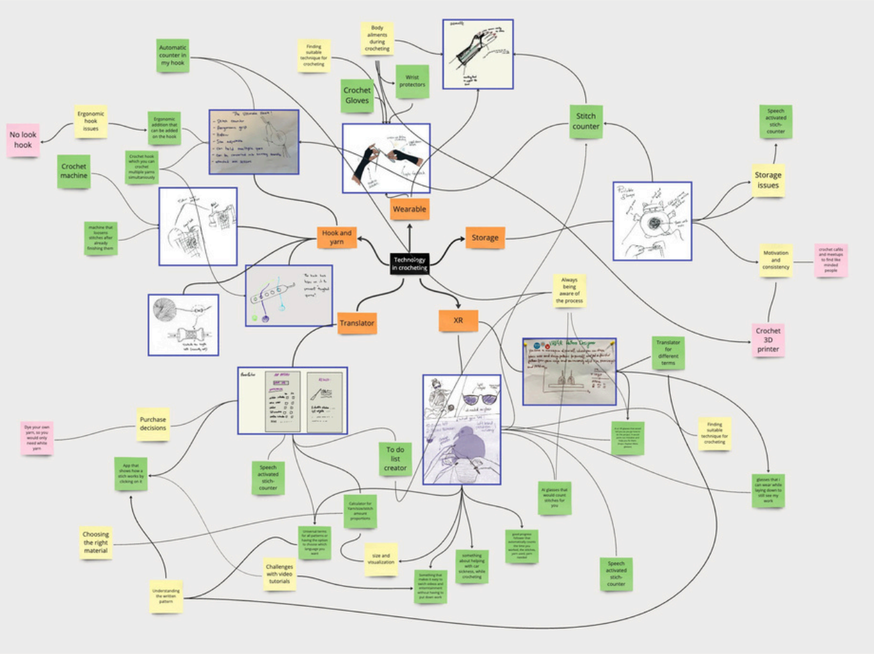
- **EXPLORE**
- PROTOTYPE

AFFINITY DIAGRAM

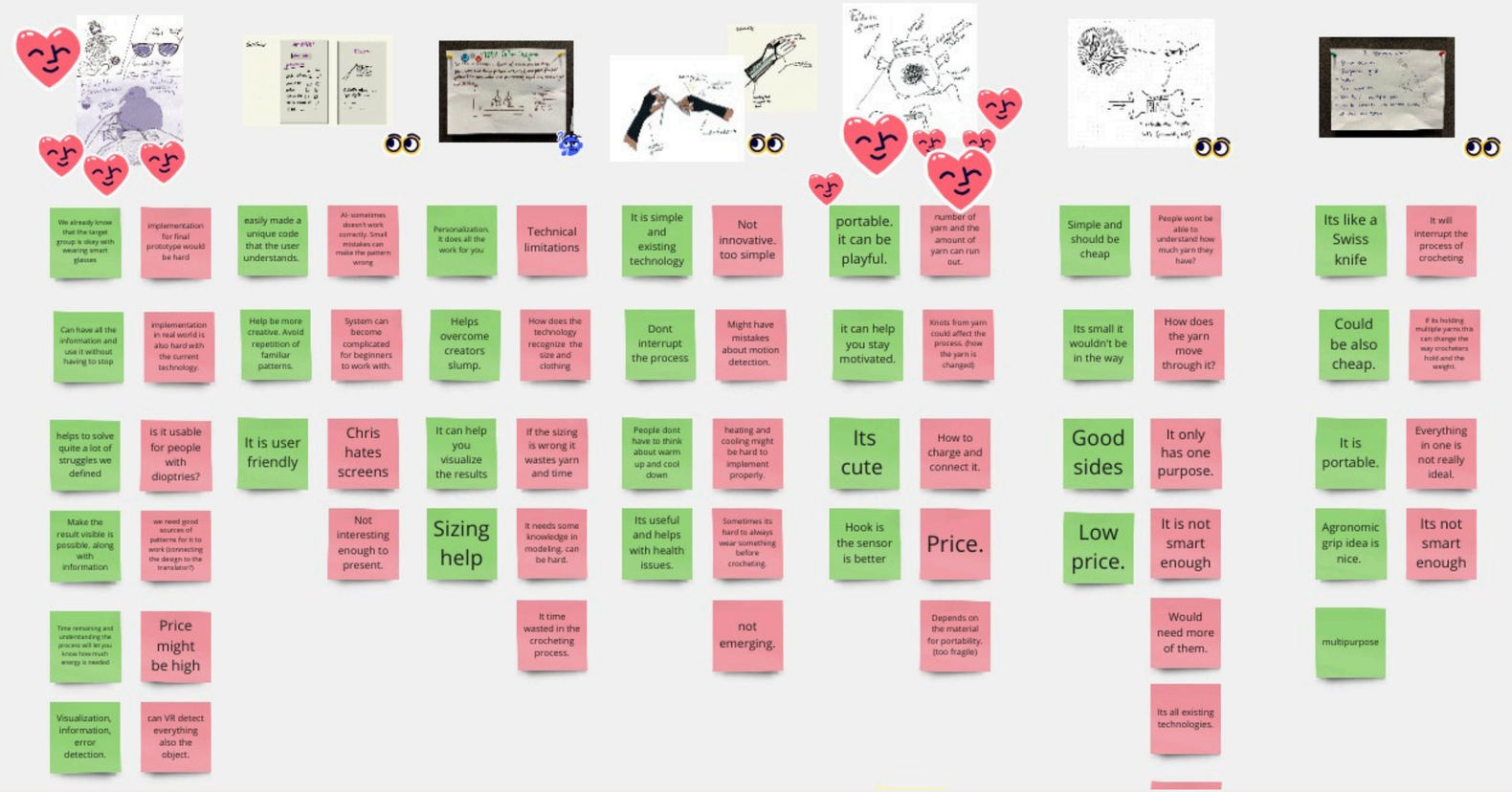


MIND MAP



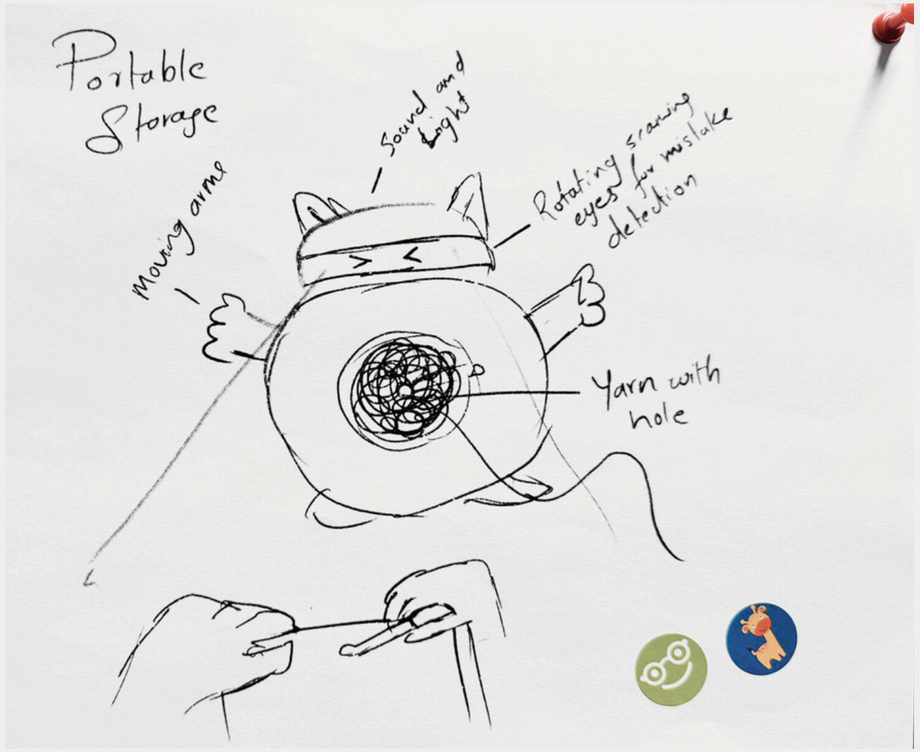
KILL YOUR DARLINGS

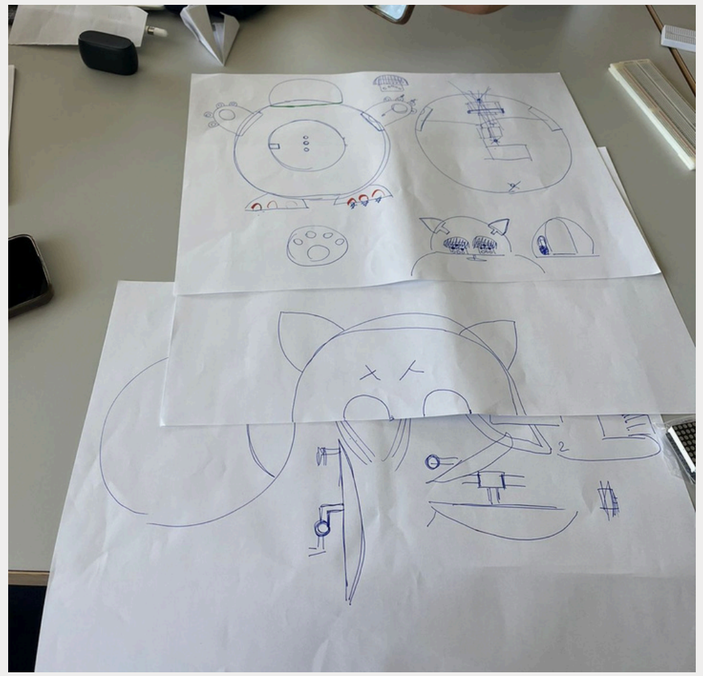
- DISCOVER
- CONCEPTS
- EXPLORE
- **PROTOTYPE**



PURRL: CROCHET COMPANION

- DISCOVER
- CONCEPTS
- EXPLORE
- **PROTOTYPE**





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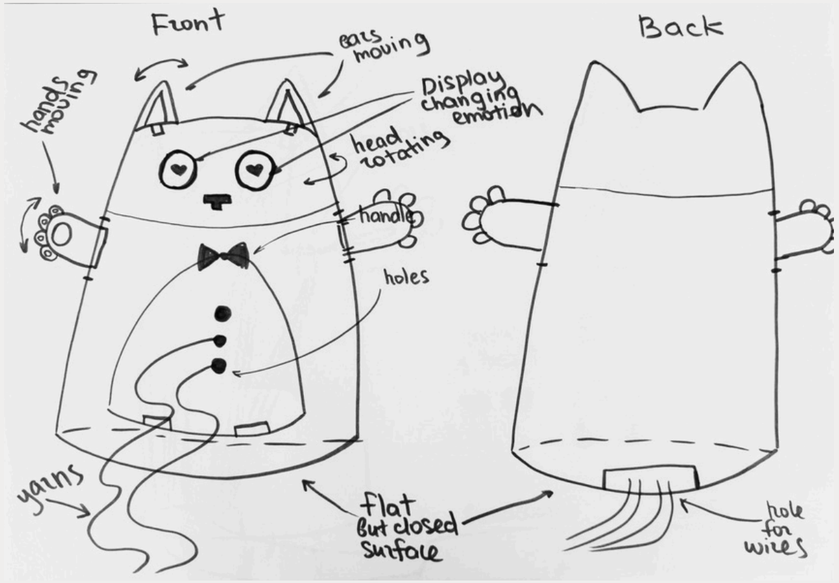
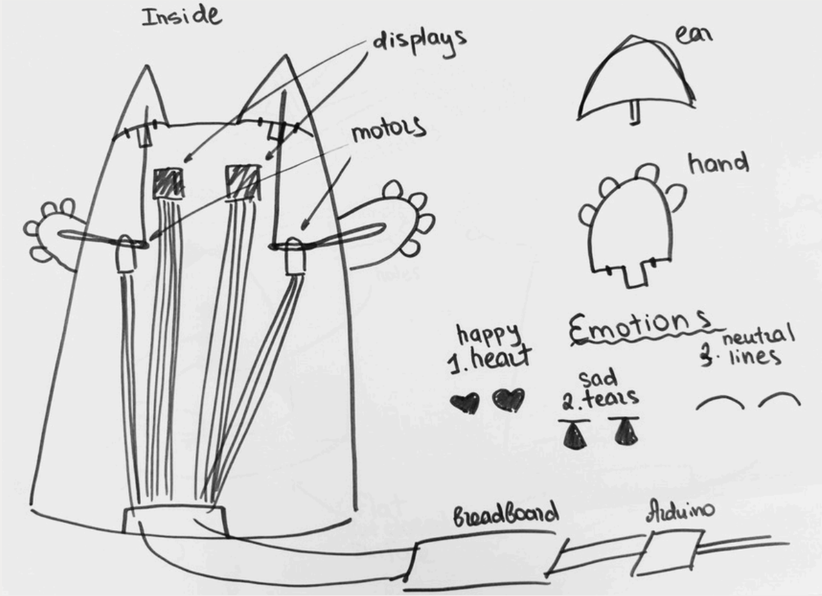


Outer structure



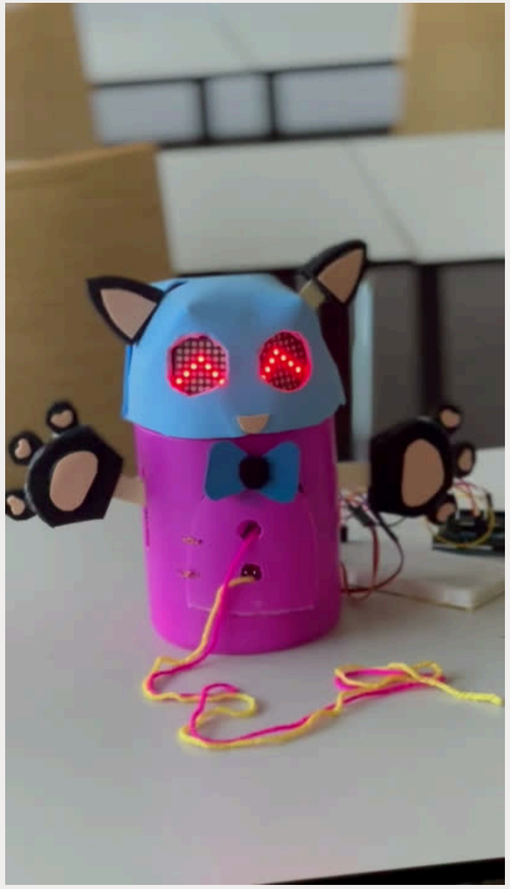
Inner structure

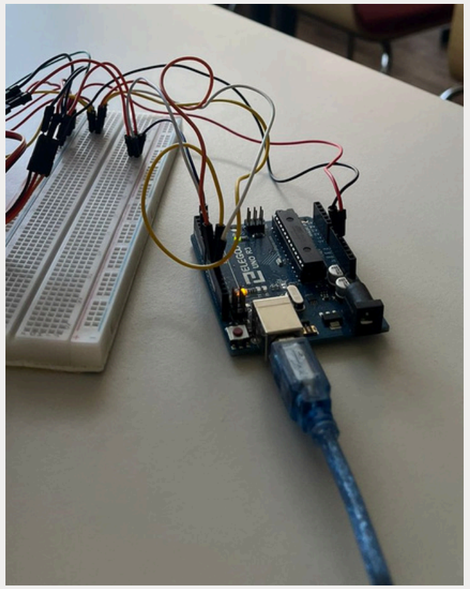
PURRL

- Head: Sensors detect patterns and errors while crocheting*
- Eyes: Displys changing expressions based on detection
- Belly: Stores and organizes yarns
- Hands/ears: Motivating gestures
- Voice-activated system
- Vibrations and sounds to indicate state

* The device can be connected to a PC/mobile via Bluetooth or cable to feed the database with patterns and information

PURRL





PURRL

- DISCOVER
- CONCEPTS
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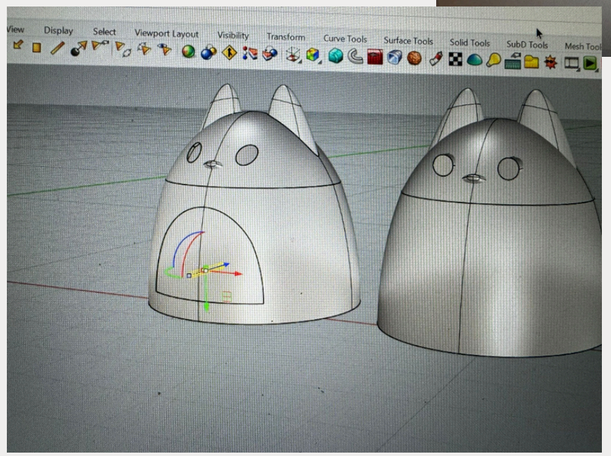
- **PROTOTYPE**



FINAL LEARNINGS

- Time management in the group is hard.
- It is important to be able to defend your opinions.
- All ideas can have a chance.
- Different prototyping tools create different outcomes.
- It is hard to access which technology is possible and which is not.
- We cannot address all needs.
- End-users' opinion actually matters!

Thank meow all!