

DOCUMENTATION prototyping

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**step 1: functional analysis +
abstraction of problems**

COFFEE MACHINE

redesign

PROBLEMS Manual functions

Getting a drink ← Boost concentration
 ← Stay awake
 ← Refreshment

- ① Checking to make sure all components are intact
- ② Filling water and coffee beans
- ③ Switch on
- ④ Set Cup in Cup holder
- ⑤ Set drink preferences

Manually looking to see if all parts are working

Constantly checking level of content (water & beans)

Manual turn on

Manually set flavour or drink
 → wait for heating & adjustments

Solution bridge



Automatic info on all functional parts through app.

Automatic info on all items (water & beans)

Turn on from phone

Set flavour through app
 * remembers previous settings

Always on standby

Water separated into different temperatures for fast delivery

Ideas:

- Wireless charging station.
- Portable.
- Readily available water temperatures.
- Smart application for total control and real time diagnostics

**step 2: abstract problem solving
by
(ugly) prototyping and hacking**

Oops!. wrong direction

I prototyped something that looks like a desktop computer that opens on the side for easy access to items.



My interpretation

- Ugly model**
- Not innovative**

**step 3: iterate by prototyping
& testing**



Liquid containers containers



**Large battery
to retain current**



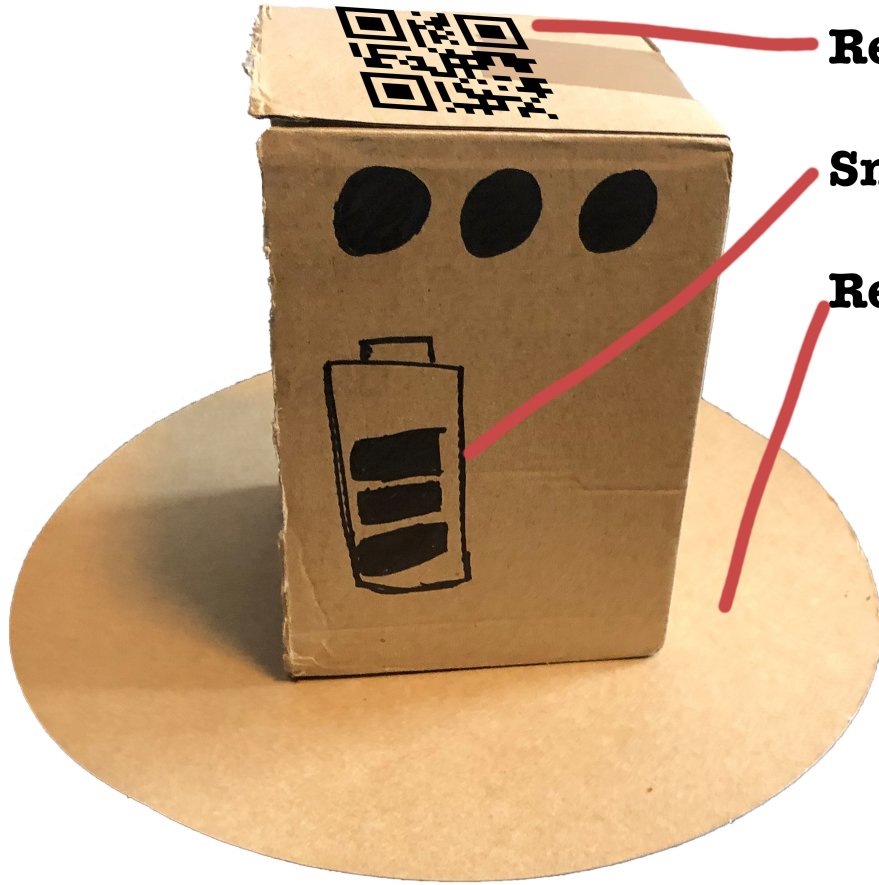
**High tech Cup holder
with electronics**



Wireless charger

**FEEDBACK: A wireless charger could
help with portability**

step 4: build a proof-of-innovation



Remote control

Smart device

Rechargeable

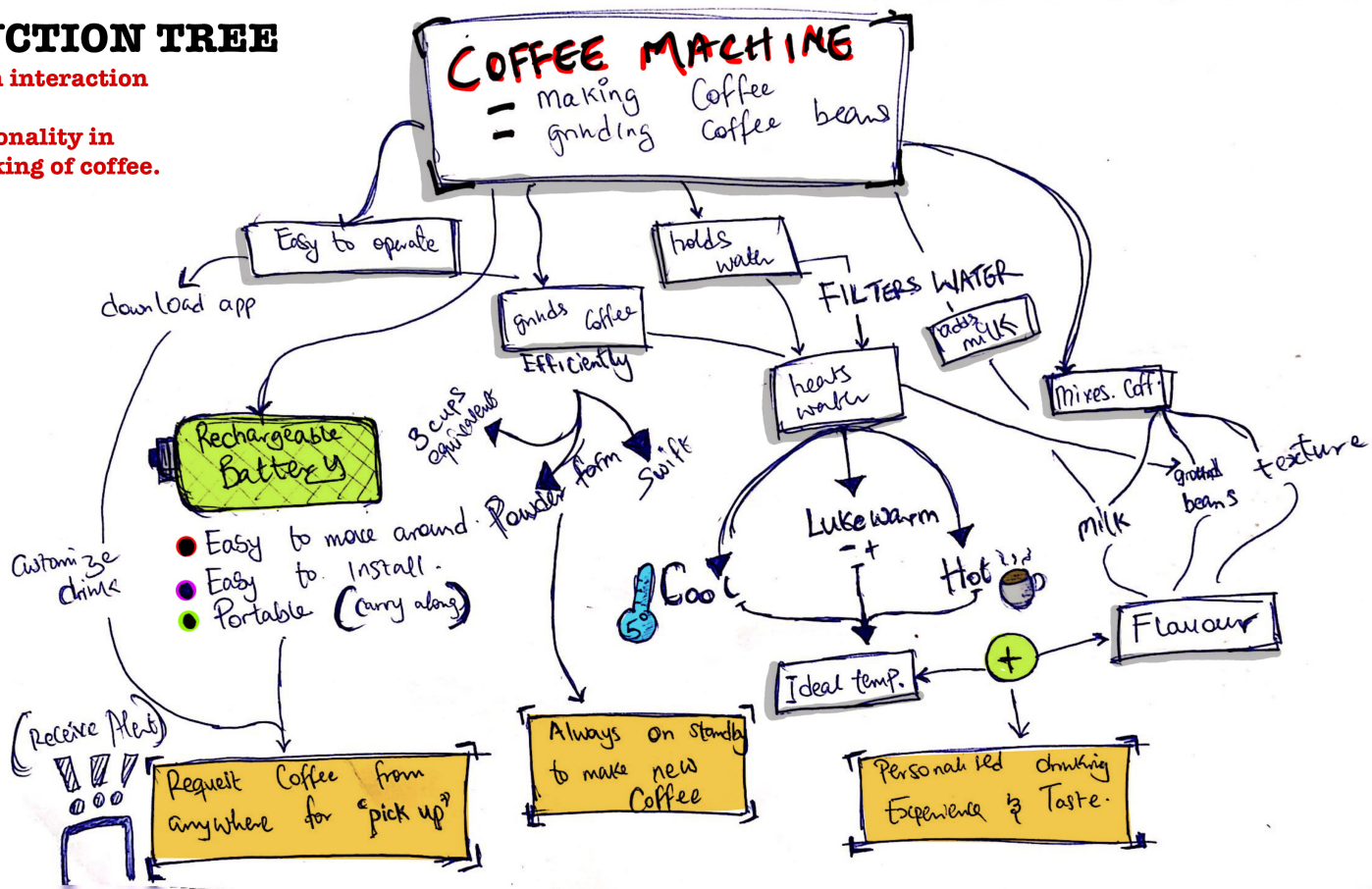
presentation 24.11.2023

FUNCTION TREE

-Human interaction

-Functionality in the making of coffee.

COFFEE MACHINE



COFFEE MACHINE

PROTOTYPES

1



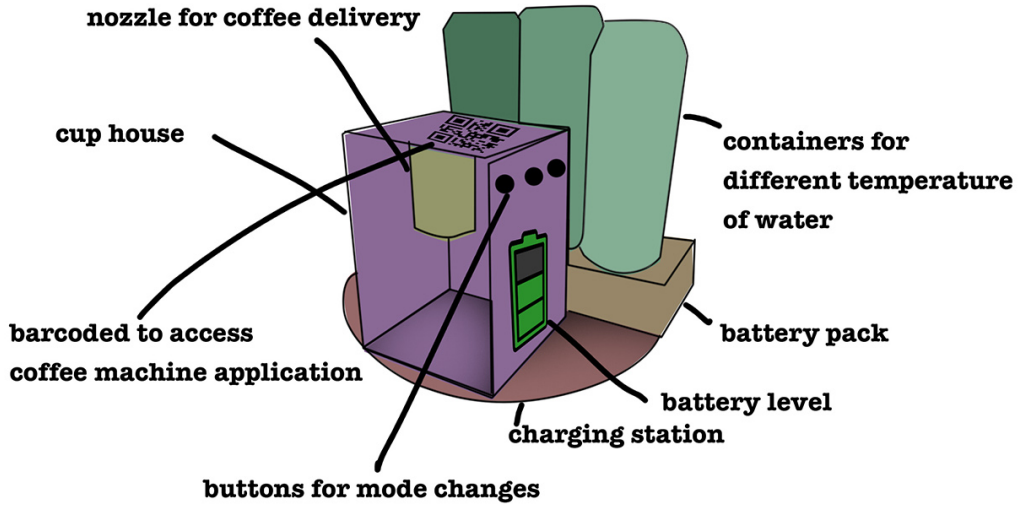
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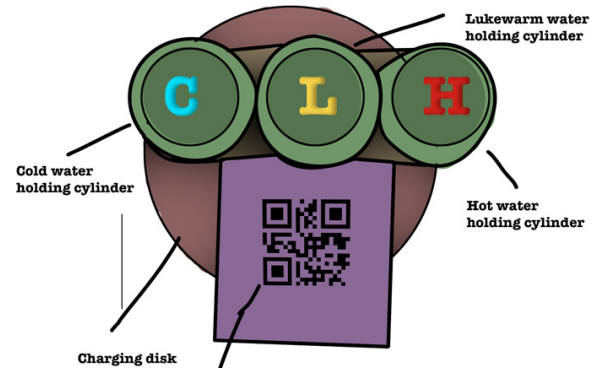
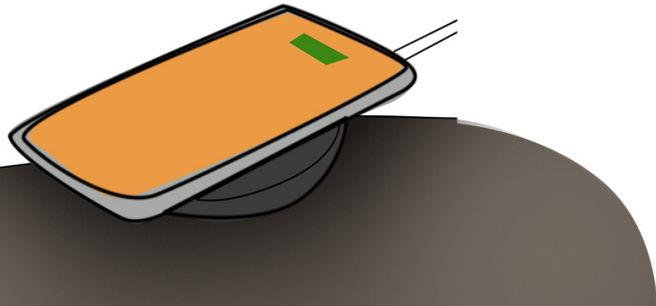
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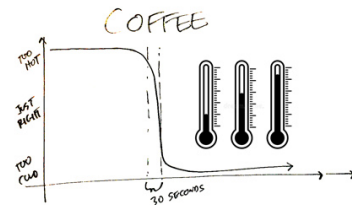
COFFEE MACHINE



FINAL PROTOTYPE INSPIRED BY IPHONE WIRELESS CHARGING



QR code to get coffee machine app



last but not least: reflection

What went well

The value proposition was quite easy to ascertain. The 1st step of my prototype took some hard thinking but once I started to draw inspiration from other devices around me, I realised some breakthrough.

Once I started with step 2 my idea started to take shape and then in the last part I liked the outcome and I felt like a light bulb turned on in my head.

What I would do differently the next time I have to analyse, hack and improve an existing product

I would try asking for opinions just to get an understanding of what people might want changed or improved about their coffee machine or why they would consider getting one if they do not already own one.

What did not go well

It was a bit of a puzzle trying to construct the model; **what shape supports the function?** The main issue was to first understand how a coffee machine might work and how I can make my design easy to understand.