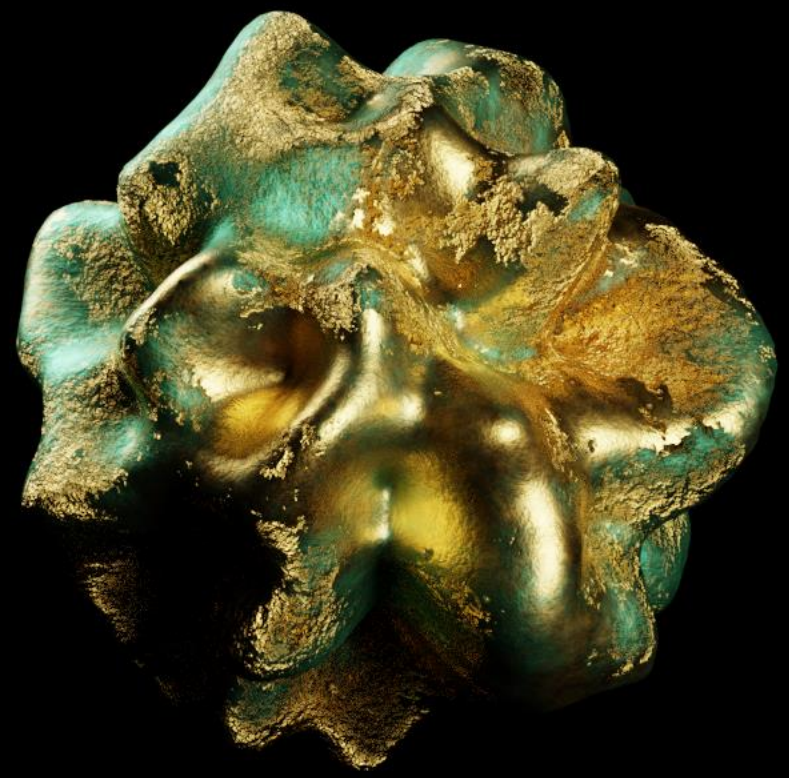
INDUSTRIAL DESIGN PORTFOLIO



2022

SRUJAL TAWADE

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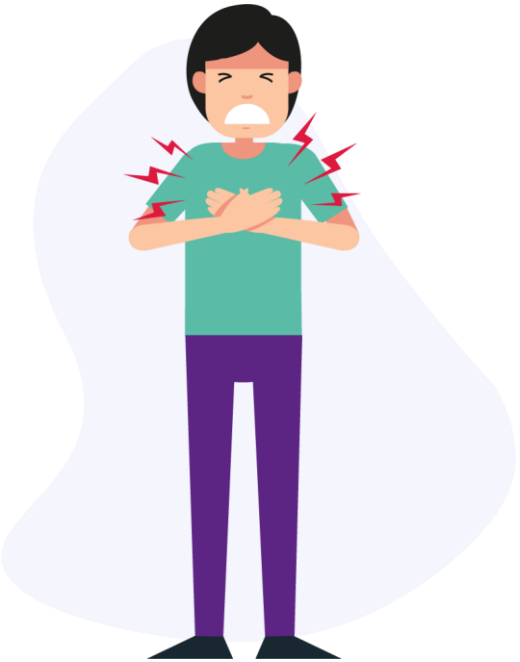
Skills	**45**

Medi Go

An health kiosk designed for urban space and corporate offices which helps the user to keep in check the basic health parameters such as blood pressure, BMI, blood oxygen

About 33% urban and 25% rural Indians are hypertensive. Of these, 25% rural and 42% urban Indians are aware of their hypertensive status. Only 25% rural and 38% of urban Indians are being treated for hypertension. One-tenth of rural and one-fifth of urban Indian hypertensive population have their BP under control.



Why place it in corporate offices?

The biggest reason for heart related problems is high blood pressure and high blood pressure is caused due to high stress level in day to day life in offices and unhealthy eating habits.

And high/low blood pressure if neglected can convert in to other deadly health problems and but if kept in check and proper preventive steps are taken it can very well be avoided. All, one has to do is keep regular check on their basic health parameters.

In today's busy life filled with deadlines no one really gets time to go to a doctor for regular test and also do not want to pay for the fees.

Hence, if the process of checking basic health vitals easier and much more approachable it will help promote a healthy lifestyle among the employees

Barinstorming

Why
क्यों

Gaps

- Not conveying emotion, hope & comfort to patients
- Data and hardware security
- Public spaces don't have kiosks
- Not user friendly
- Weakening support overtime
- People getting anxious in public environment
- Extreme cost
- Bulky & ugly
- Human Attention required
- Tedious process & complex UI

Locations
कहाँ

Corporate Offices

Schools

Medical Facilities

- Clinics
- Hospitals
- Health Centers
- Camp & Campaigns

Government Offices

Health kiosk

What
क्या

Health checkup

- User record and health analysis
- Suggestions to patient
- Vaccinations
- Mental Health
- Day to Day checkups
- Order Medicines
- Get prescriptions

How
कैसे

SMART

- APP - To get notification for regular health checkup
- Get online certificates , Prescriptions & medicine suggestions etc.

Users
कौन

Government employee

Students

People who want to keep eye on their health

Corporate employee

People who has just been diagnosed with diseases

- Diabetes
- Blood Pressure
- Cold
- Fever
- Asthma
- Jaundice

Potential User

- Employees of any institution
- Students on campus

Efficiency

- Enhanced experience
- Quick & Crisp Process
- Smart connectivity
- Accuracy of info

IMPACT

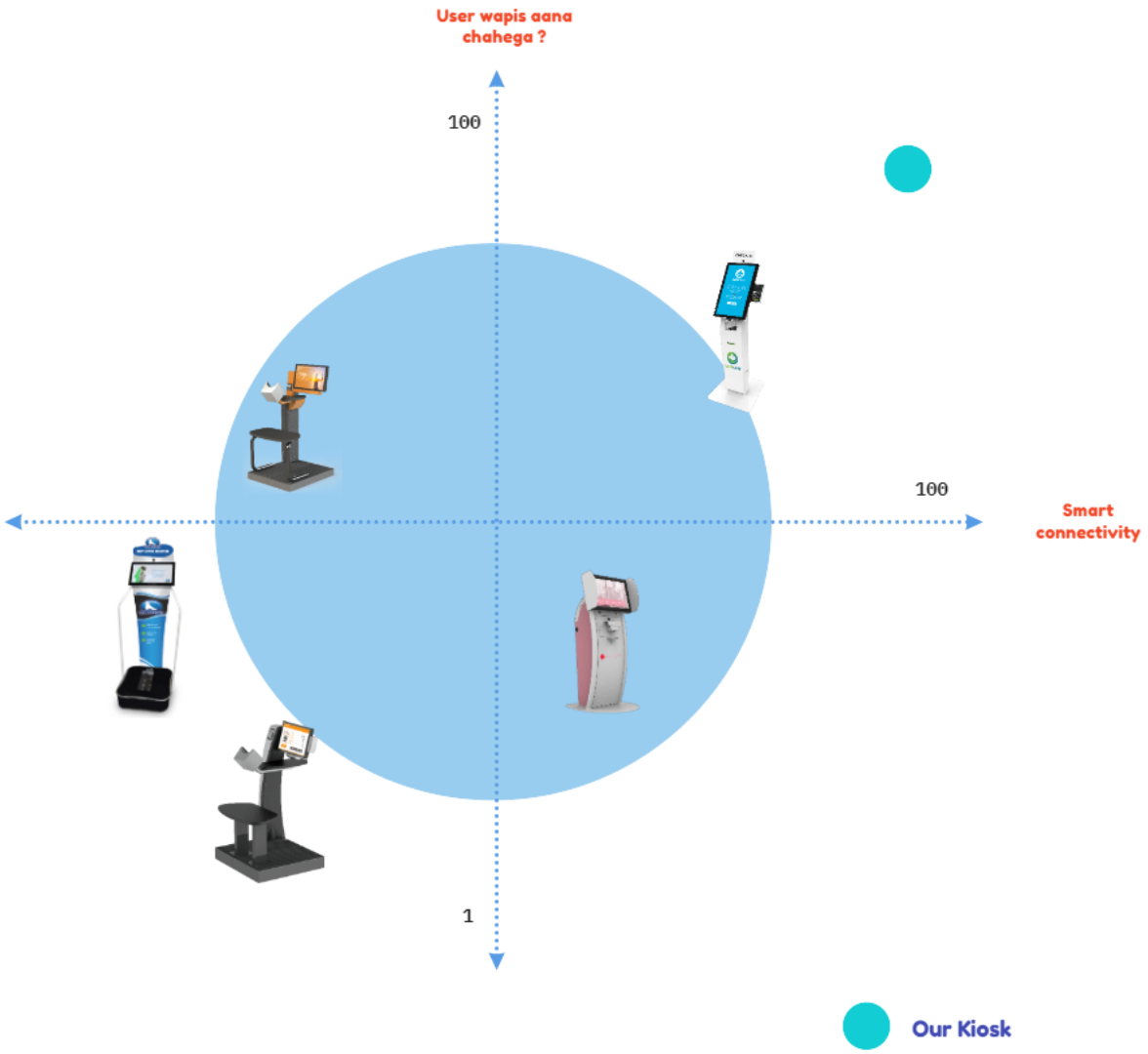
Stress involved

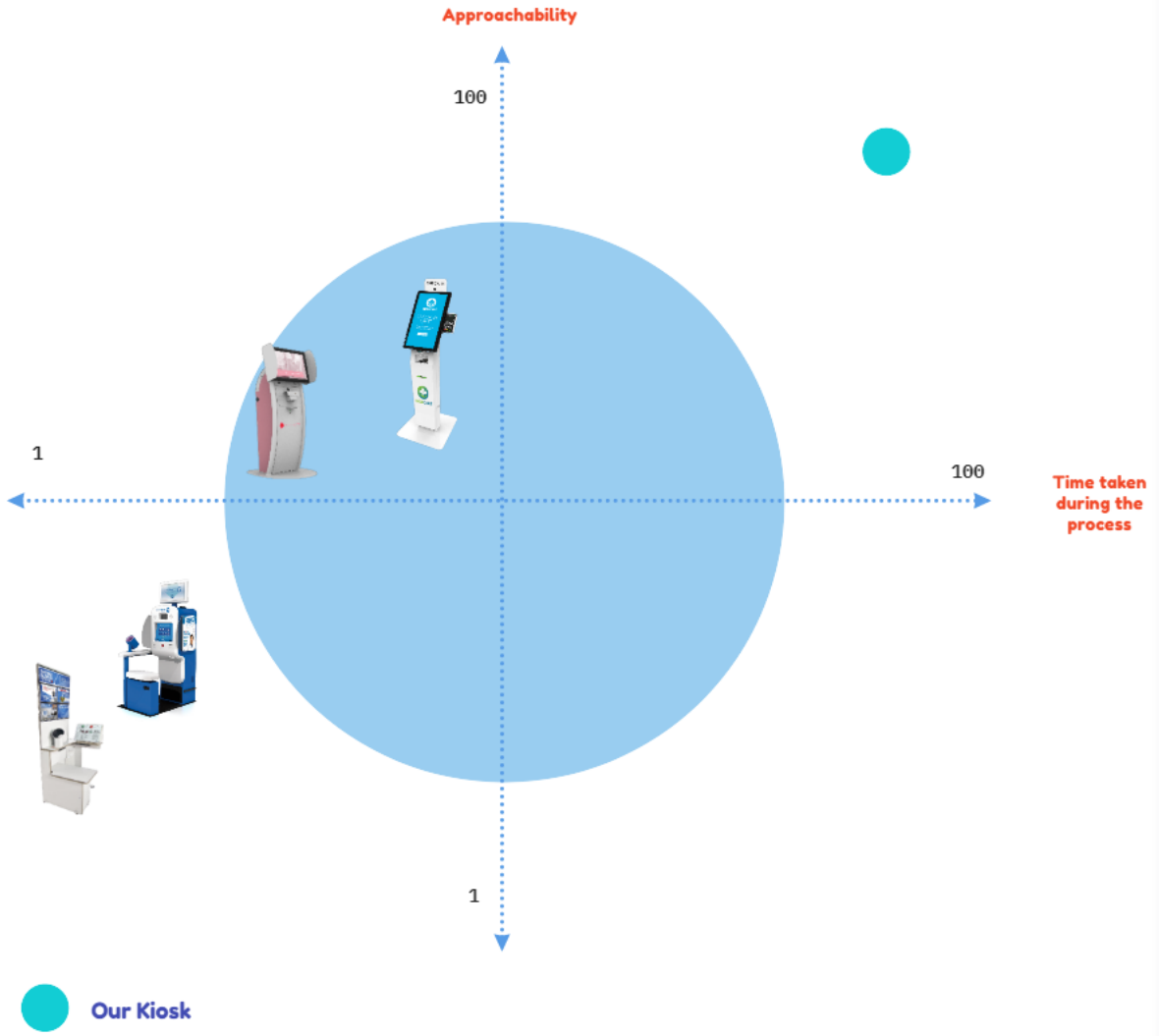
- Nervousness
- Fear of Awareness in process
- Remembering Security keys
- Remembering Data Shared

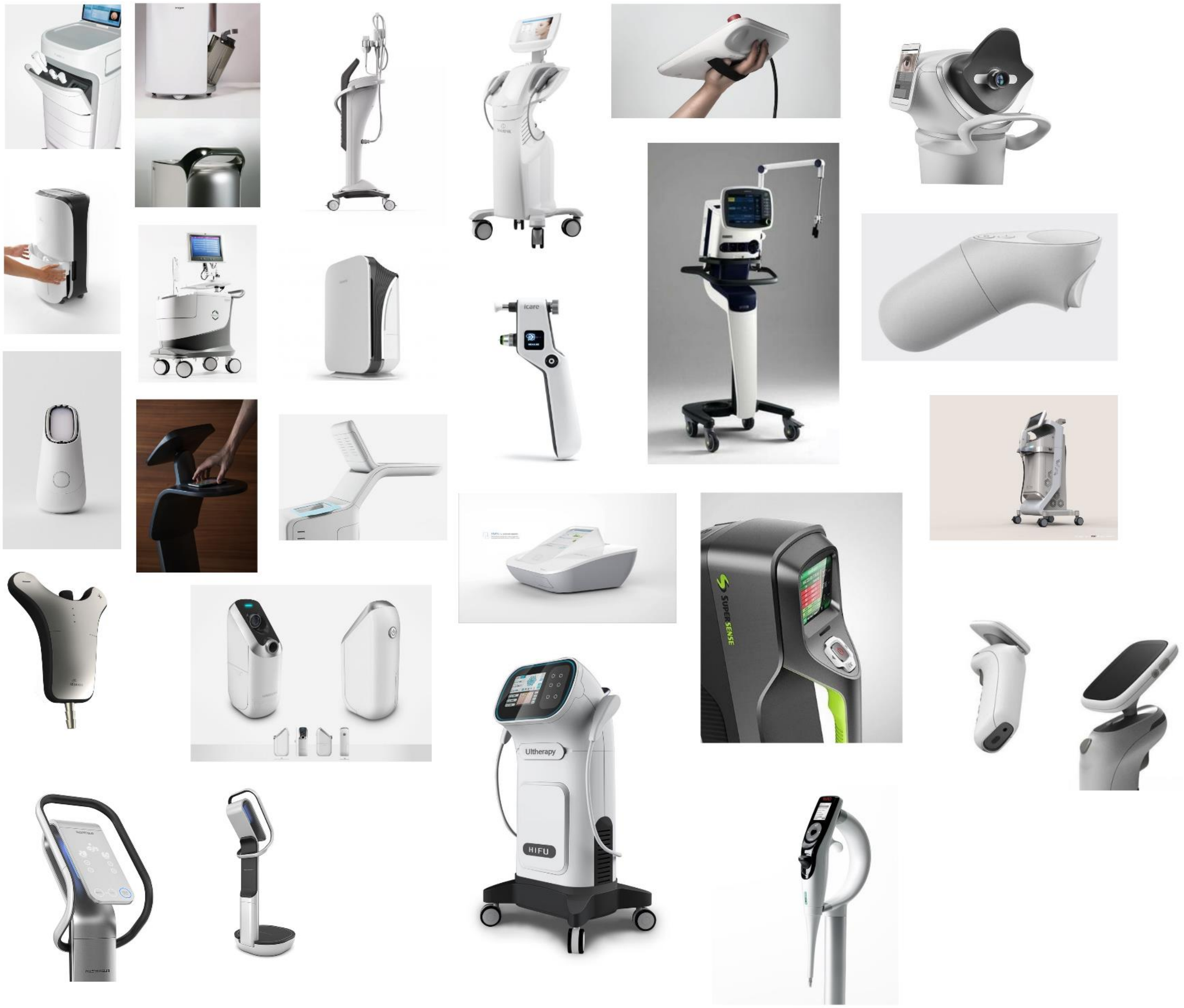
Experience

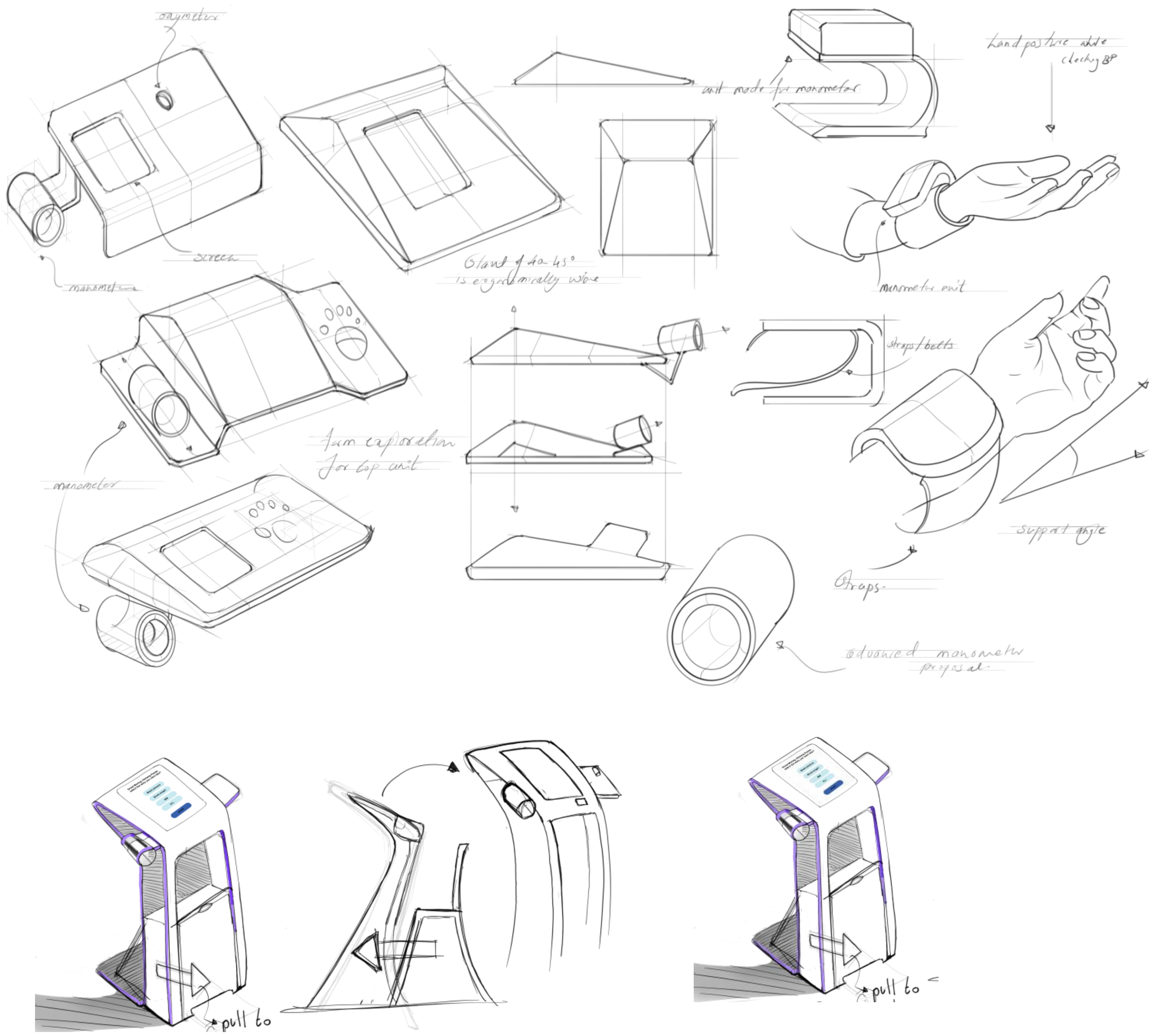
- Hassle Free
- Involves Hope & Emotion
- Easy to navigate

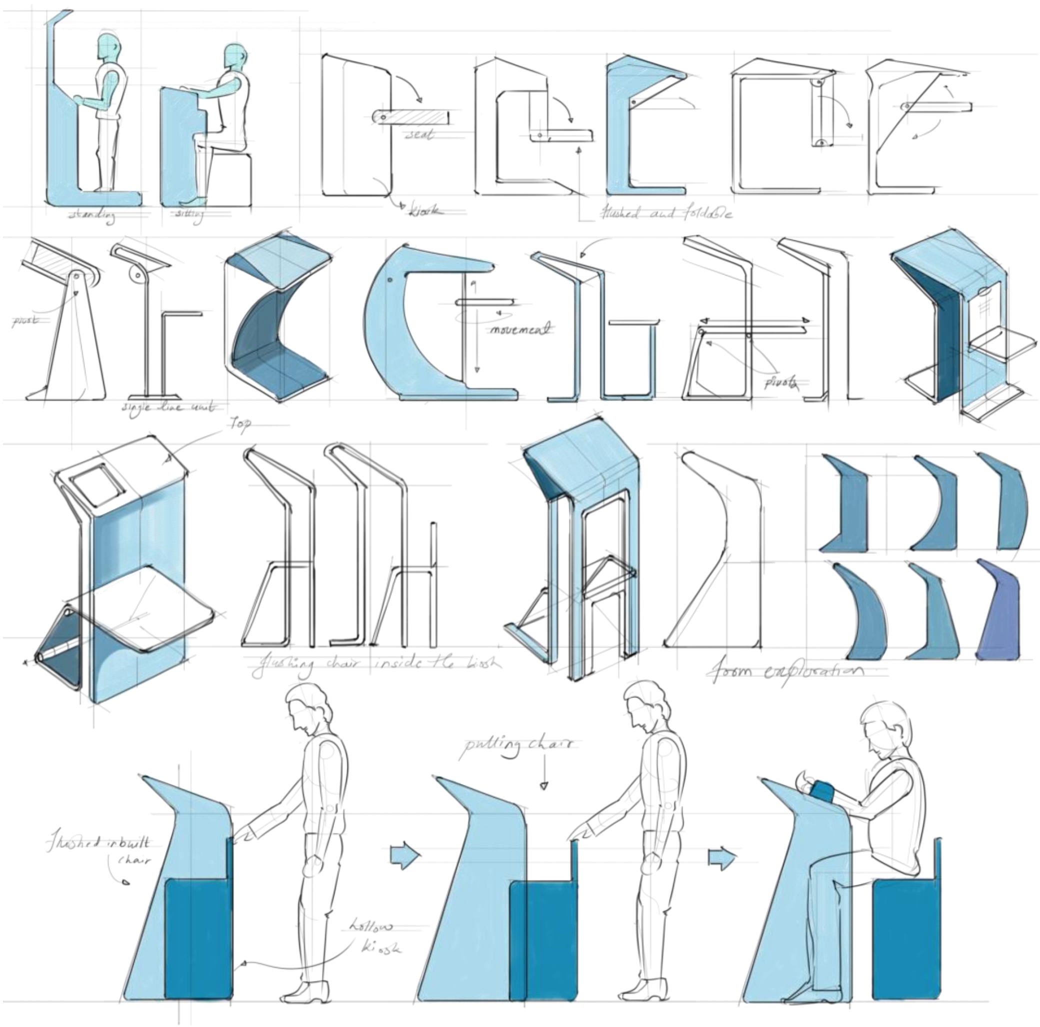
Product Mapping





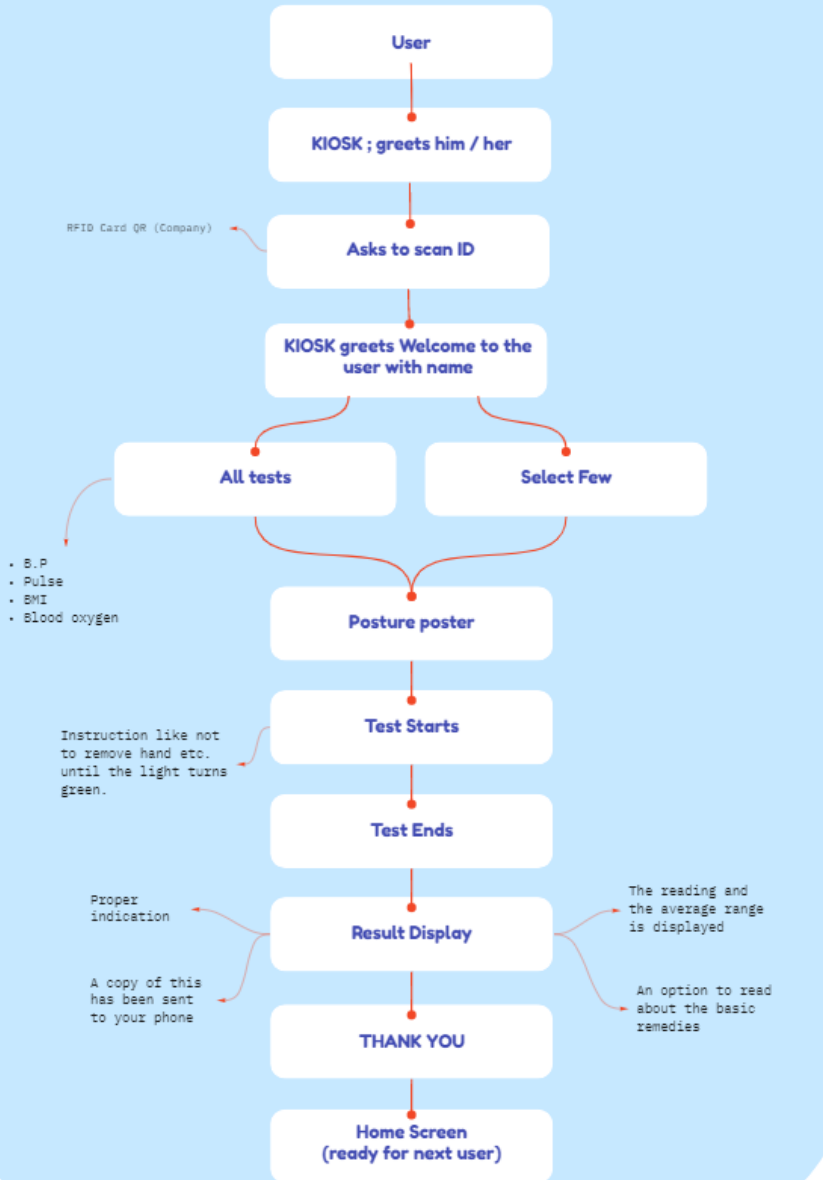

icare
SUPER SENSE
Ultherapy
HIFU


oxymeter
unit made for manometer
hand posture while checking BP
screen
manometer
Slant of 40-45° is ergonomically wise
manometer unit
straps/belts
form exploration for top unit
manometer
support angle
straps
advanced manometer proposal
pull to
pull to


standing
sitting
seat
kiosk
flushed and foldable
pivot
single line unit
movement
pivots
Top
flushing chair inside the kiosk
form exploration
pulling chair
flushed inbuilt chair
hollow kiosk

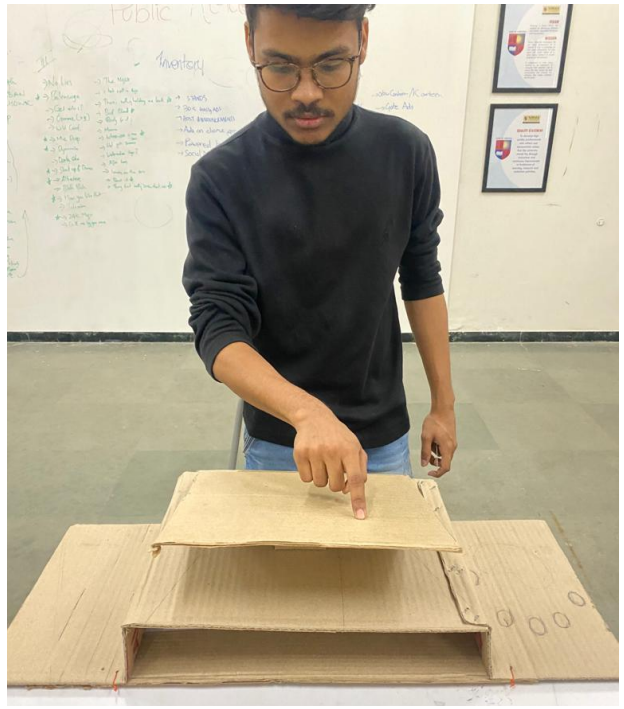
App Wireframe which would be connected to the kiosk and will keep you updated with your daily health report

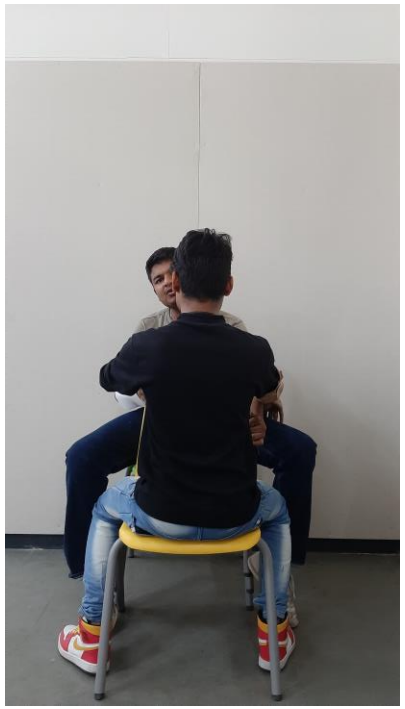
PROCESS



Medi Go Features

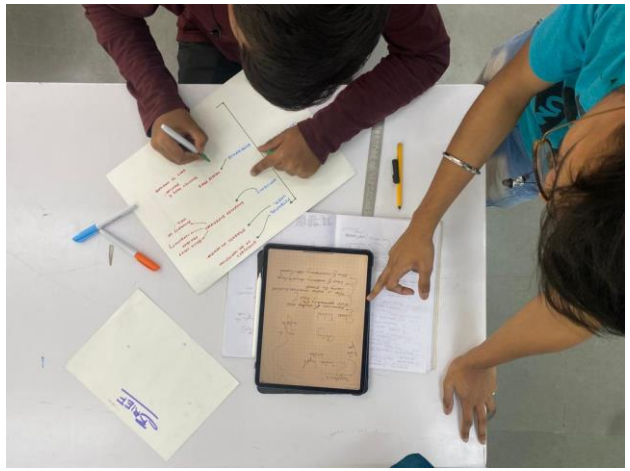
- Medical History
- Self Assessment
- Remote consultation
- Patient registration
- Feedback
- Accessibility
- Efficiency
- Safety
- Discrepancy in prescription
- Quick and cost efficient



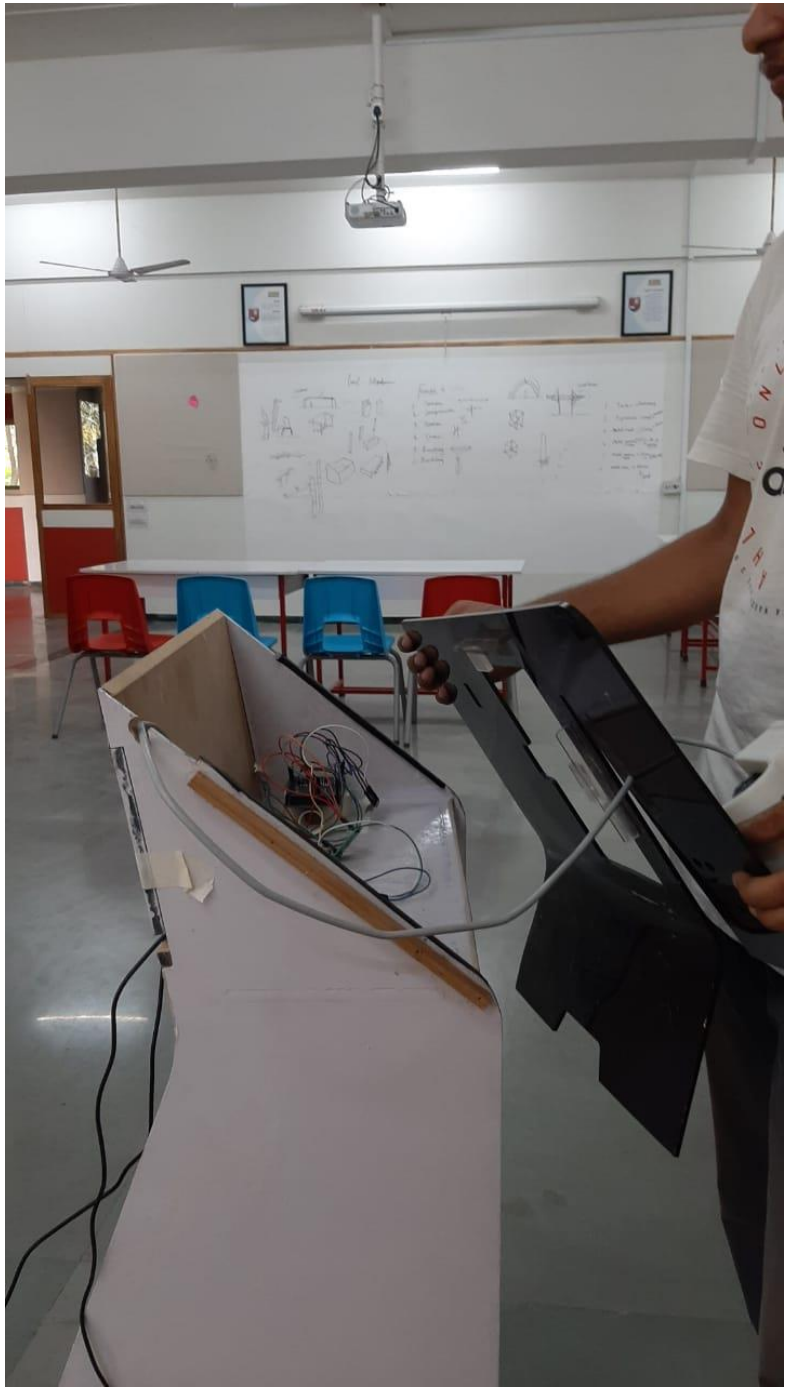



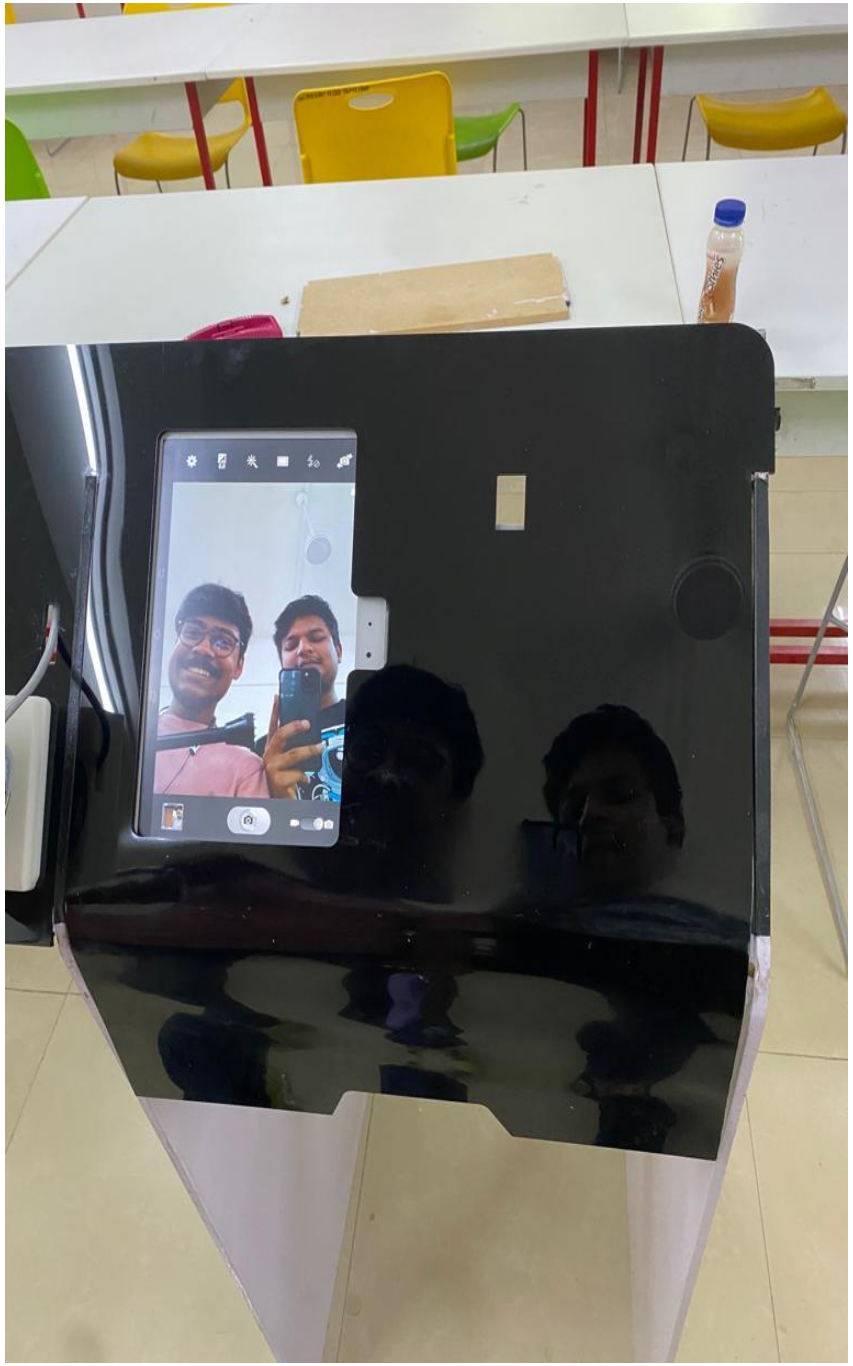

Roleplaying the situations and how the user would interact with our kiosk by making low fidelity prototypes and understanding the ergonomics and the interaction area.

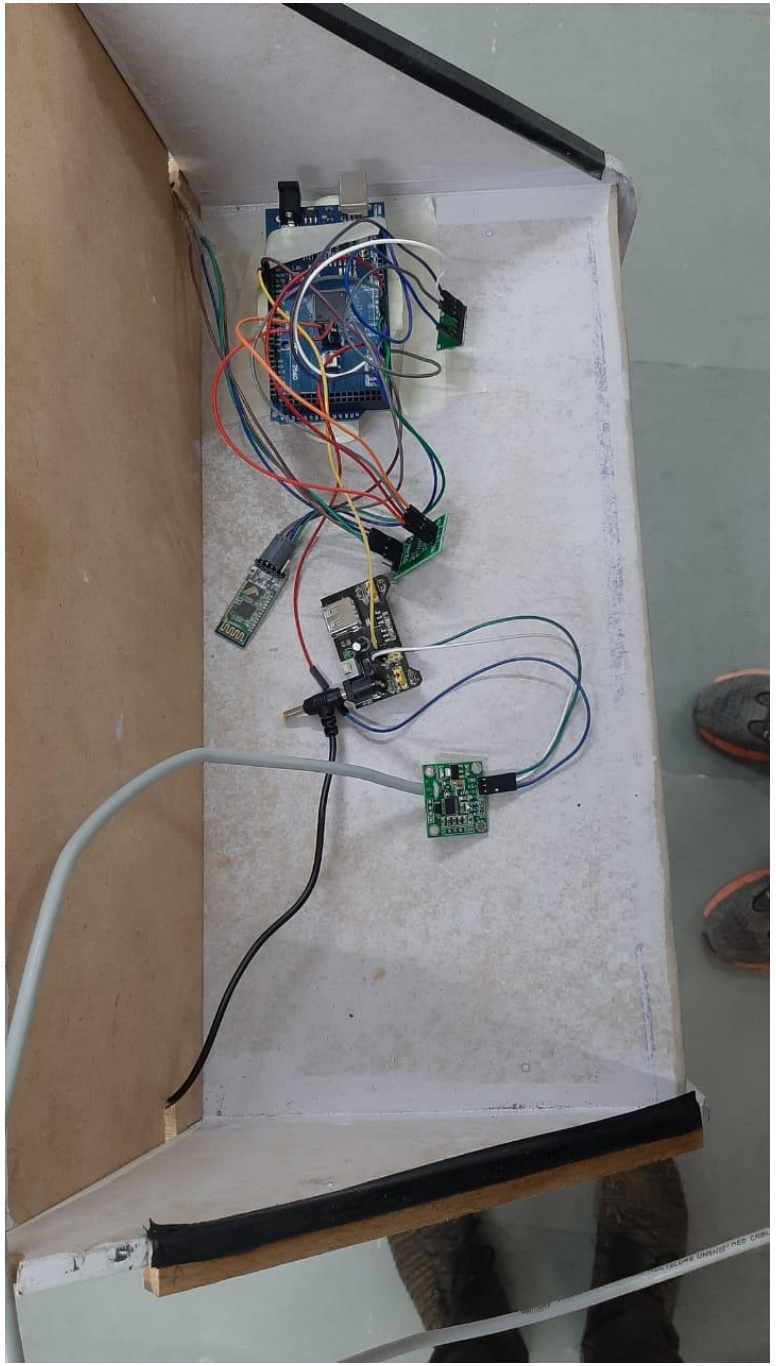


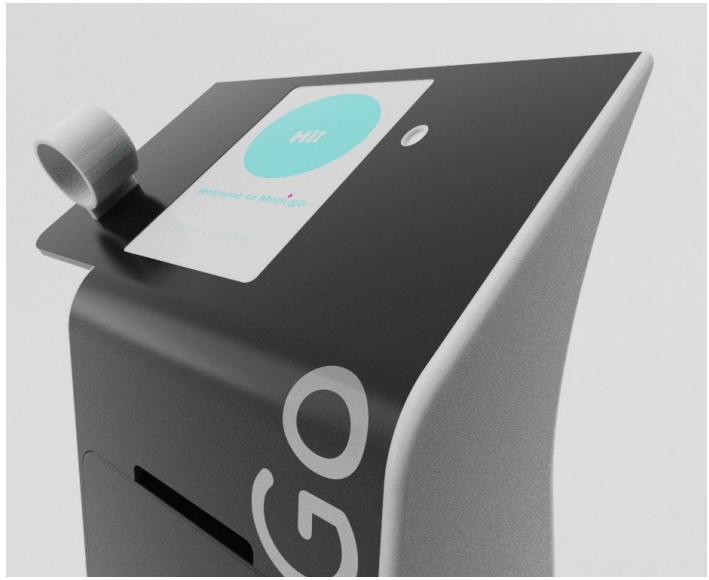


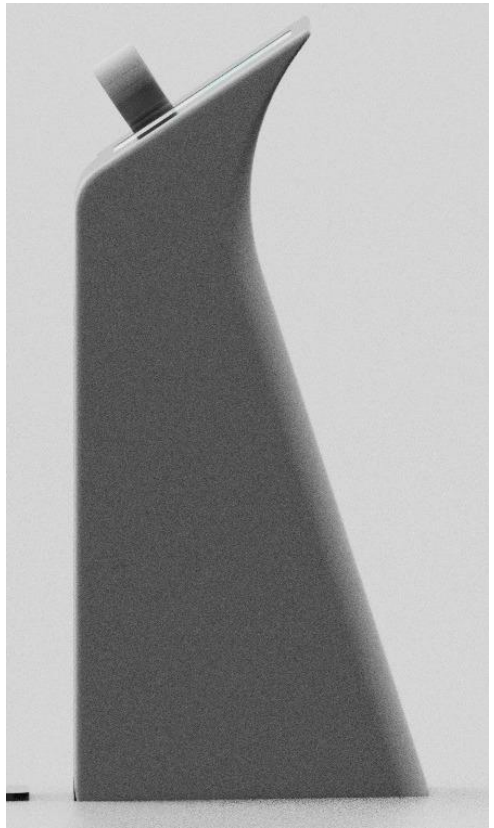







Save Power


Welcome to MediGo




Medi Go


Go
Medi

GPS Smart Travel Pillow

An integrated travel pillow that wakes you up from your sleep right before your destination

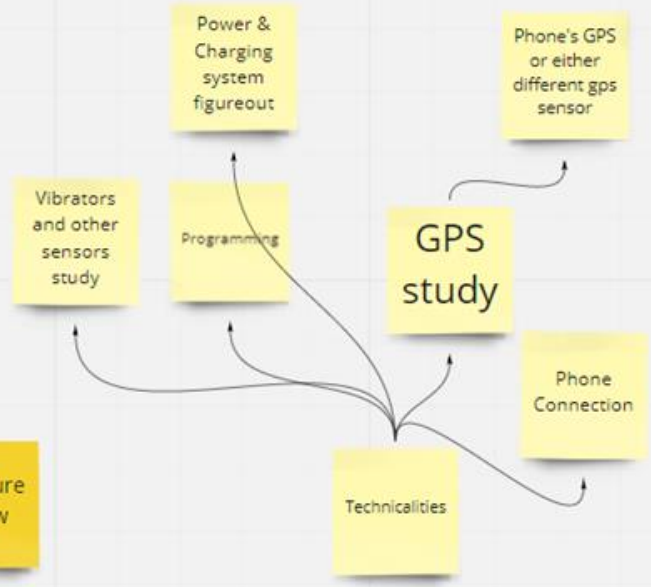
Context

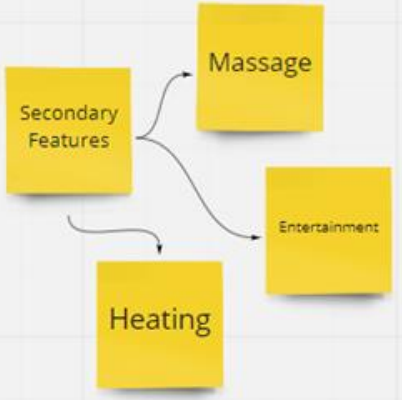
While travelling in a train many people tend to miss their station as its coming at late night. So to make them aware of their destination if they are sleeping. Either they set an alarm which can't be heard if they are in deep sleep and may disturb others or they never sleep only.

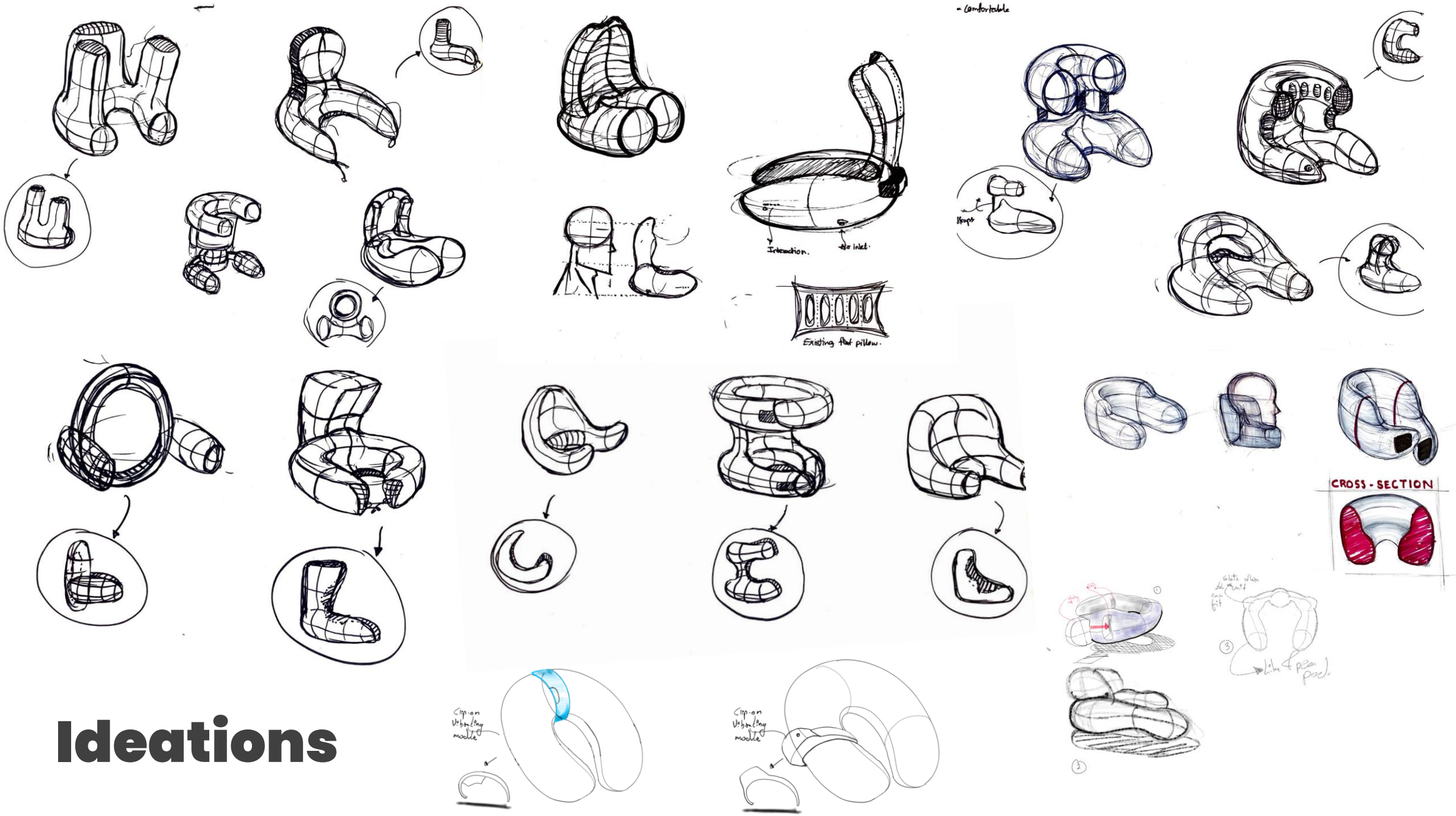
Very few people use a pillow to sleep in rather they can be seen keeping their luggage or a towel etc to sleep on

GPS Driven Travel Pillow Alarm

Research Mindmap - Areas to look into

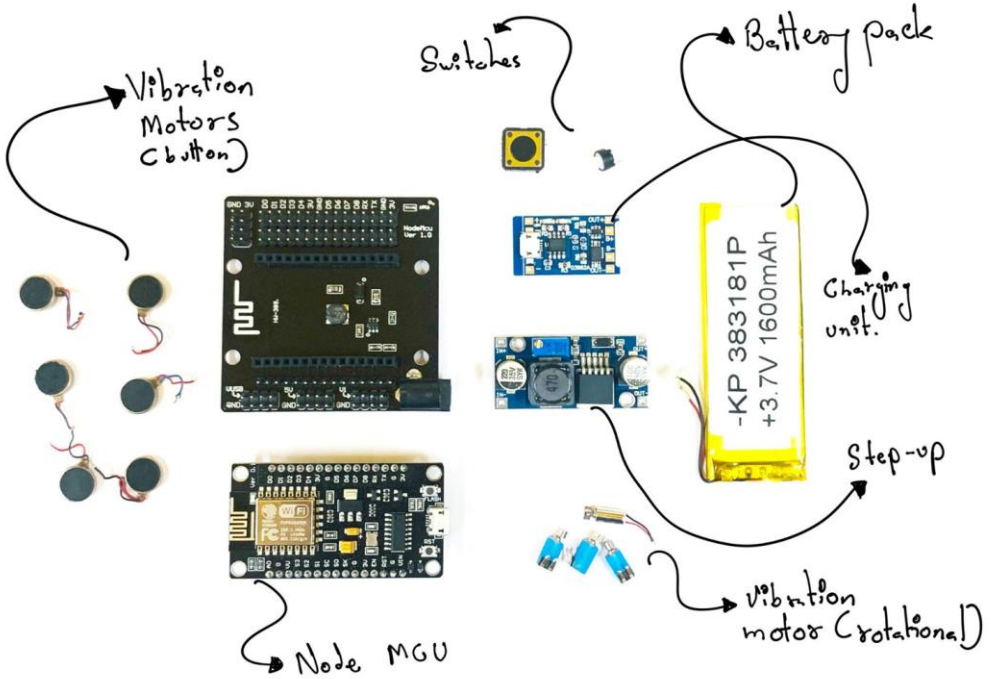




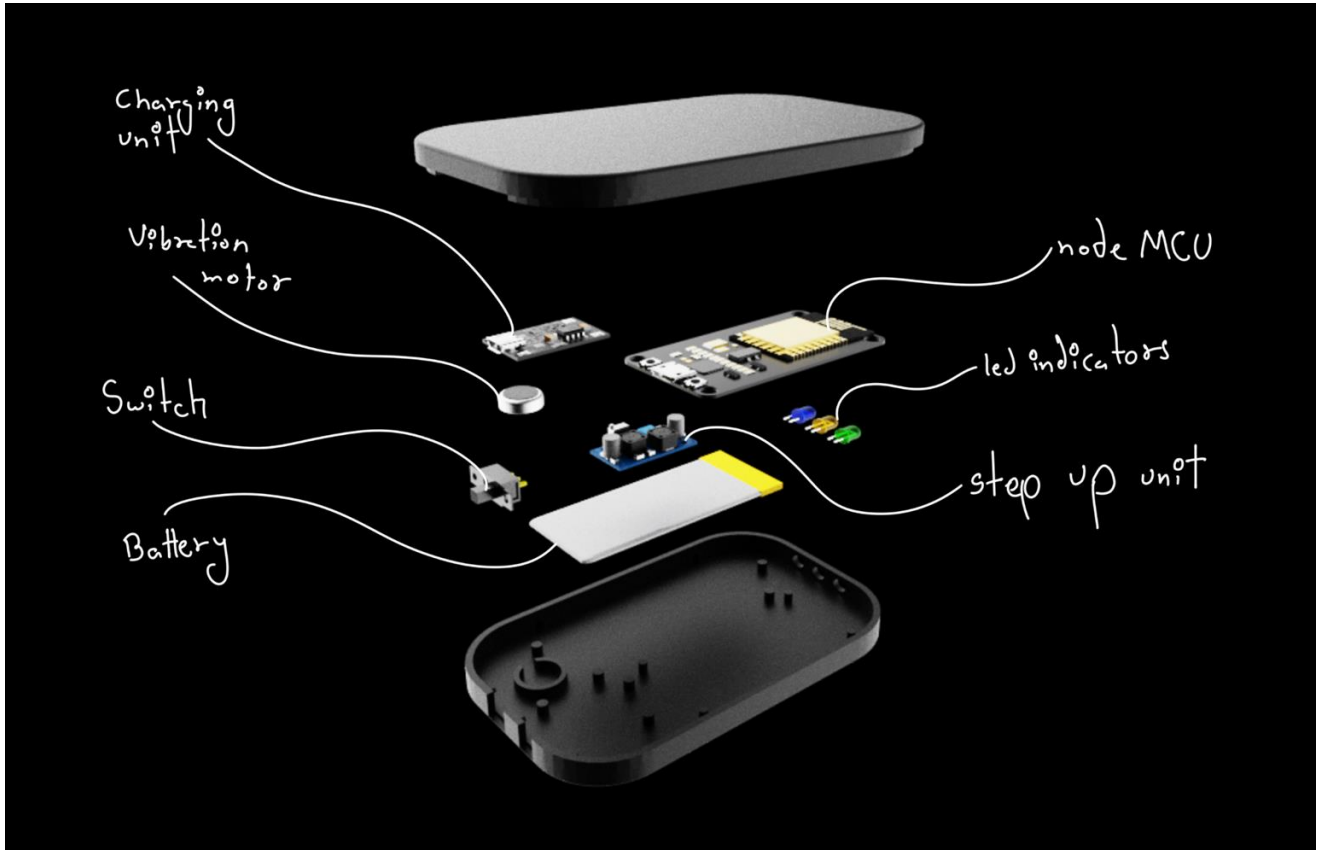

- comfortable
Interaction.
Existing flat pillow.
CROSS - SECTION
Clip-on Urbanling module
Clip-on Urbanling module

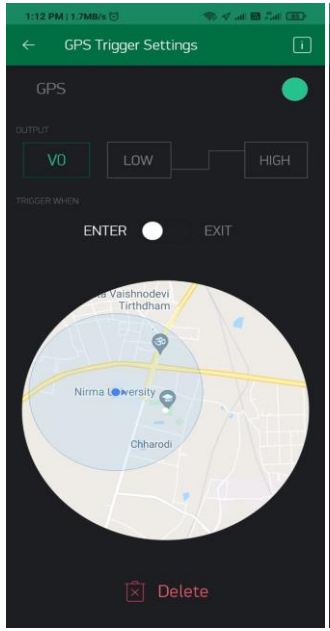
Ideations

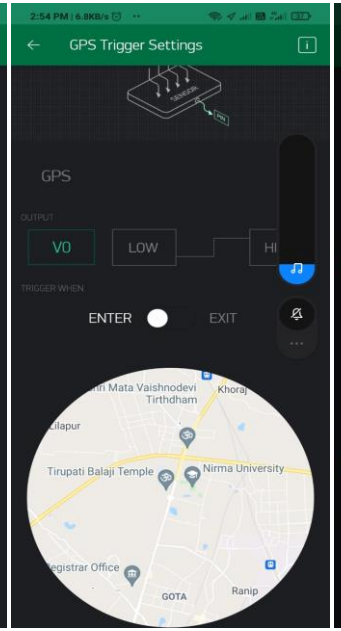
Module

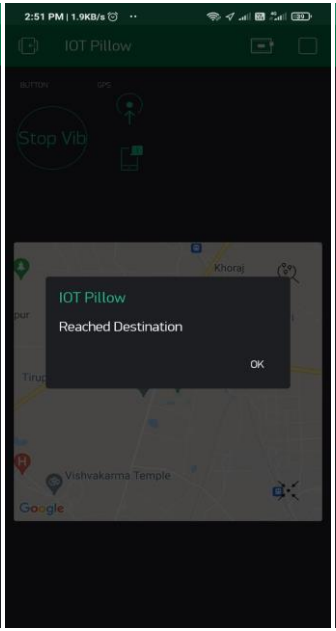

Vibration Motors (button)
Switches
Battery pack
Charging unit.
-KP 383181P
+3.7V 1600mAh
Step-up
Vibration motor (rotational)
Node MCU

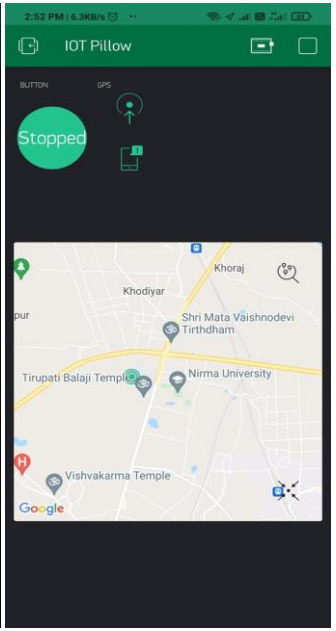

DC Power Indicator
Mobile Connnection Indicator
Destination Trigger Indicator
Power Switch
Micro USB Charging Point


Charging unit
Vibration motor
Switch
Battery
node MCU
led indicators
step up unit

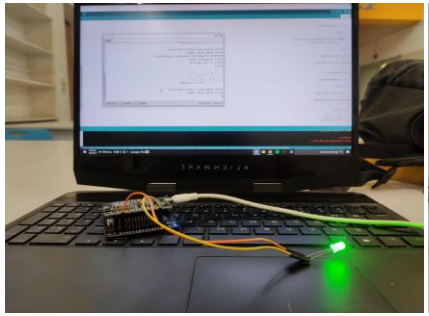


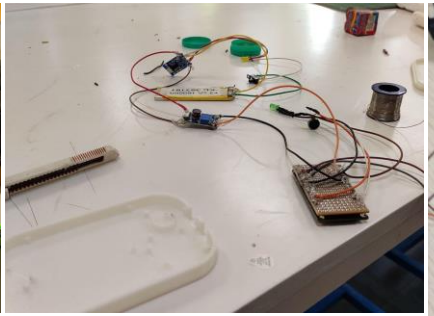


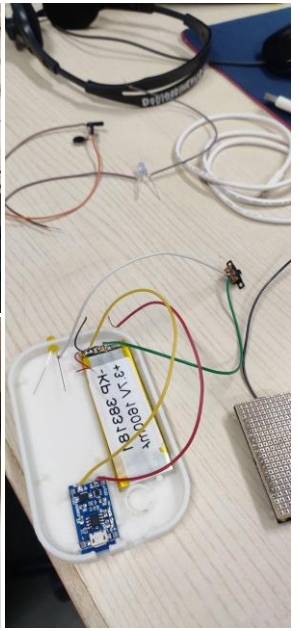


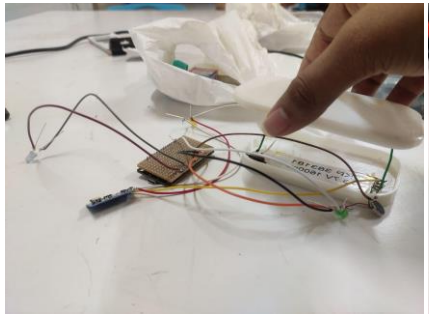


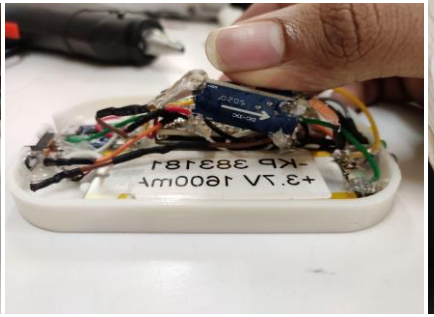
The Module would be connected with an app where we can enter our destination and it will also notify with a notification when the destination is reached.

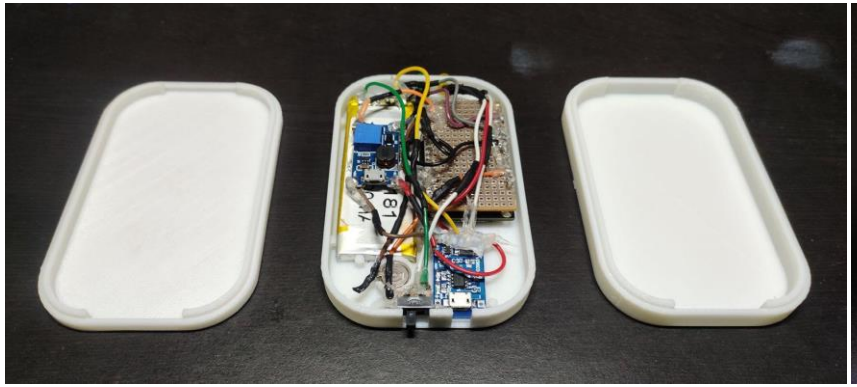


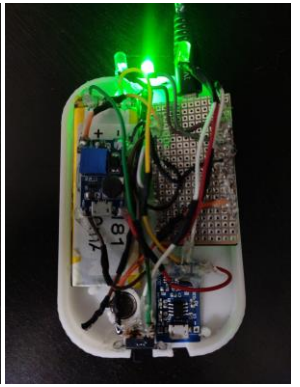






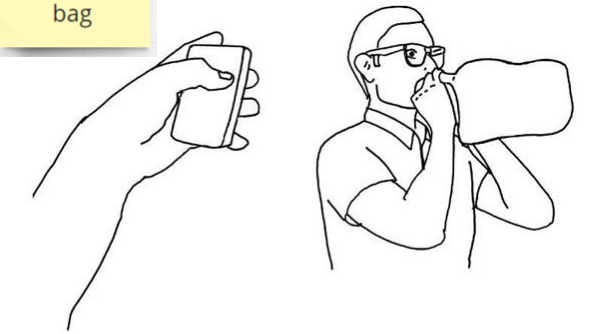






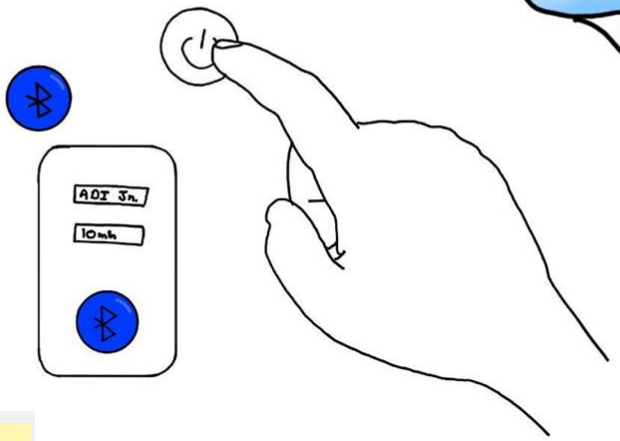
Principle Model

Take out the product from the bag

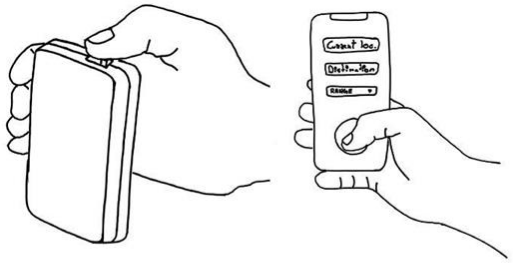


Unfold and Inflate

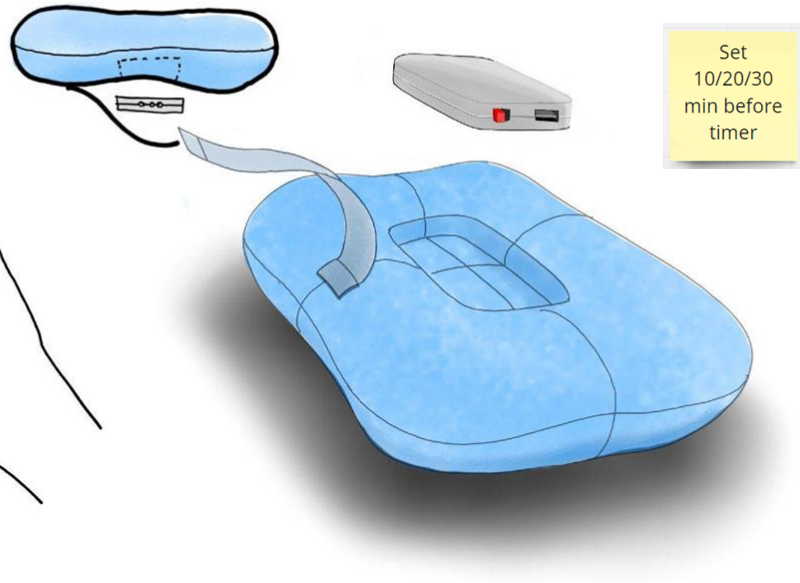
Set destination in Mobile Application

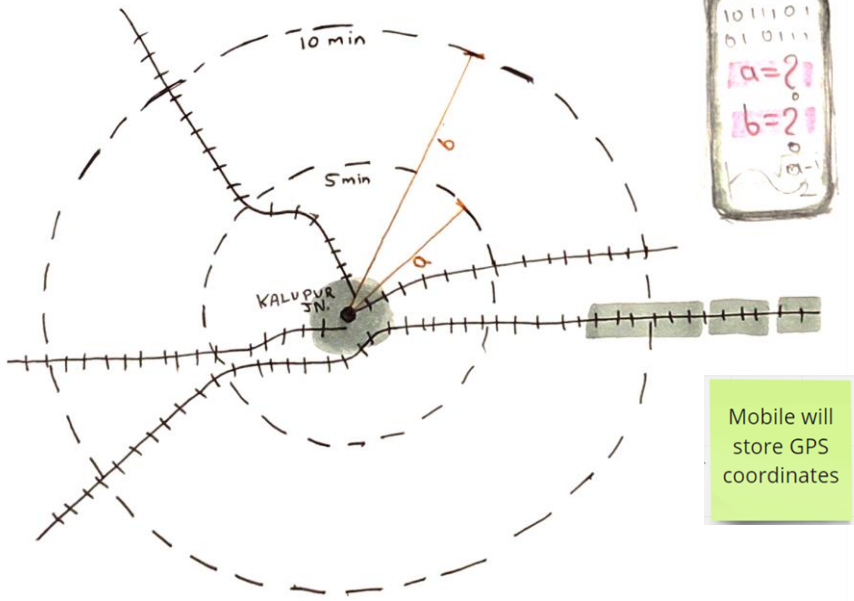


GPS coordinates of Destination Railway Station gets fed into code variable

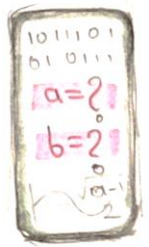


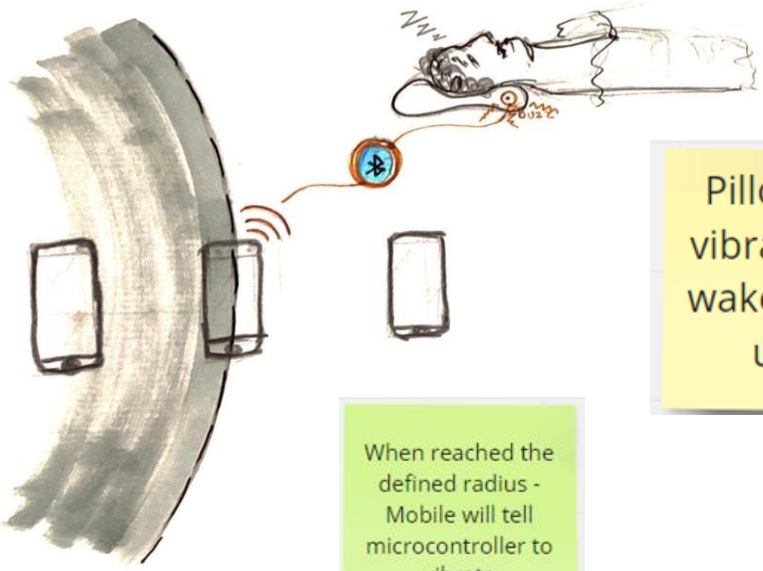
Set 10/20/30 min before timer





Mobile will store GPS coordinates





When reached the defined radius - Mobile will tell microcontroller to vibrate

Pillow will vibrate and wakeup the user

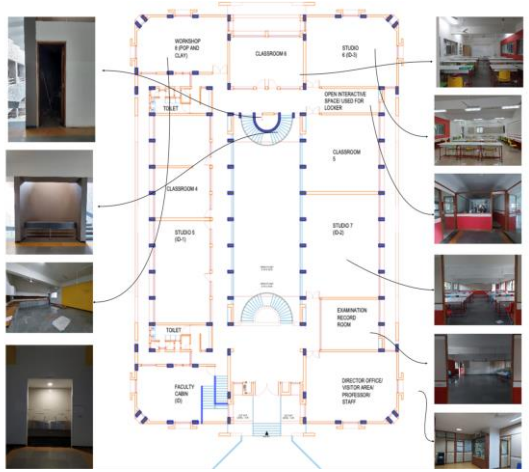
Final module form

BANC

A stackable bench which will stack horizontally to save space and make cleaning easier.

Research

Understanding the environment by mapping down the environment, people, space and activities performed in that areas. The mapping was done by keeping certain aspects in mind and noted down in a table.

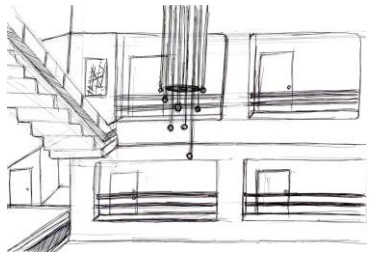


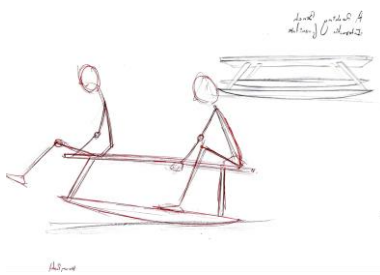
Space	People		Activities
Helical stairs 2 visiting Faculty cabins 1 Wacom lab Working room Workshop • tool room • metal workshop • wood workshop • spray painting booth Corridor with shoe and bag racks. Faculty cabins divided in individual cabins Classrooms Advance modeling lab ID computer lab CD computer lab Audio visual room Faculty meeting room Plantation rectangle with a path around it.	Always there faculty cabin • faculties in there respected cabins wood and metal workshop • workshop assitant • cleaning staff	Temporary(visiting) Peons Cleaner students faculty members students, cleaners passer by students teachers cleaners lab assistants students faculty students and faculty	peons- catering faculty needs(coffee, chai, stationery) faculty members- teaching (on there systems), lunch, interactions students - working in workshops, carrying and storing their models and raw materials. removing their bags and shoes for respective labs faculty- meeting in their cabins to discuss further assignments cleaning staff- poocha every morning in all the rooms and keeping the machines clean

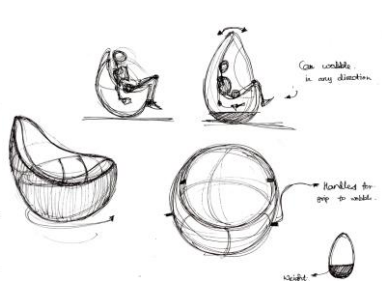
	Privacy	Amount of noise allowed	People's familiarity with the space	Time spent	What people like to do when their work in done	Footfall and frequency	Environment	To what extent are animals allowed?	Amount of waste created	Variations in sitting provisions	Frequency of cleaning needed
Class rooms on ground floor	★	★	★	★★★★	Make groups and sit chit chatting, playing music, roam around in the building to other classes and interact with other batches	★★★★★	★★★★	★★★	★★	★	★★★★
Class rooms on first floor	★★	★★★		★★★★	Almost the same as other classes but jamming sessions take place once in a while where they use table for percussion. Junior batches do to roam around as much	★★★	★★★★	★	★★★	★	★★★★
Class on second floor	★★★	★★★	★★	★★★★	The jamming sessions started whereas it is the farthest from the director's office and music can freely be played	★★★	-	★	-	-	★★★★
Faculty cabin	★★★	★★★	★	★★★	During the beginning and the end of the day they gather in other's cabin and chit chat , there are only two visitor's chair so at least one of them has to stand. Come out in the courtyard to receive calls	★★	★★	-	★	★	★★
Workshop (clay)	★	★★★	★	★	Not in use yet	★★	★	★	★★★	★	★★★★
workshop (wood/metal)	★	★★★★	★★★	★	Usually do not prefer to stay there and chill as the surfaces are not clean	★★★	★	-	★★★★	★	★★★★★
Labs	★	★	★★	★	Leave after the work in over as there is low mobile connectivity	★★	★★★	-	-	★	★
Lobby	★	★★★	★★	★★★	Gather around at the beginning and end of the day waiting for the faculty or friends to join them	-	★★	★★★★	★★	★	-
Corridor	★	★★	★★	★★	Go there to use the lockers and keep their folders sometimes come in the corridors to take a break and stand there for a while	★★★	★★	★★	★★	-	★★
Stairs	★	★★★	★	★	Not a preferred place to chill after work as there are always passer by, sometimes to call people from other classes or to click the picture of the sunset or sit in the solitude for a while	★★	★★	★★	★	★★	★★
washrooms	★★★★★	★★	★★★★	★		★★	★	-	★★	-	★★★★

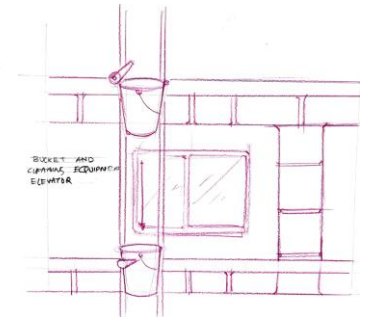
1 ★ being the least
5 ★ being the most

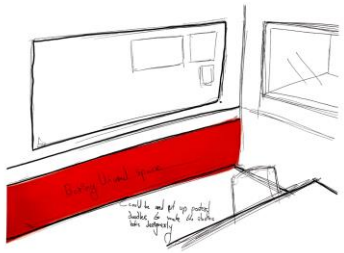
Opportunity mapping

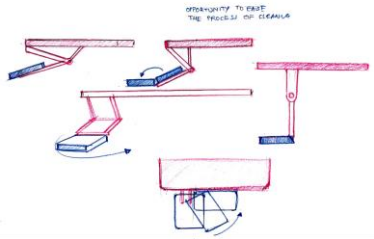


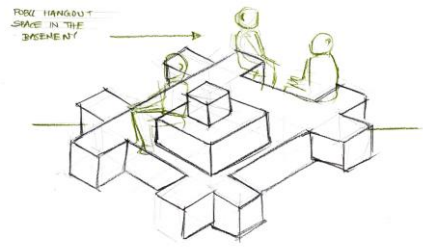


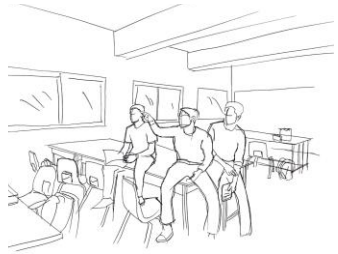


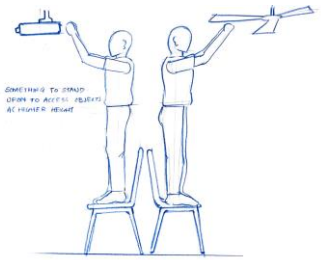


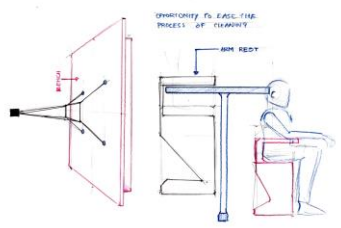


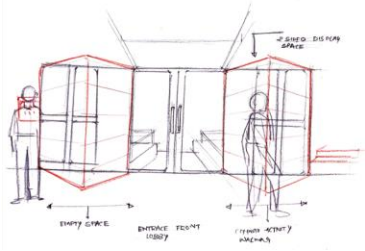


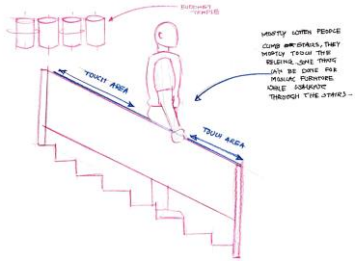


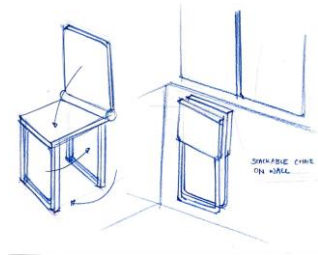


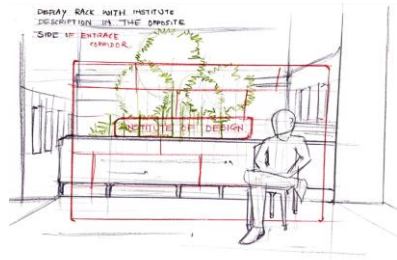






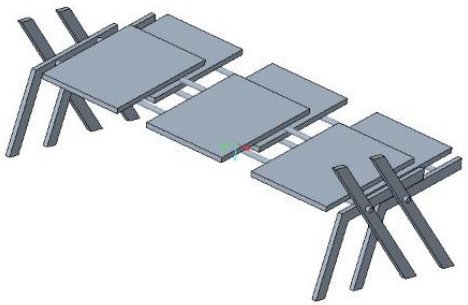


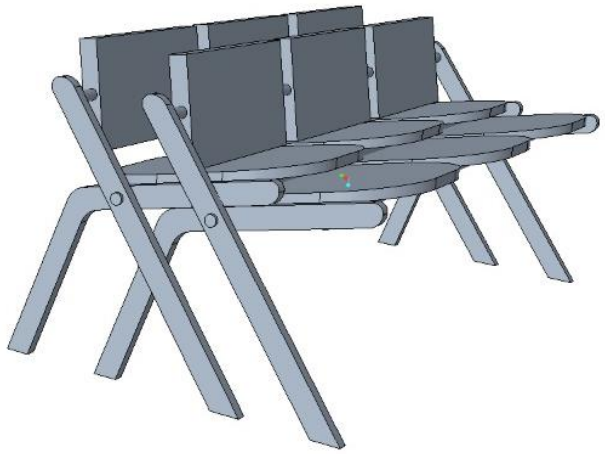


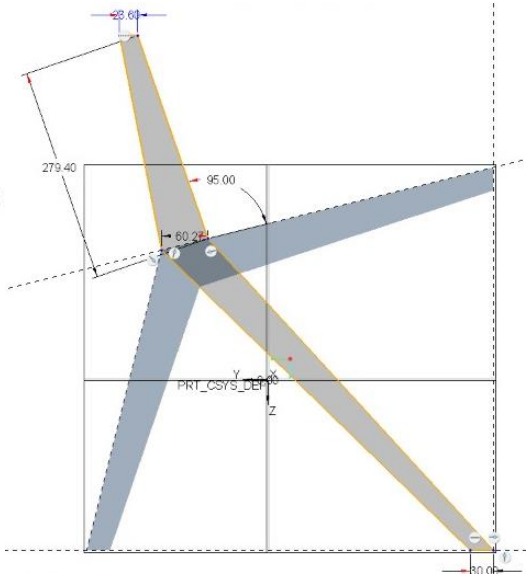


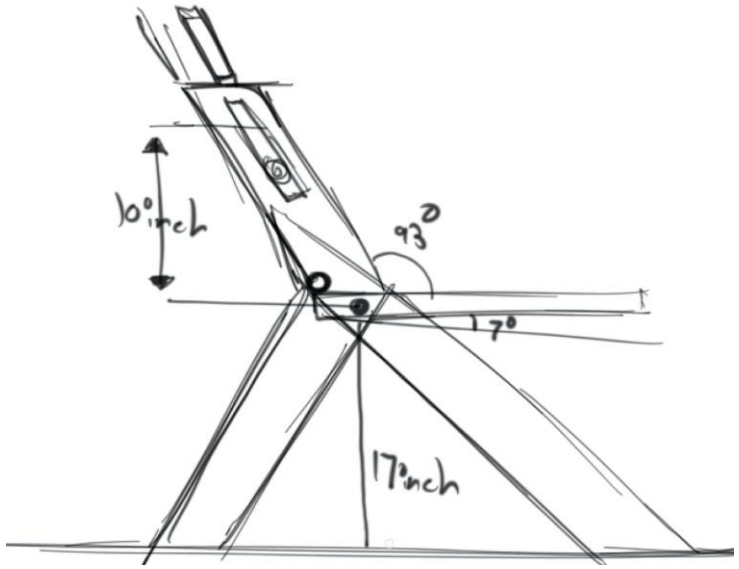
Stackability

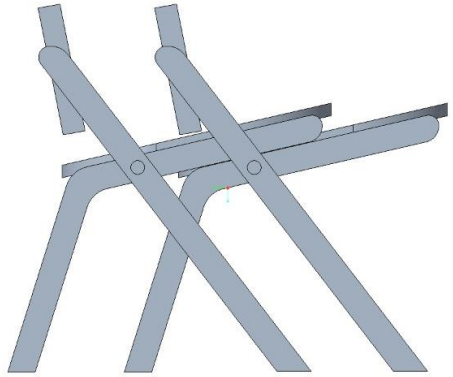
Understanding and visualizing the horizontal stackability in a bench with quick cad modelling and other references for precision.

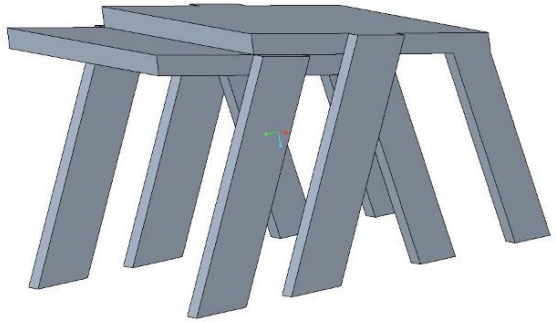


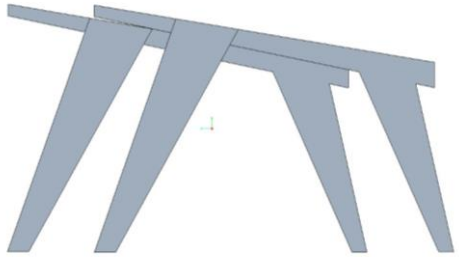


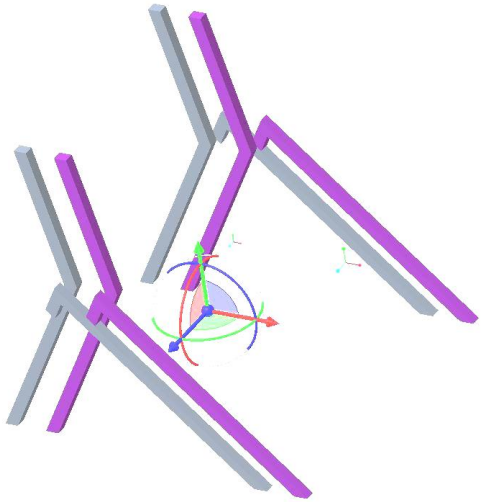






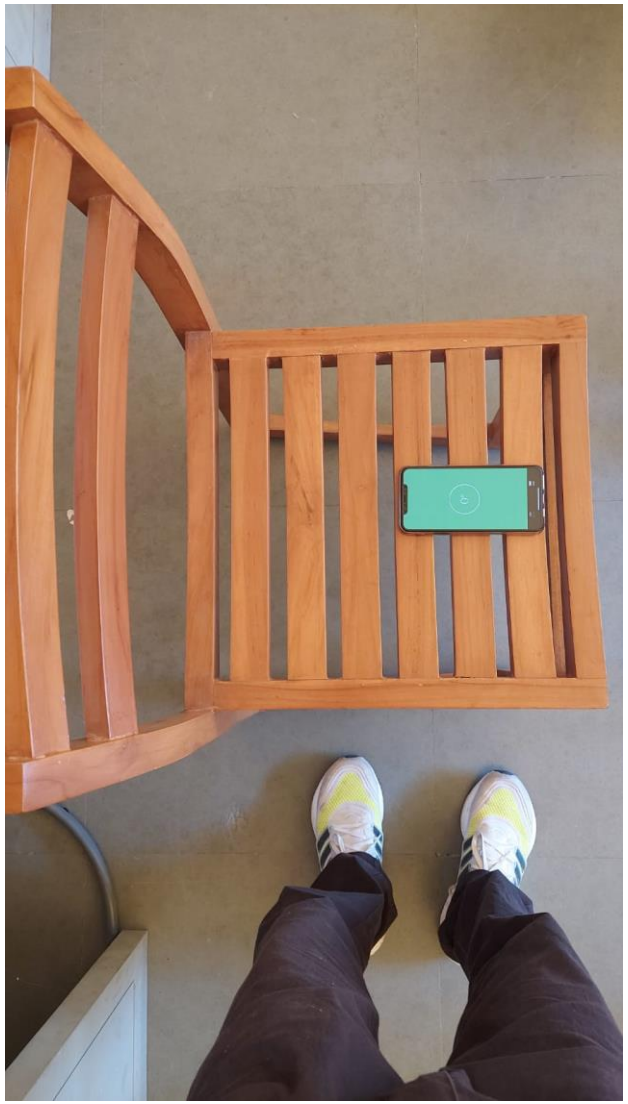


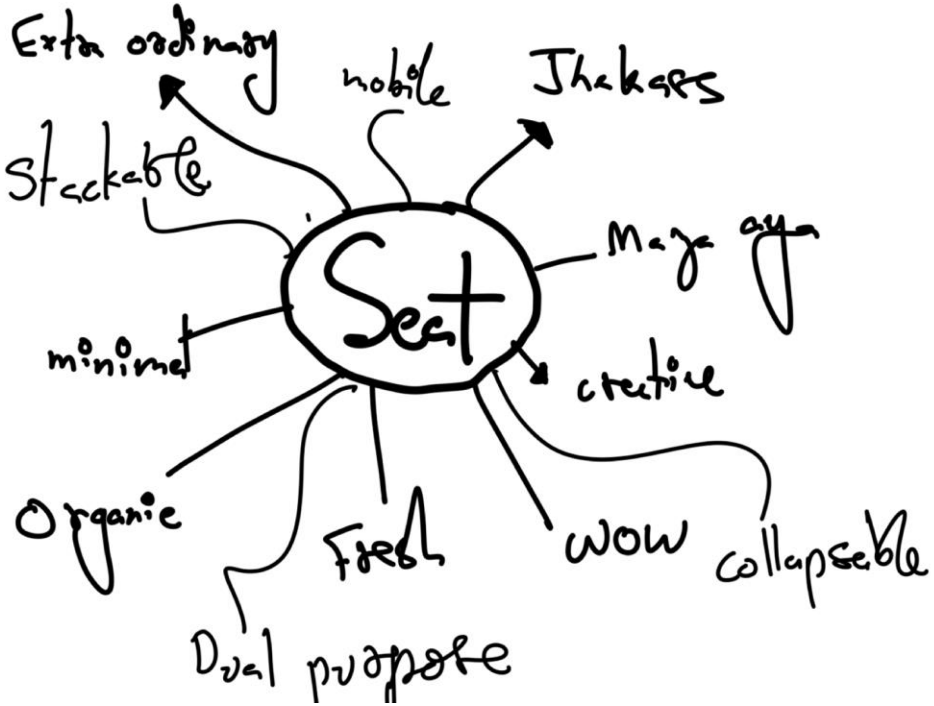


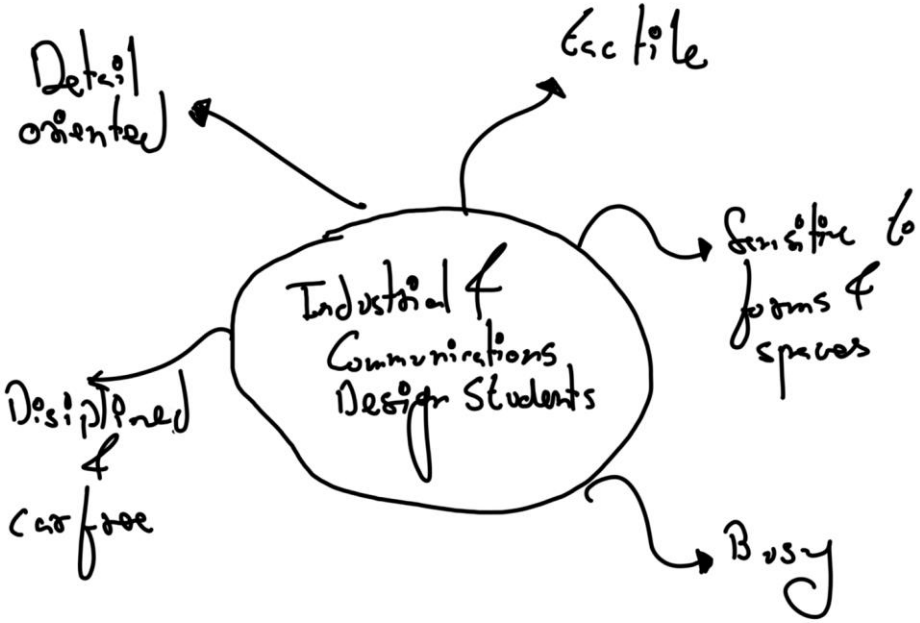


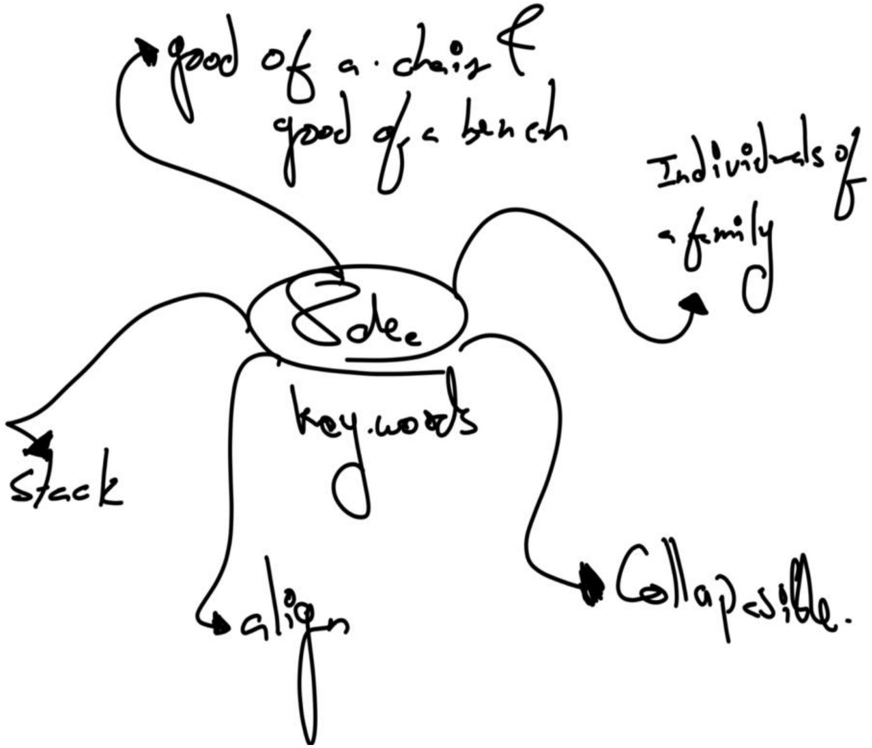
Stackability rules

Understanding the seat height & angle for stacking sideways precisely. As normal stacking requires only one of the pair of legs of chair to be in different plane to stack but stacking horizontally requires not only one pair of leg in different plane but also the seat to be in a certain angle to stack perfectly without any obstruction.

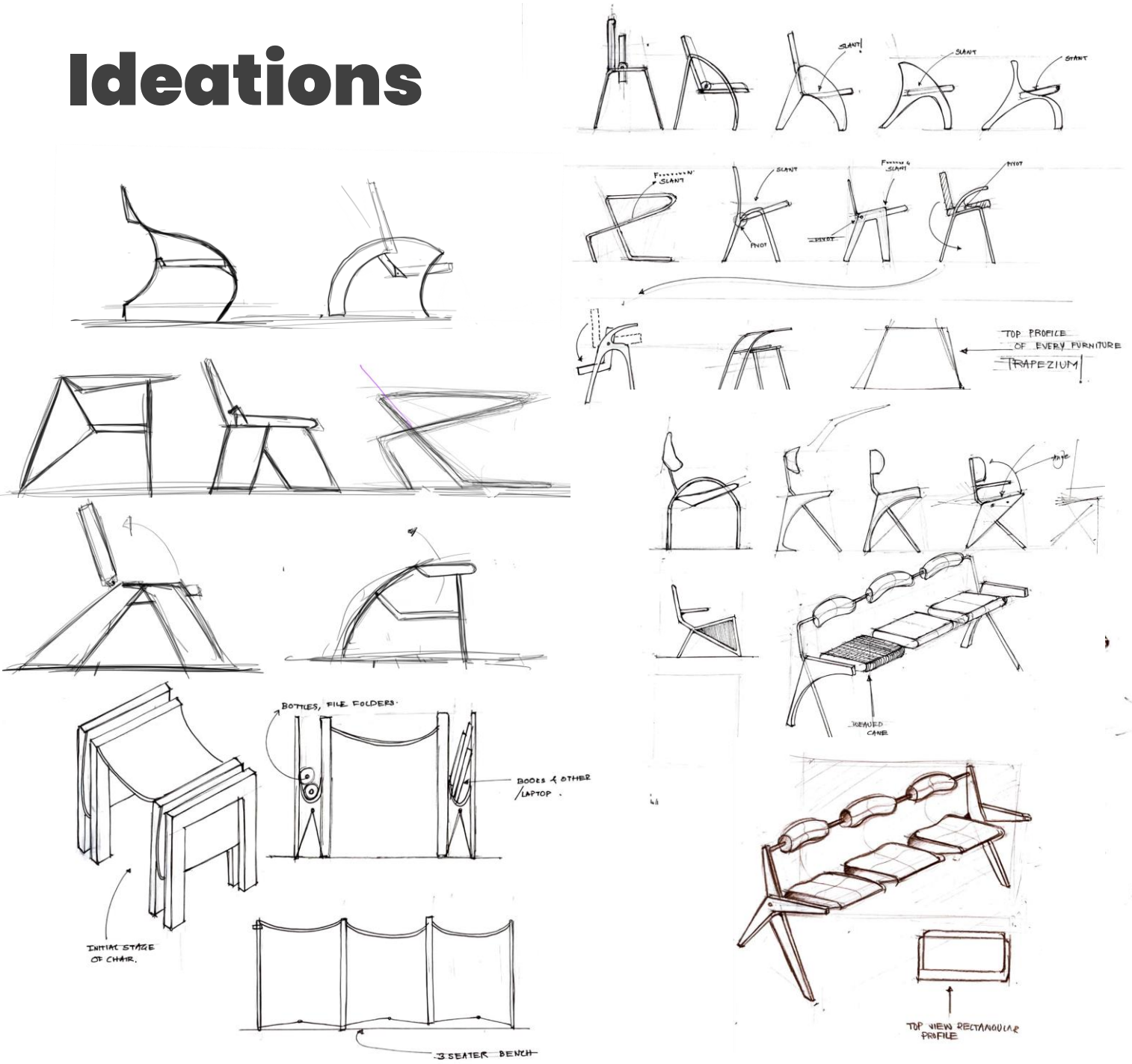


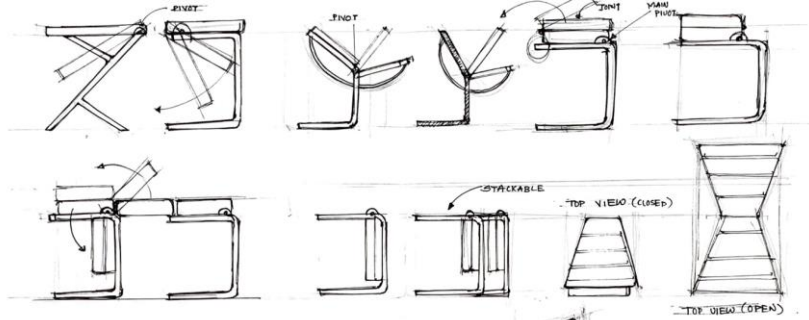


Seat
Extra ordinary
mobile
Jhakaas
stackable
minimal
creative
Organic
Fresh
WOW
collapsable
Dual purpose

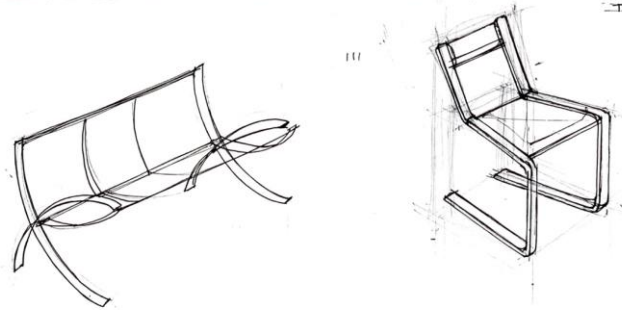

Industrial & Communications Design Students
Detail oriented
tactile
Sensitive to forms & spaces
Disciplined & carefree
Busy

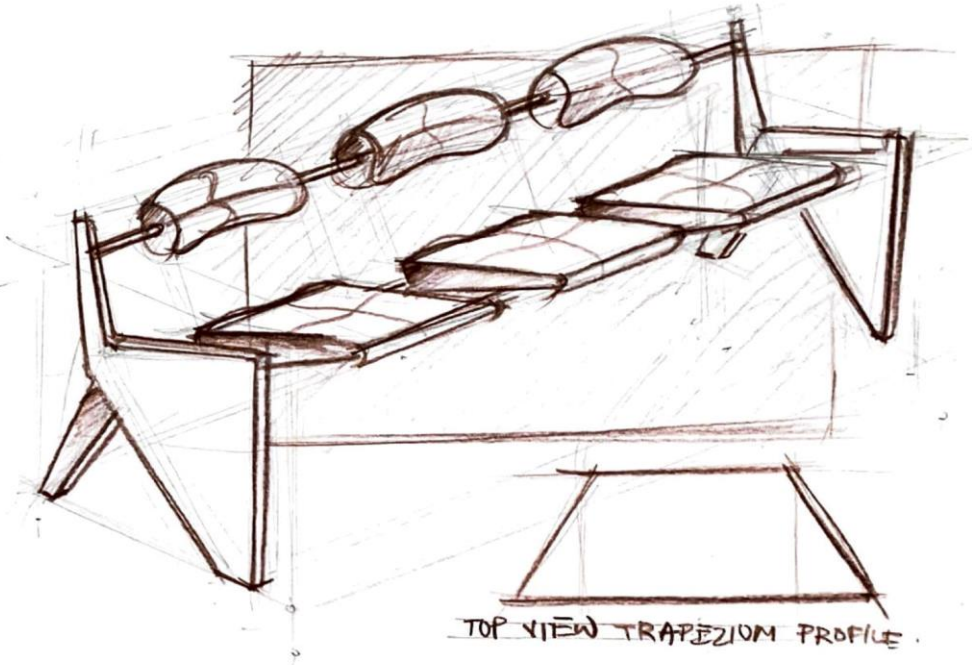

key words
good of a chair & good of a bench
Individuals of a family
stack
align
Collapsible.

Ideations


SLANT
SLANT
SLANT
PIVOT
TOP PROFICE OF EVERY FURNITURE
TRAPEZIUM
REMOVED CANE
TOP VIEW RECTANGULAR PROFILE
BOTTLES, FILE FOLDERS.
BOOKS & OTHER /LAPTOP.
INITIAL STAGE OF CHAIR.
3 SEATER BENCH


PIVOT
PIVOT
STACKABLE
TOP VIEW (CLOSED)
TOP VIEW (OPEN)

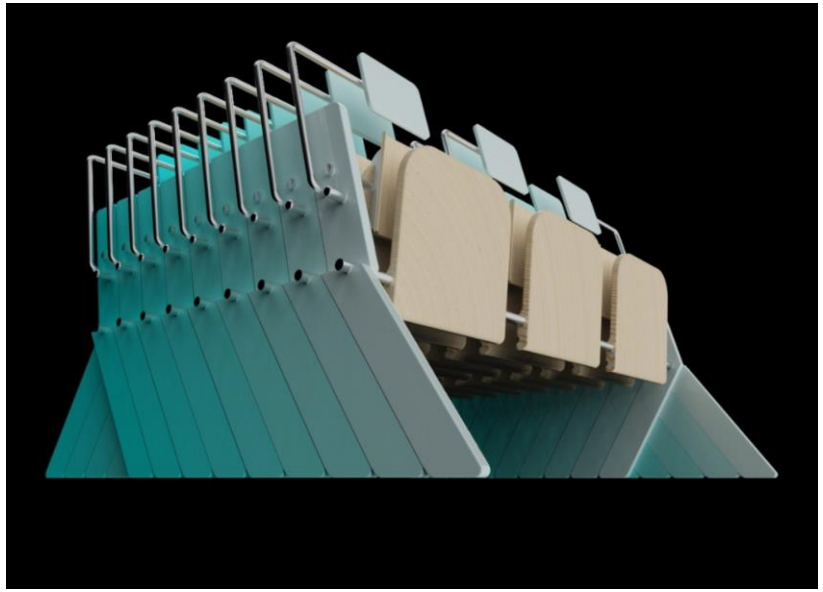
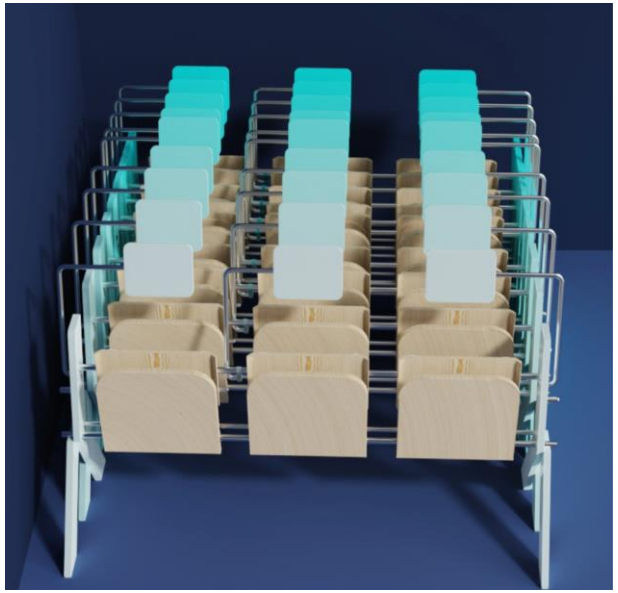



TOP VIEW TRAPEZIUM PROFILE.

Final 1:5 prototype and render






Biodegradable Composites

Making biodegradable composite using natural binders

Experimenting with binders and base material

Gelatin + Ararot + Water + Cocopeat (high)

Water + Glycerin + Vinegar + Sabudana + colour

Water + Glycerin + Vinegar + Potato starch

Tapioca (Sabudana Powder) +Glycerin + Gelatin + Water + Orange peel powder

Tapioca (Sabudana Powder) +Glycerin + Gelatin + Water + Orange peel powder

Gelatin + Ararot + Water + Vinegar + Cocopeat (low)

Water + Glycerin + Vinegar + Sabudana + colour

Water + Glycerin + Vinegar + Potato Starch + colour

Tapioca (Sabudana Powder) +Glycerin + Gelatin + Water

Attempt 1

1 layer of jute
Sabudana
Crushed, Glycerin
+ gelatin

Attempt 3

1 layer of jute
Sabudana
Powder, Glycerin
+ gelatin

Attempt 2

2 layer of jute
Sabudana
Crushed, Glycerin
+ gelatin

Attempt 4

1 layer of jute
Sabudana
Powder, Glycerin
+ gelatin

Preparing the jute sheets by applying different layers of jute and changing the quantity of the binder, also experimenting by molding it on different surface to understand the material properties.

The jute sheet were kept to dry overnight which become hard enough to peel off.









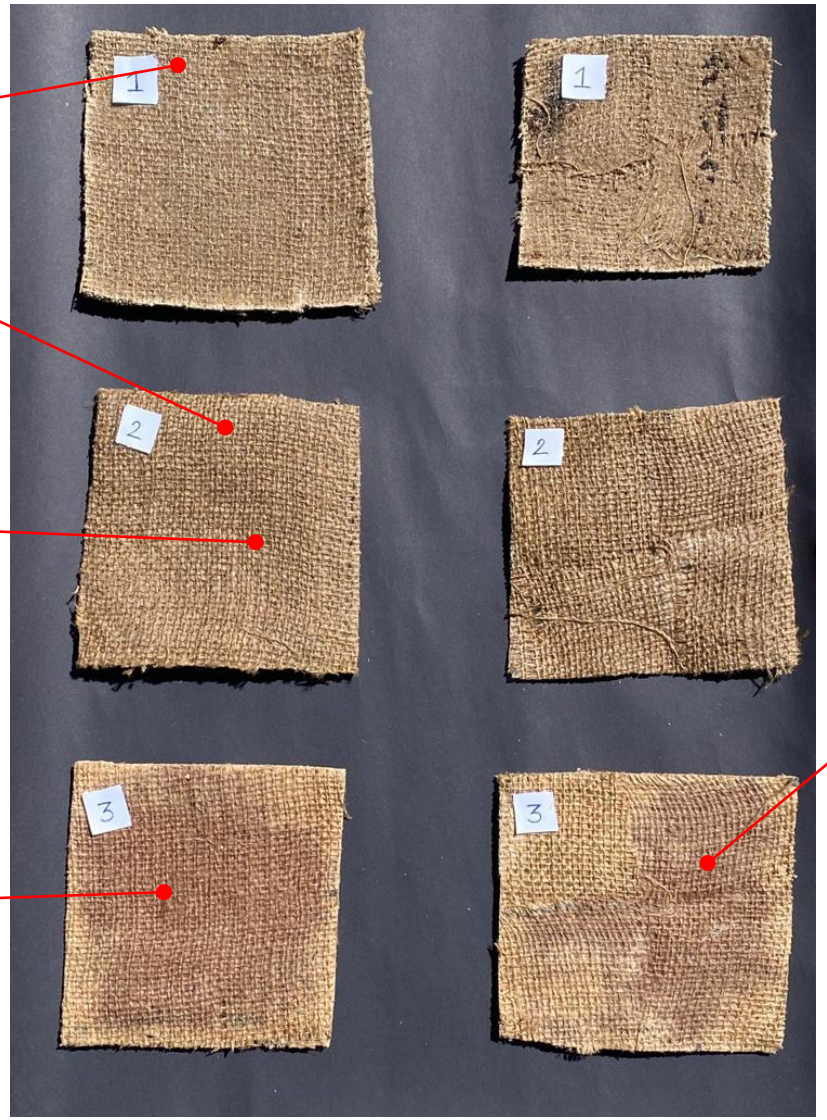

Experimenting with different layers of jute and jute laying pattern

1 layer

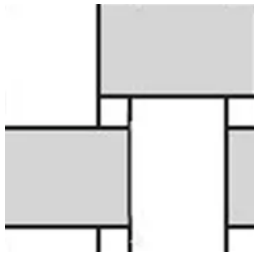
Normal layering of jute piece

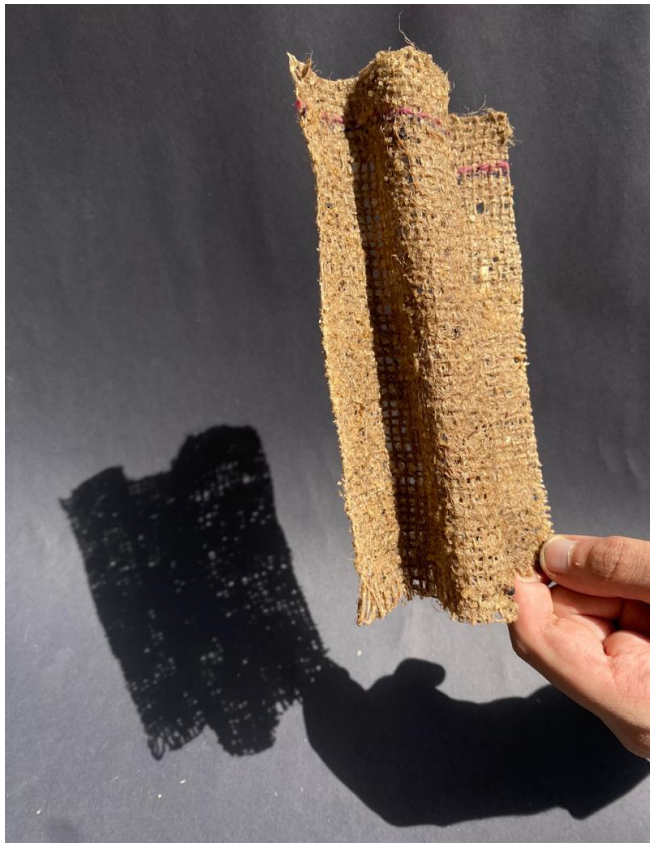
2 layer

3 layer

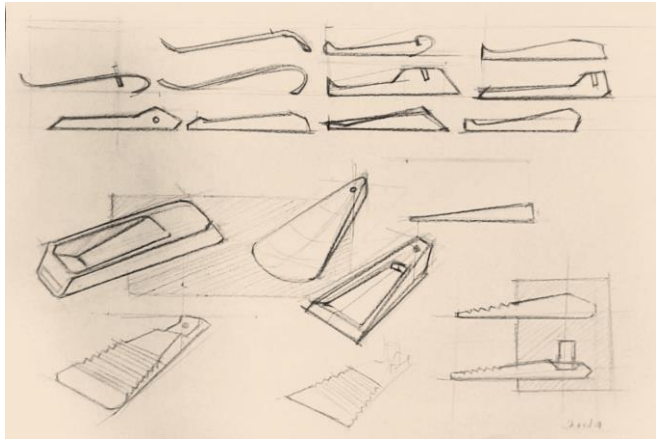


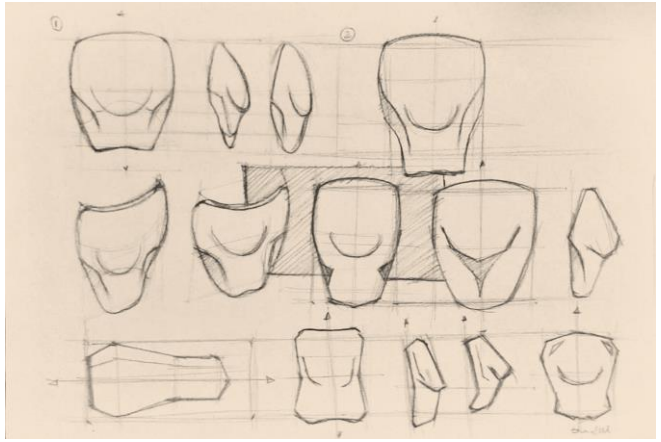
Placing jute strips in weaving pattern

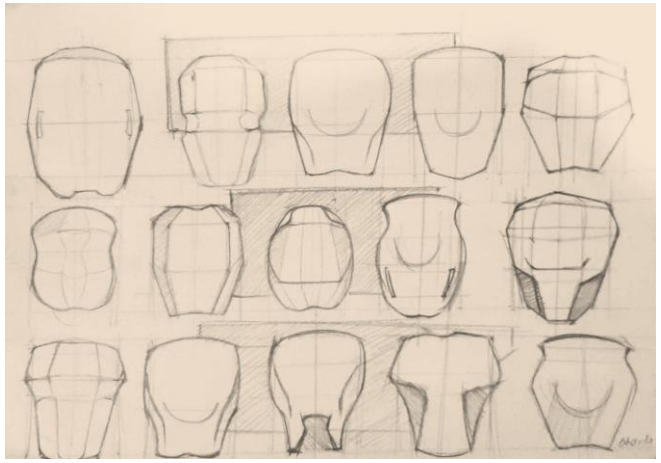


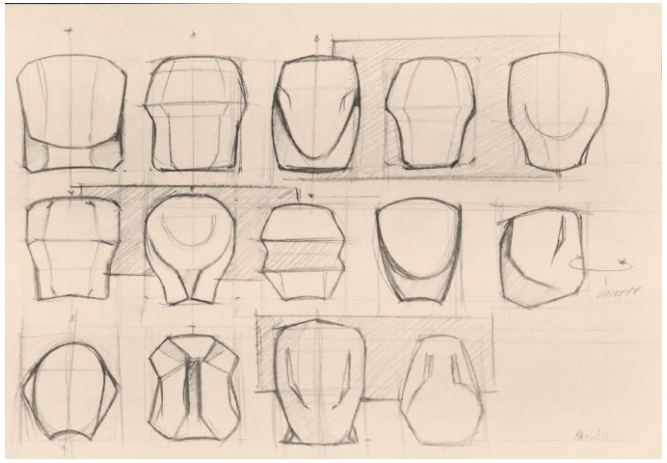


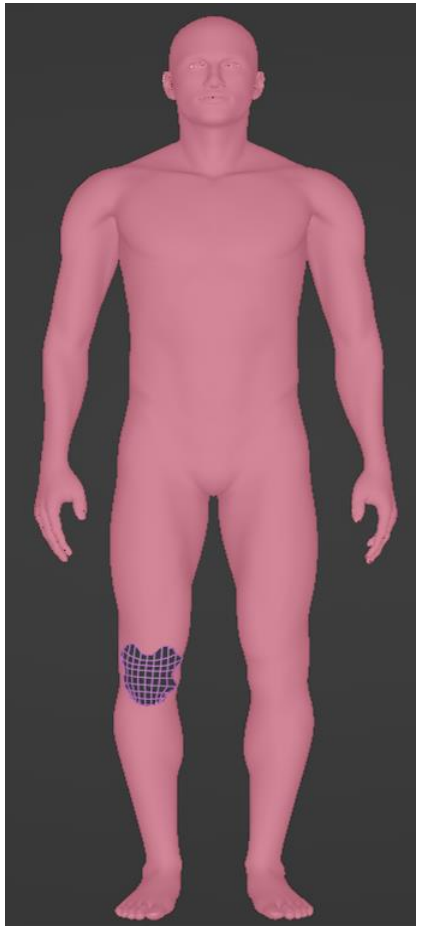
Testing the sample we created that is 7 layered took load of 700+ kgs.

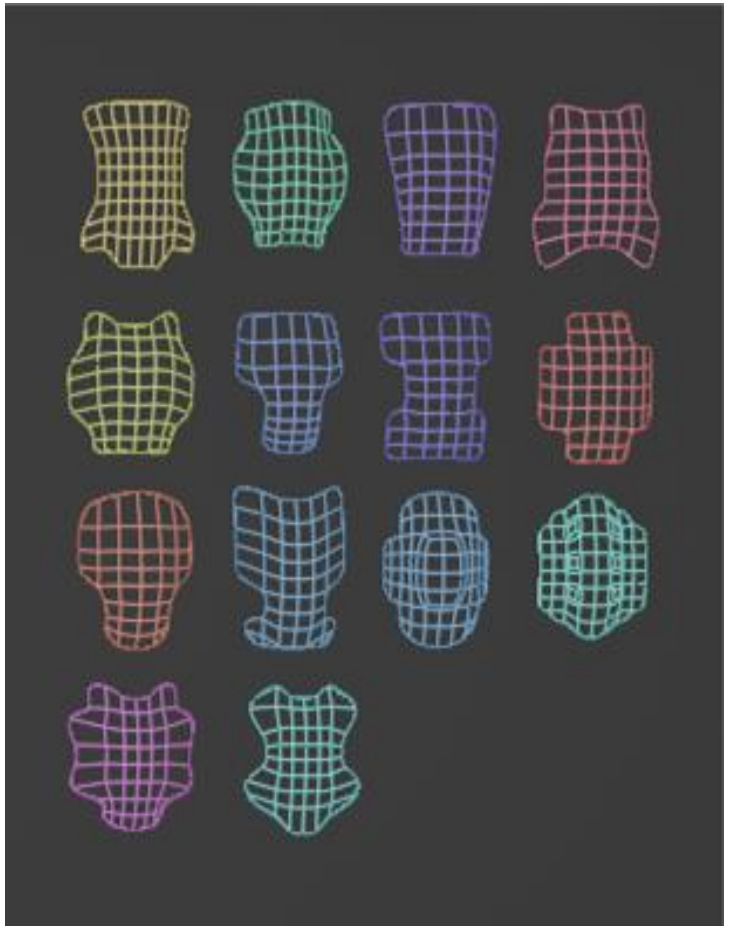




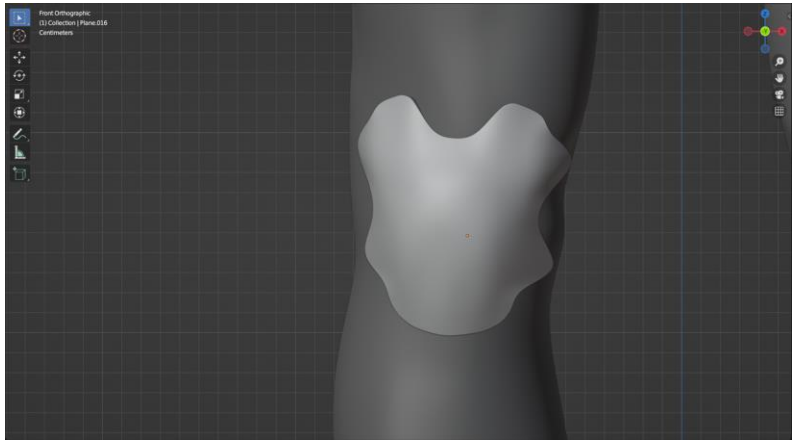








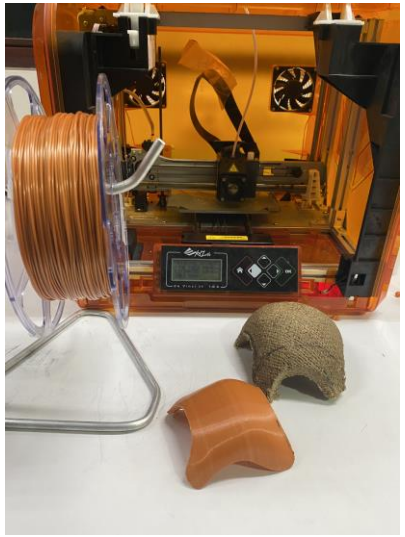
Quick Concepts, 3d Modelling and Clay moulding to understand the anatomy of the knee for making Kneepad as a product.



Taking a rough mold of the knee with clay




3d printing the final mold

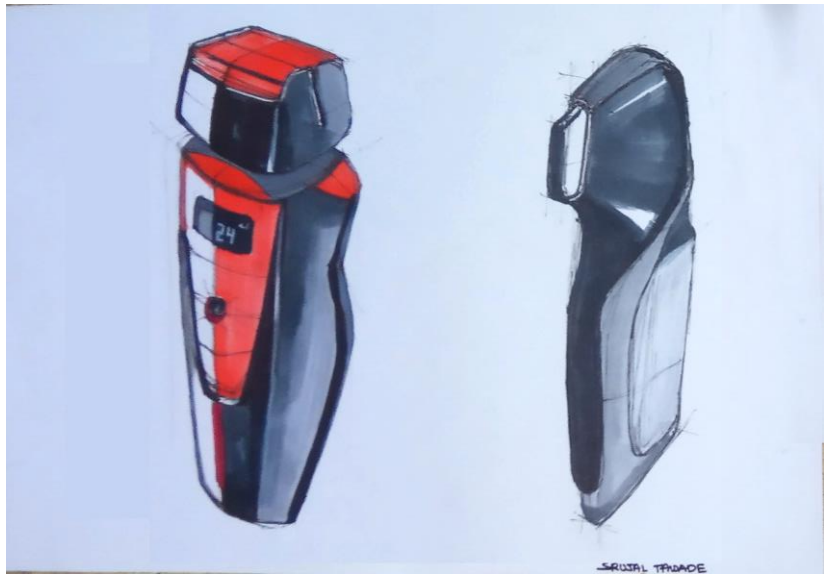



Final composite material

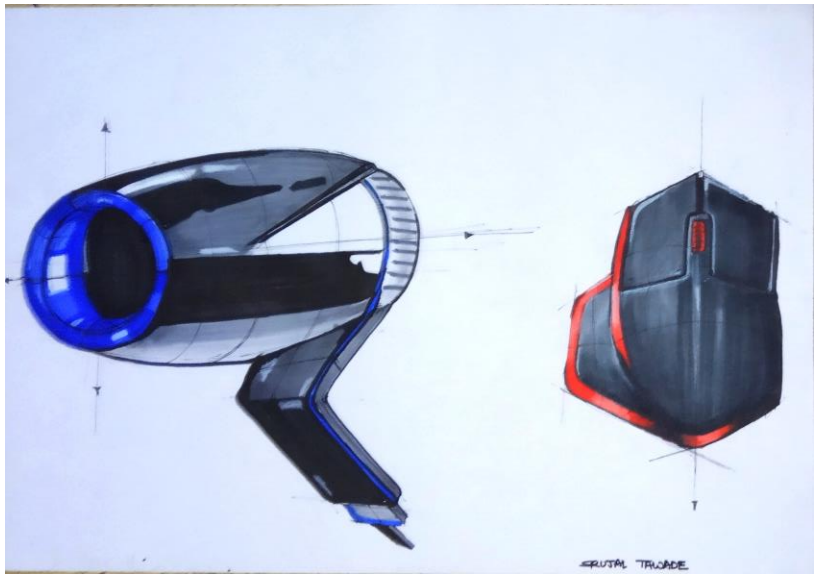




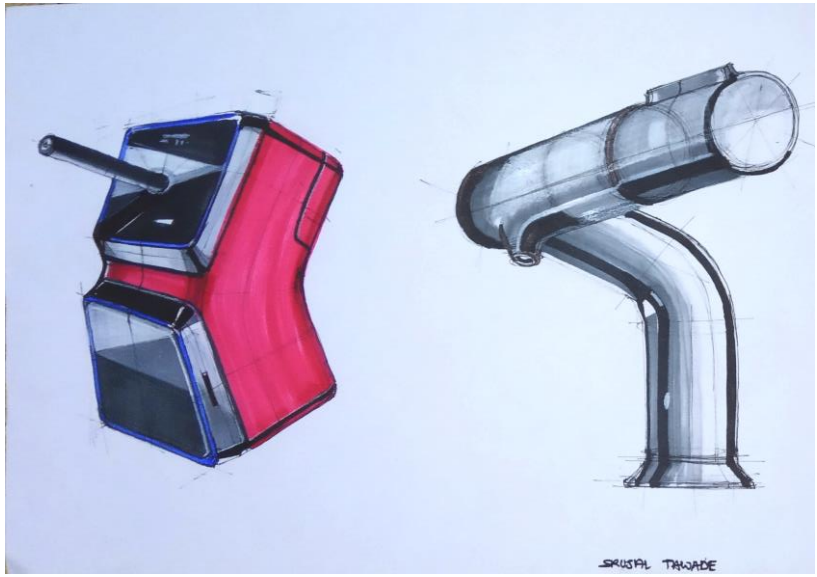
Skills


SRUJAL TAVADE


SRUJAL TAVADE


SRUJAL TAVADE


SRUJAL TAVADE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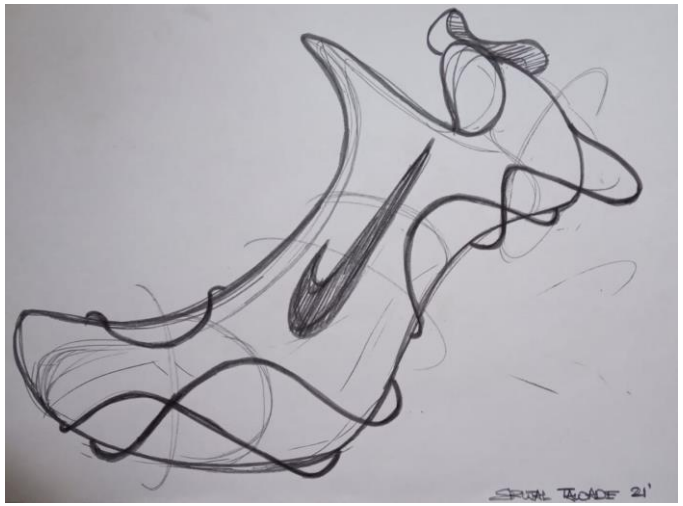
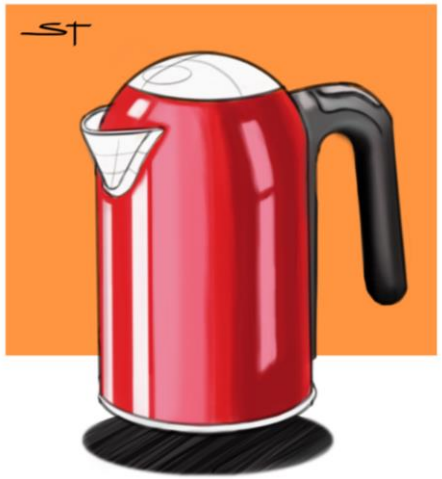
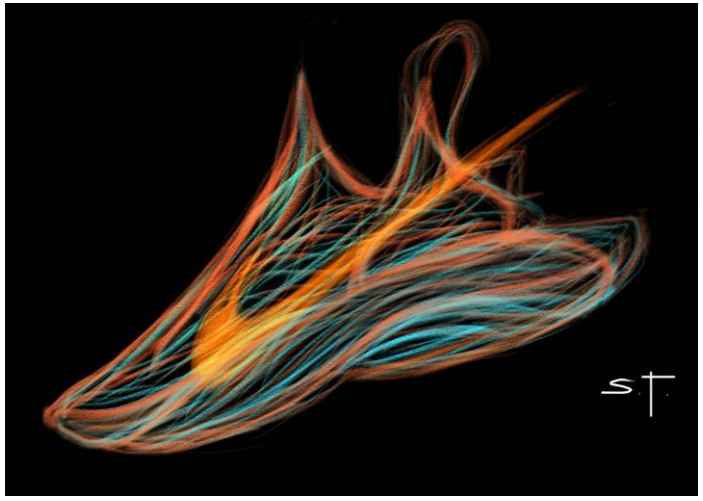
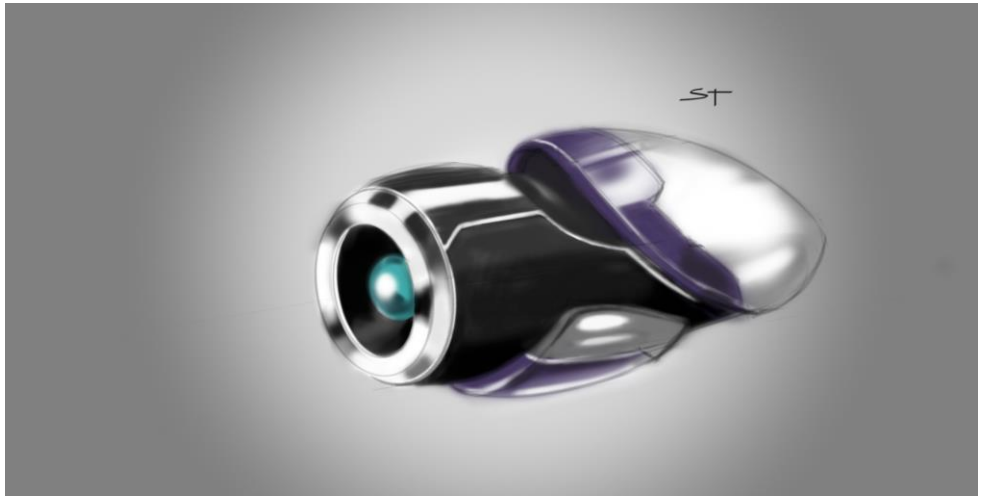
SRUJAL TAVADE




NIKE








boAt
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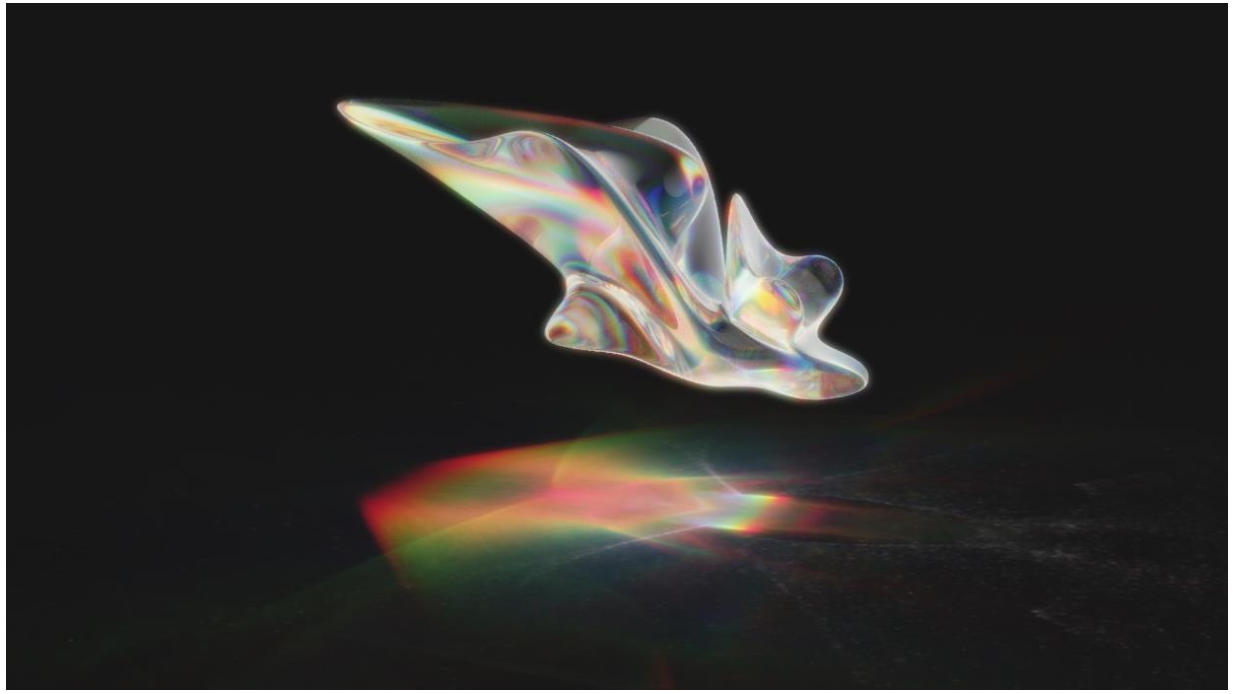

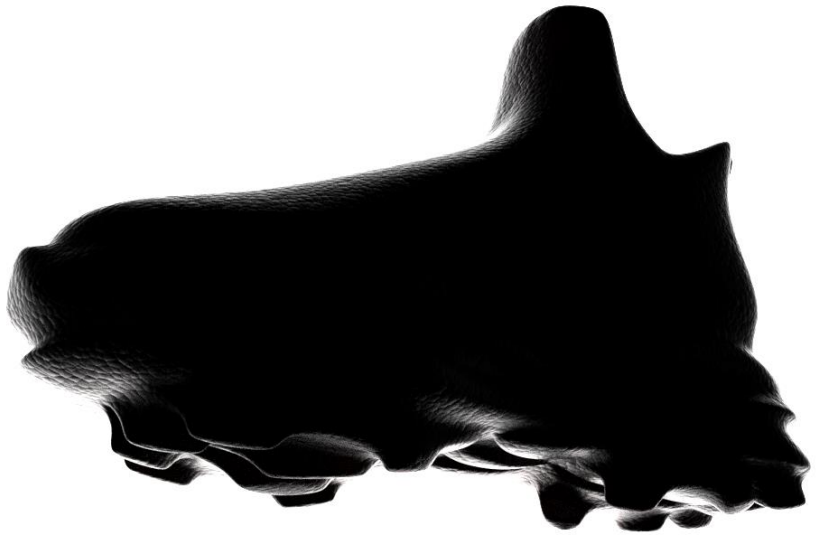


GROWTH BOOSTER
BEARD OIL
ALL SKIN TYPES
NO MINERALS & PARABENS
HYPE


BRAUN

Thank You