

...

# DESIGN PROCESSES & PERSPECTIVES



A JOURNAL BY  
HIMANSHU CHAUHAN

# About Me



I am Himanshu Chauhan, a second-year student at Indraprastha Institute of Information Technology Delhi currently pursuing Bachelors in Computer Science and Design.

# Acknowledgement

I want to thank my instructor, Mr. Amit Sabherwal, for his exceedingly valuable feedback and guidance throughout the course and the hard work to design this course so brilliantly.

I would also like to thank my TA's and teammates for their valuable inputs, without which accomplishing this task would have been a lot more complicated.

This journal is all-encompassing; it includes all my learnings, experiences, insights and researches conducted throughout the Design Processes and Perspectives course. Every point shared in this journal is of my own and subject to subjectivity for others.

# Table of Contents

01 Context and Concern

02 Design Approaches

03 Research methods

04 Designing Tools

05 Mini Projects

06 Final Project

# Context

It is the supporting information around an idea that defines it and gives it a reference point for our thinking.

Knowing the context is essential because it helps us understand the problem accurately and keeps us assured that we serve the demographic we want.

# Types of Context

*Psychological*

*Social*

*Cultural*

*Historical*

*Physical*

*Technical*

*Spatial*

*Environmental*

*Geographical*

*Economical*

*Political*



# Concern

The ability to identify and understand concerns is essential for designers. We must be able to observe and evaluate the personas and their needs, pain points and motivations.

We must also be also to identify issues concerning self, society and ultimately the environment and design solutions while keeping in mind not to digress from focussing on bettering the concerned areas.

Areas of concerns:

- social concerns
- economic concerns
- political concerns
- environmental concerns

# Learnings & Reflections

- I learnt and became familiar with various types of contexts and concerns.
- I learnt how to ideate for every context by empathising with the stakeholders and using mind maps.
- I learnt to differentiate between context and concern and can now identify among them.

# Design Approaches

## Sustainable Design

It refers to designing new solutions or altering the already existing ones to ensure that they are beneficial for the environment.

The solutions are easily replenishable, require less energy to produce and recycle, and are cost-effective.

Paper straws are much more environmentally friendly than their plastic counterparts.



# Inclusive and Universal Design

They refer to building new solutions to cater to people from minority backgrounds and augmenting existing solutions so that people from all backgrounds can use them effectively.

It creates a welcoming environment and provides equal opportunity to everyone, and the users feel motivated and represented.

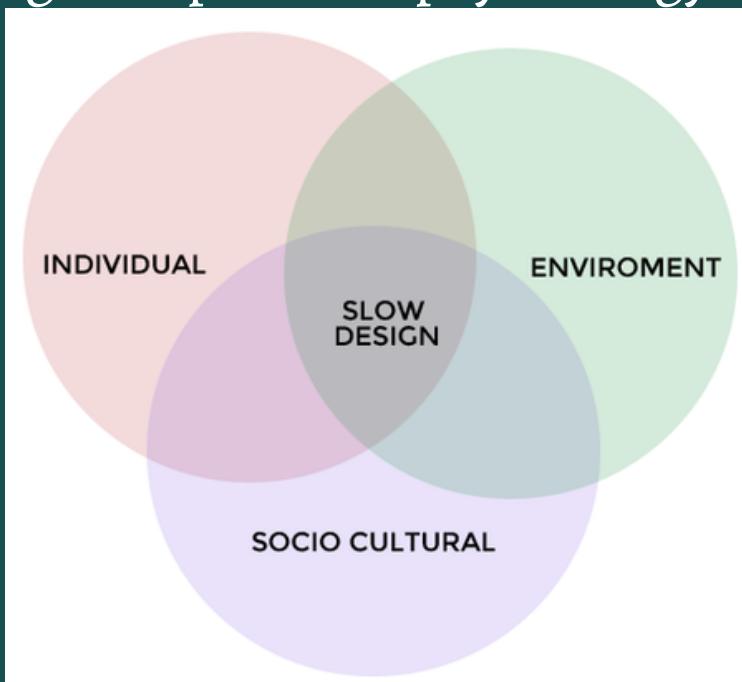
Microsoft Accessibility Xbox Controller allows users with visual and sensory impairments play games.



# Slow Design

The design process is much longer and exhaustive, with more time for research, reflection, testing and fine-tuning while focussing on both the short and long term goals of the solution.

It also takes a deeper look into human behaviour, sustainability, cultural aspects, well being and positive psychology.

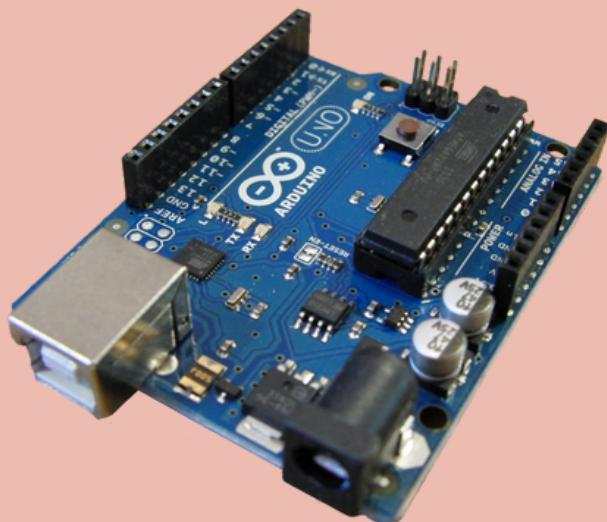


# Open Design

The idea of open design revolves around sharing and mutual growth.

Solutions can be accessed by everyone, and everyone is welcome to critique and come up with their own augmentation to the original solution.

Arduino is an open source electronic prototyping platform.



# Resilient Design

Resilient in design refers to constant adaptation to changing conditions in order to maintain functionality even through harsh and demanding situations.

Examples include designing buildings that can remain as they are during natural calamities like earthquakes and droughts.

A windmill made up of solar panels.



# Deep Design

**Discover:** Immerse into the ecosystem of the consumers

**Empathise:** Get insights, feelings, viewpoints

**Experiment:** Ideate; prototype; iterate

**Produce:** Leverage the learnings and formulate a solution; get feedback

# Design Activism

Using design as a tool to bring about positive change; helps people masses understand and get motivated by the cause.

## Co-Design

It is the act of integrating the stakeholders into the design development process so that the solution caters to their needs effectively and is unable.

## Convivial Design

Gives individuality, freedom and power to individuals so they depend less on consumer goods and ideas. It focuses on simplicity and goes against consumerism and excessive and often unneeded changes.

# Learnings & Reflections

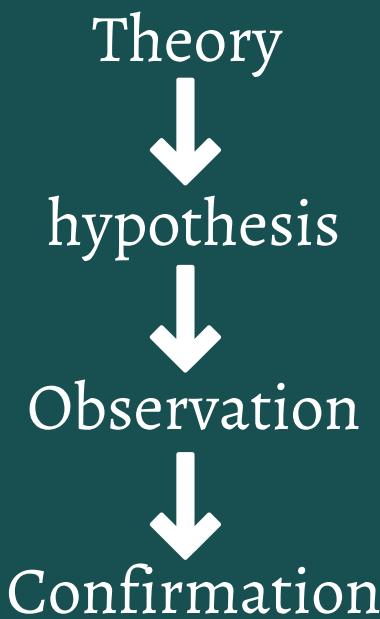
- I learnt in-depth about various design methodologies and principles and realised that many categories had sustainability as a strength.
- I learnt the importance of sharing design solutions and keeping them opensource - from improved feedback to seeing our idea evolve with others, inputs.
- I learnt how involving stakeholders and users in the design process results in a better solution/product from our paper presentation and also by exploring the various methodologies.

# Research Methods

## Qualitative Methods

Focus on the individuality and uniqueness of the persona, is contextually specific and use subjective knowledge.

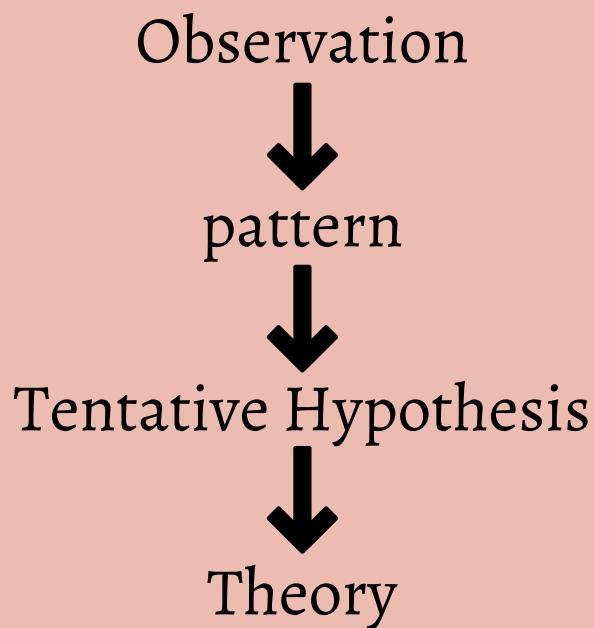
The reasoning is inductive in nature, and the explanations are idiographic.



# Quantitative Methods

Focus on generalisability and object knowledge.

The reasoning is deductive in nature, and the explanations are nomothetic.



# Research Question

Questions that are formed through careful and thorough evaluation of our research goals, the stakeholders, contexts and concerns, to seek out answers through a research process.

# Problem Statement

A concise description of a problem around which a project to solve it is formed. It is generally formed after exploring many problem areas and finalising one after carefully considering goals and motivations.

# Learnings & Reflections

- My learnings about design research leveraged from my Research Methods in Social Science and Design course, and I could relate them with teachings in the Design Processes and Perspectives course well.
- I learnt how to correctly identify and differentiate between research questions and problem statements.
- I learnt when and where qualitative and quantitative research methods work and now can correctly identify the correct type of research method according to the scenario.

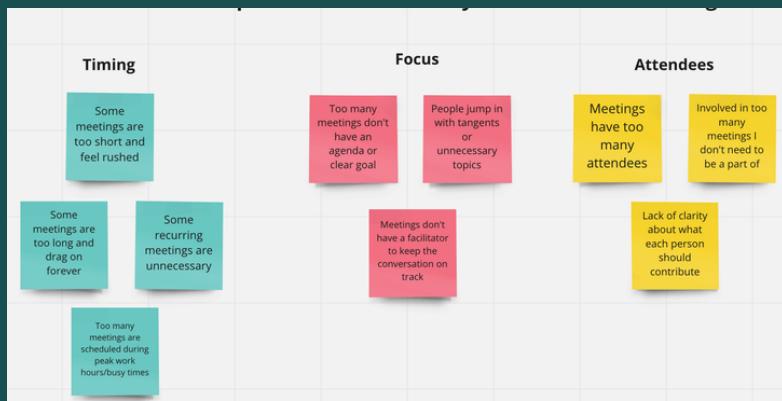
# Designing Tools

## Affinity Diagram

The affinity diagram organizes a large number of ideas into their natural relationships. It is the organized output from a brainstorming session. Use it to generate, organize, and consolidate information related to a product, process, complex issue, or problem.

### When to use affinity Diagram

- When you are confronted with many facts or ideas in apparent chaos
- When issues seem too large and complex to grasp



# Empathy Mapping

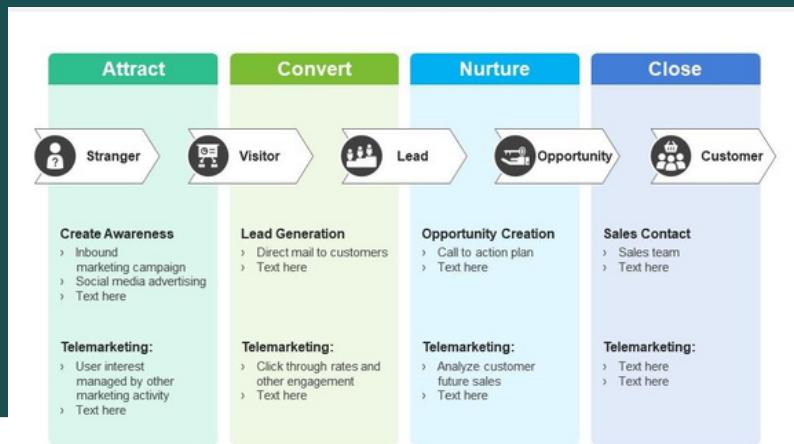


- An **Empathy map** is a collaborative visualization used to articulate what we know about a particular type of user. It externalizes knowledge about users to
  - 1) create a shared understanding of user needs, and
  - 2) aid in decision-making.

# User Journey Map

A user journey map (also known as a customer journey map) is a diagram that visually illustrates the user flow through your site, starting with initial contact or discovery, and continuing through the process of engagement into long-term loyalty and advocacy.

It identifies key interactions and touchpoints with your website or mobile app and describes in detail the customer's goals, motivations, and feelings at each step.

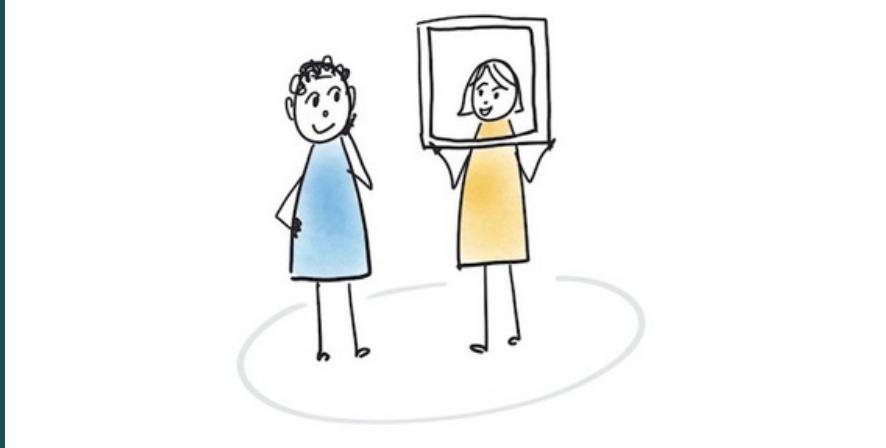


# SWOT ANALYSIS



- SWOT analysis is a strategic planning technique that provides assessment tools.
- Identifying core strengths, weaknesses, opportunities, and threats lead to fact-based analysis, fresh perspectives, and new ideas.

# BODY STORMING



Bodystorming is a way of subjecting a researcher's own body to physically experience a situation in order to ideate.

A combination of role-play and simulation, bodystorming takes place in a physical environment, instilling a feeling of empathy for the users.

Bodystorming is also a form of brainstorming using the body i.e. by acting out stories or simulating something very close to reality with the objective of generating ideas.

# Card Sorting



Card sorting is a UX research technique for discovering how people understand and categorize information. This technique is used when a team wants to group and label website information in a way that makes sense for the target audience.

# How Might We...

**How Might We** \_\_\_\_\_ *Action*  
\_\_\_\_\_ *What*  
**for** \_\_\_\_\_ *Stakeholder*  
**in order to** \_\_\_\_\_ *What change?*

How Might We (HMW) statements are small but mighty questions that allow us to reframe our insights into opportunity areas and innovate on problems found during user research.

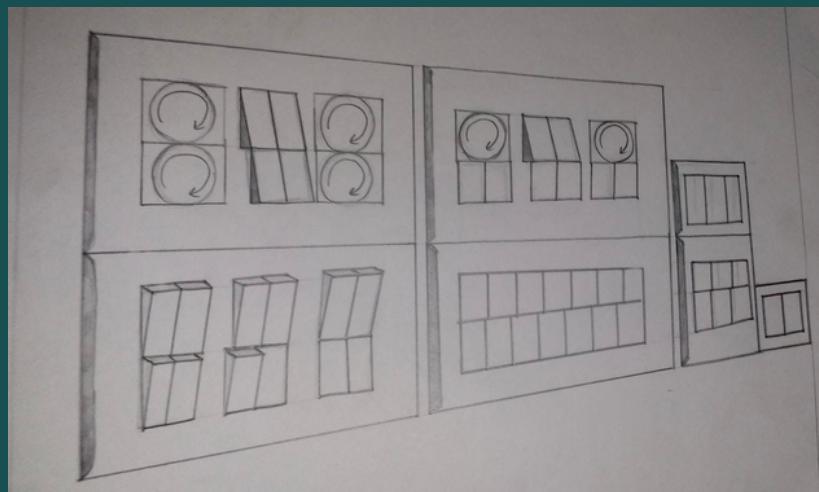
# Mini Projects

# Problems in Existing Designs

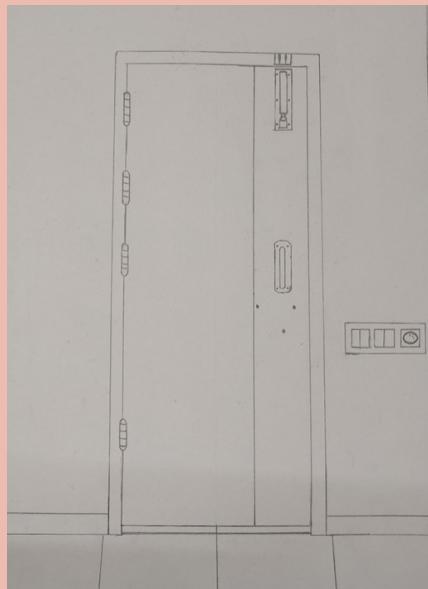
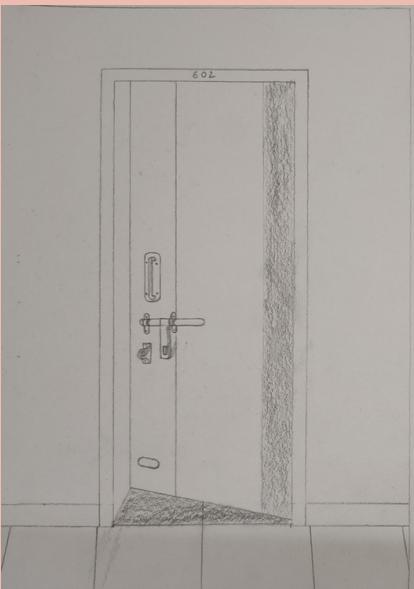
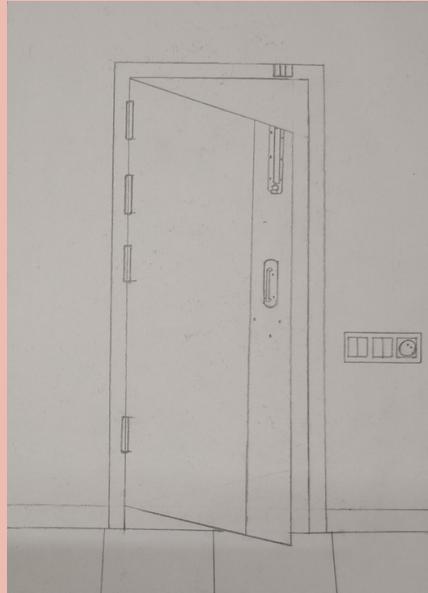
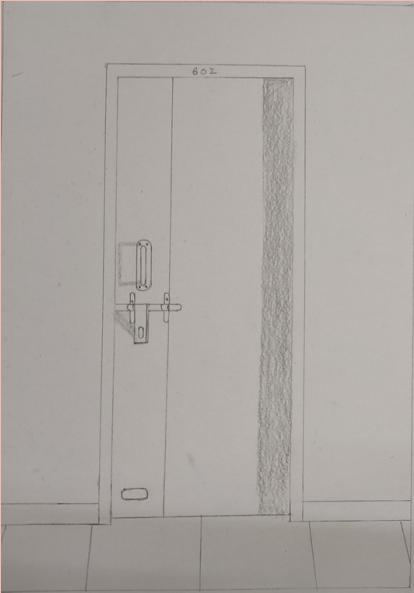
- Umbrella



- Fan Regulators



## • Door Lock Issue



# DIAL Reasoning

Deductive Reasoning

Derivation of a conclusion by reasoning.



Inductive Reasoning

Induction is a method of reasoning involving an element of probability.



# 3 Lens Approach



Self heating  
Knife



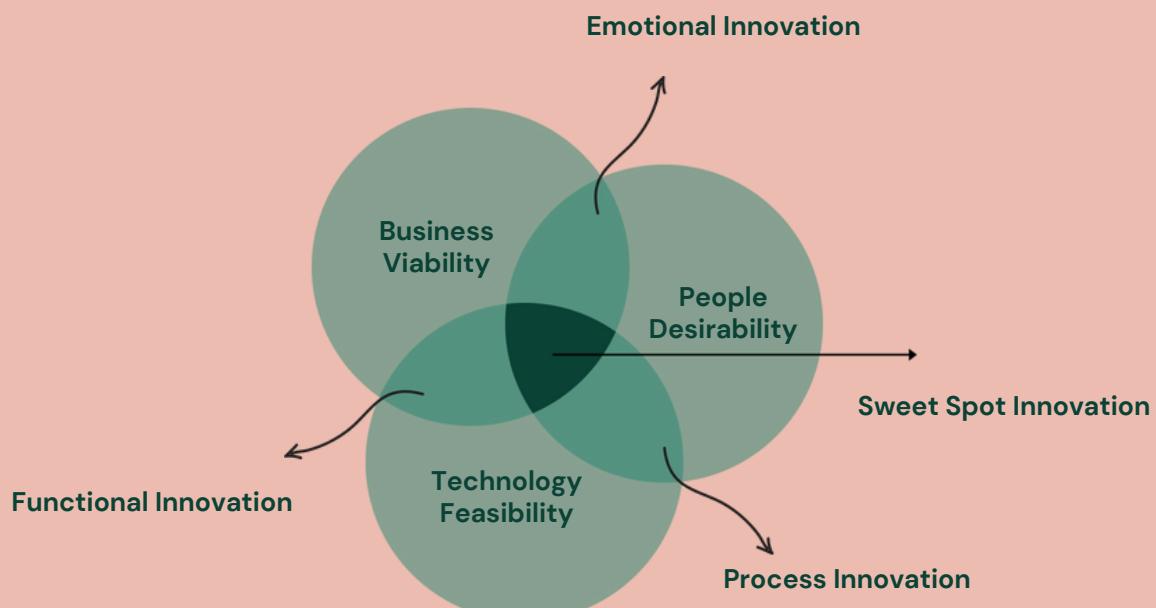
Thumb hole book  
page holder



Toothpaste  
tooth squeezer



Amazon



# Explanation

This project aimed at incorporating all our learnings from the course and identifying a problem area that resonated with our group's attributes and ideologies to make up a service that could be a possible necessity in the future. After the identification of the problem area, we were able to come up with a process that was both extensive and efficient to scope the problem area and devise a solution from those insights.

The design process we followed :

- Mapping of individual and group attributes
- Group vision and ideology
- Problem area brainstorming(Funnel Map)
- Affinity Mapping
- Insights & infographics
- Mapping out stakeholders
- Persona Mapping
- Framing the Service
- Service Concept Generation
- Service Blueprint

# Final Project

# Students & Professional Work from home

## Problem that we encountered:

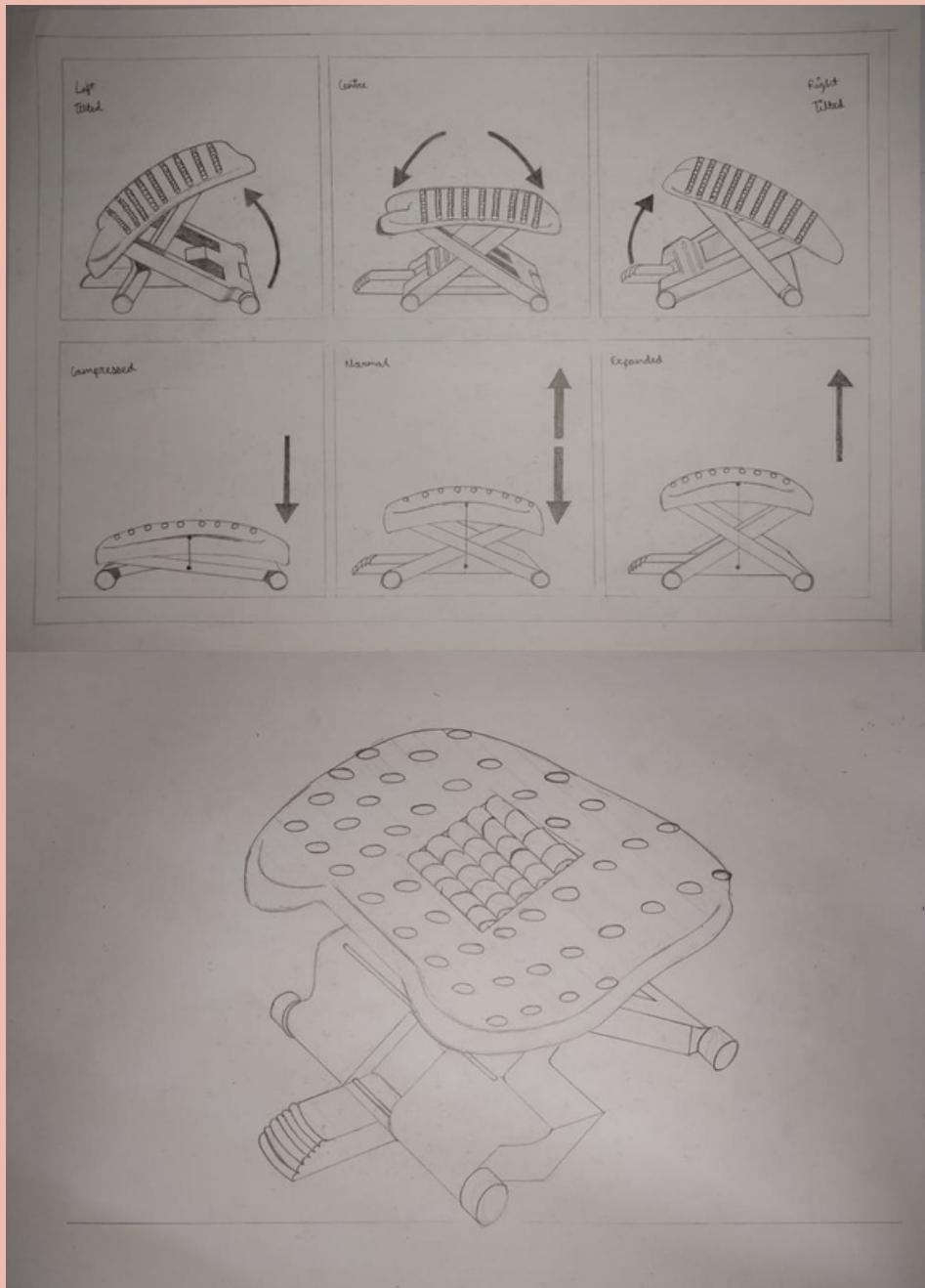
Working from home or anyplace for long duration while sitting at desk causes strain on the leg muscles and discomfort in ankles, feet, thigh muscles, neck, shoulders and back therefore we need a solution to overcome this issue.

## How we solve the problem:

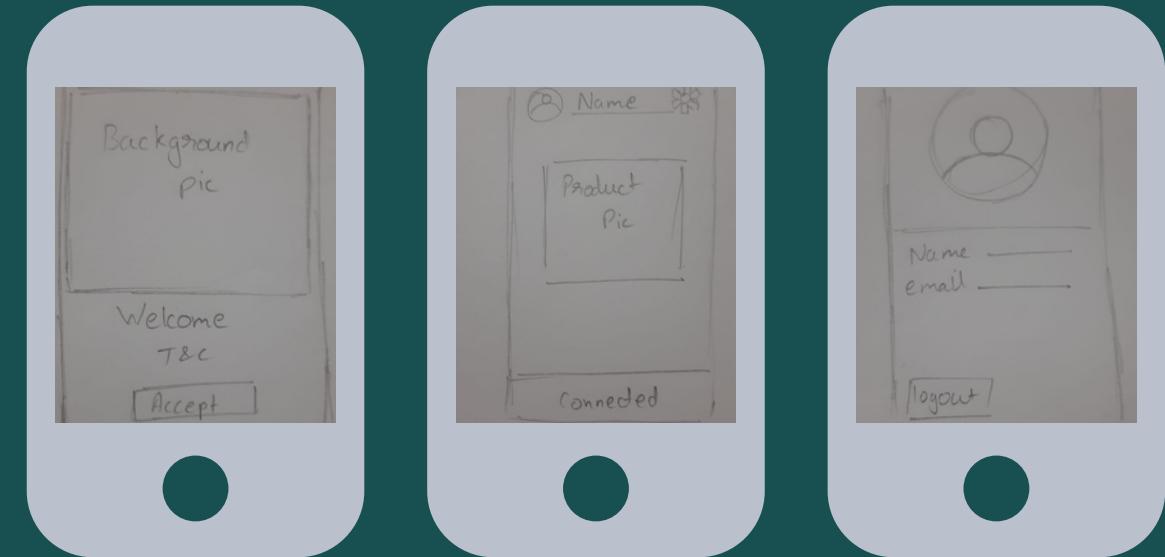
We tried to sort out the problem faced by the online working society by our device FOOTREST .The Device was directly controlled by our App. We tried to design the app in such a way that it gives minimum cognitive load to users.

# Prototyping

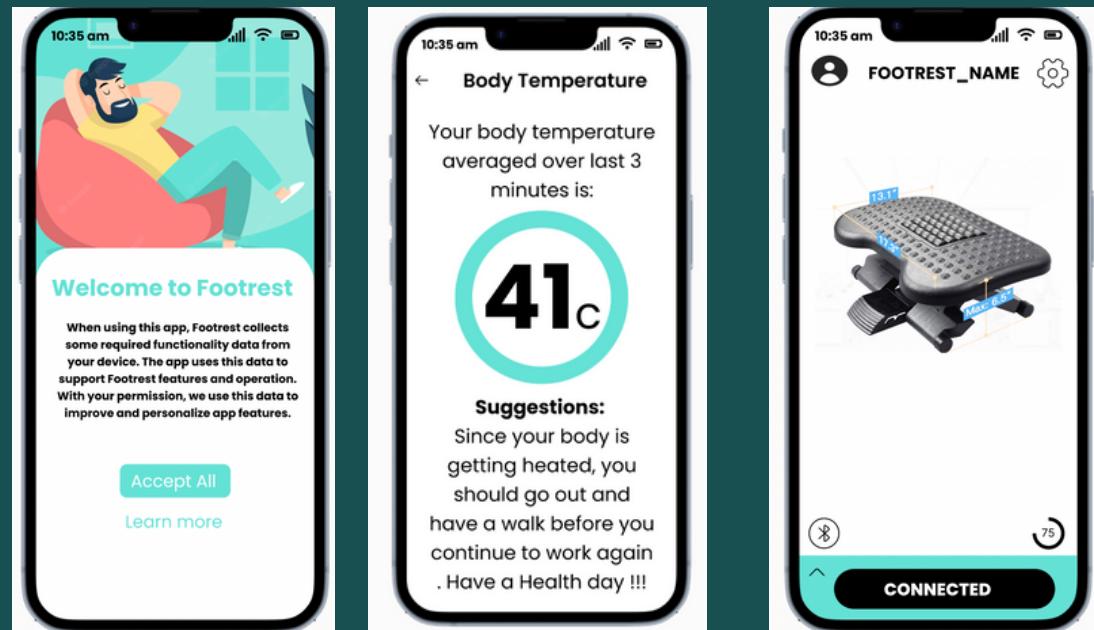
## Product Low-fi



# App Low-fi



# App High-fi



# Our Solution

We created a "FOOTREST" which aims to reduce Strain and Pressure on leg Muscles as well as eases ankles and feet, thereby providing comfort to users.



# Learnings & Reflections

- I learnt about how users are the ultimate stakeholders and how important it is to empathise with them using various means to get an effective solution.
- I understood the role of perspectives and how to observe and ideate for the problem from different perspectives.
- I learnt about the affective component, which includes emotional response and feel, and the cognitive component, which includes understanding and imagining the other, of empathy.

# THANK YOU !!

