

Designing Indian Sitting style Furniture for contemporary lifestyle

Guide

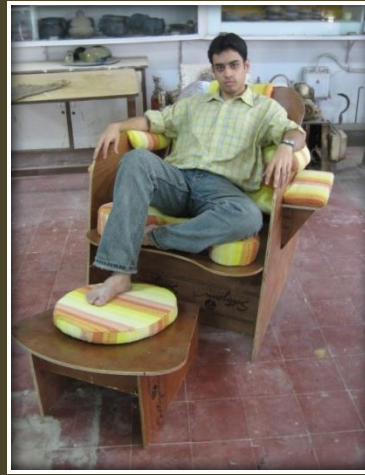
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3 Dec 2008



What is Indian Sitting style furniture?

- Supporting platform for Cross-legged sitting as well as for stretched legs.
- A low height platform with cylindrical cushions at the back for lumbar support - **Diwan**



What is Indian Sitting style furniture?

- A seat, big enough to support the legs on the same platform or a part of it.



Why Indian Sitting style furniture?

-Indian living rooms

- Interaction with family members
- TV Watching
- Entertaining friends/ guests

Furniture for informal/ leisure activities.

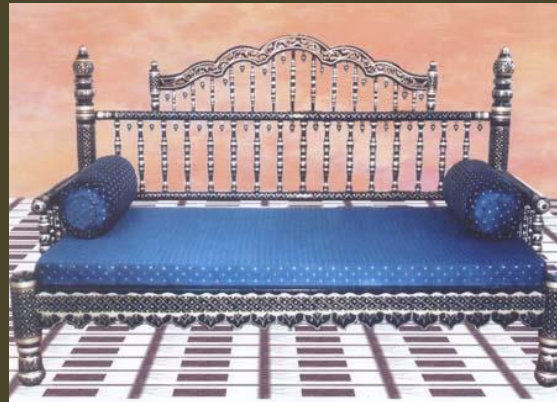


Why Indian Sitting style furniture?

-Market offerings

- Made up of wood with carvings, decorations, etc.
- Comparable products - Lack of Indian identity.

Does not gel with the contemporary Indian interiors.



Project brief

To design comfortable support system for the typical Indian style sitting for residential use, suitable for contemporary lifestyle and interiors.

Initial Product brief

To design

- a seating system (what)

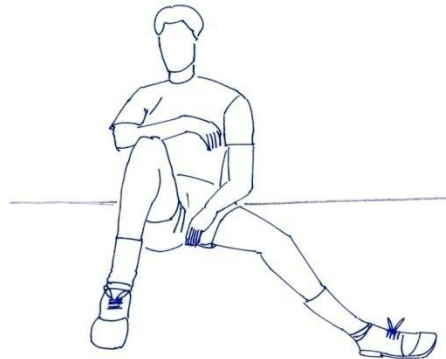
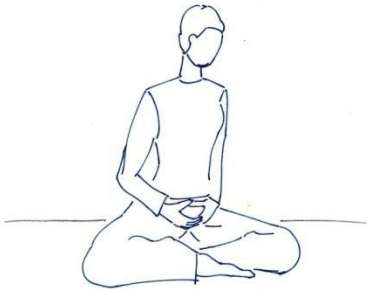
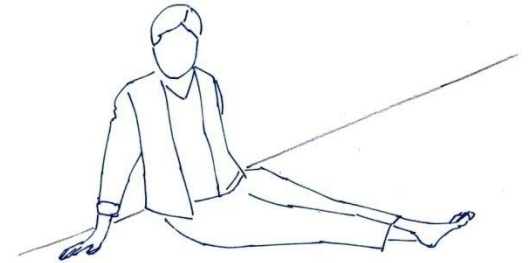
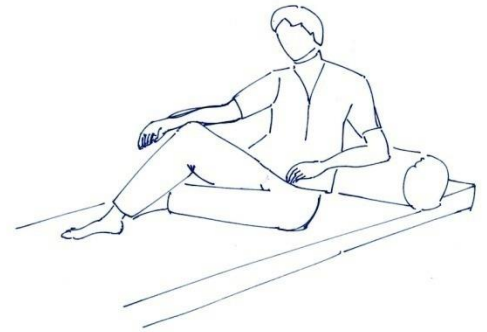
- for typical Indian sitting postures (which)

- of leisure activities – TV watching, family interactions, reading, occasionally a small nap, etc. (when)

- to be used in contemporary urban residential spaces (where)

- for the middle class and upper middle class of the society (whom)

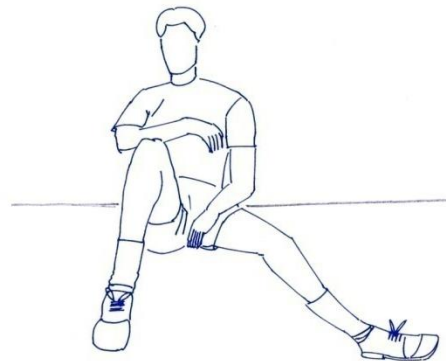
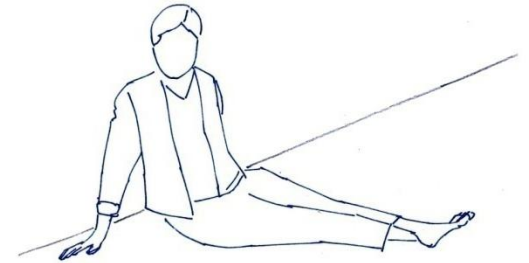
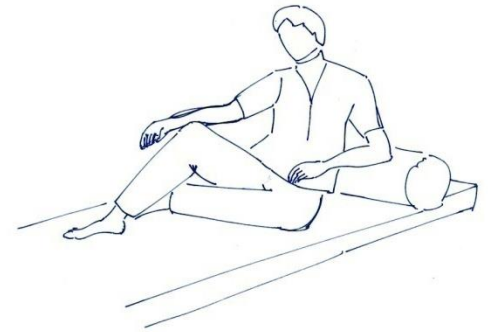
Typical Indian sitting postures



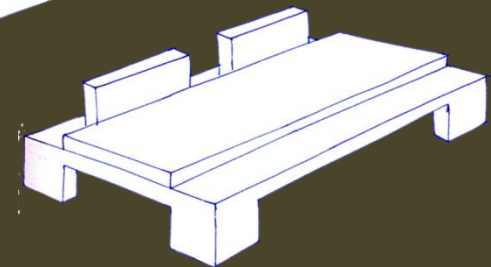
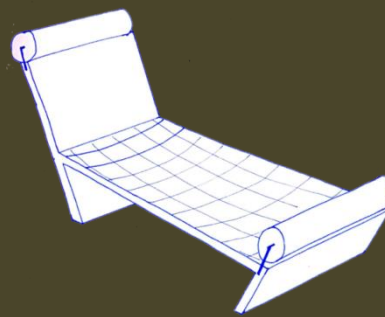
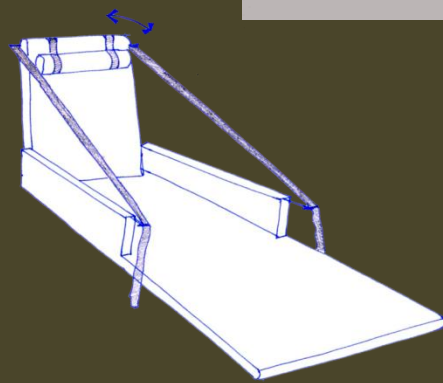
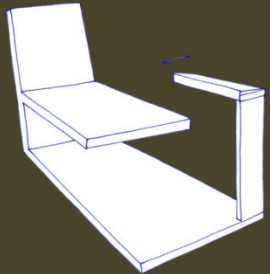
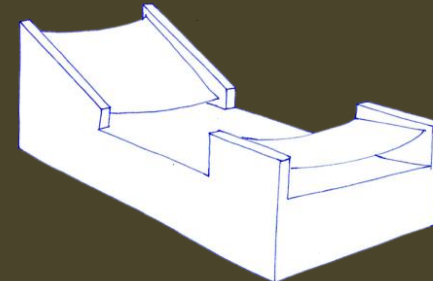
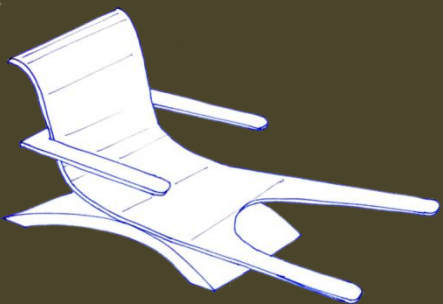
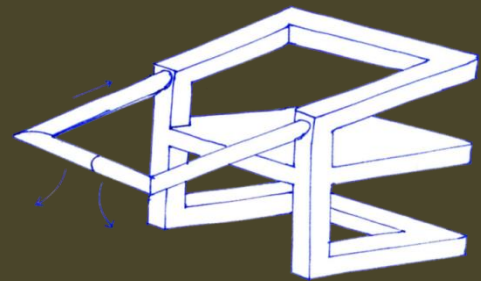
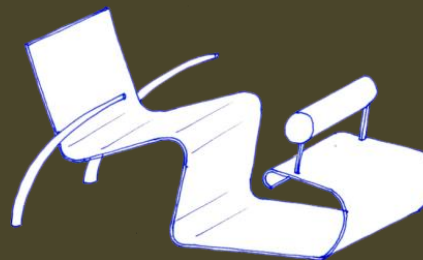
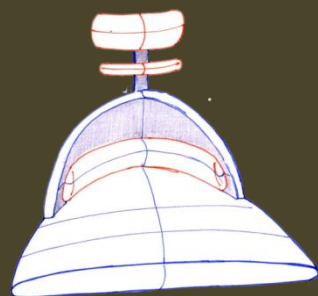
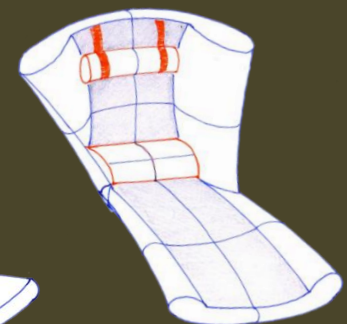
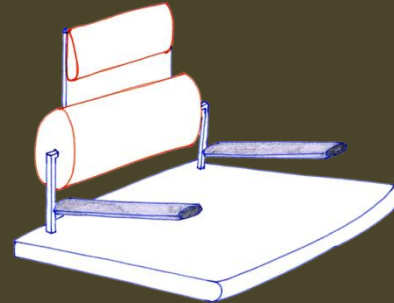
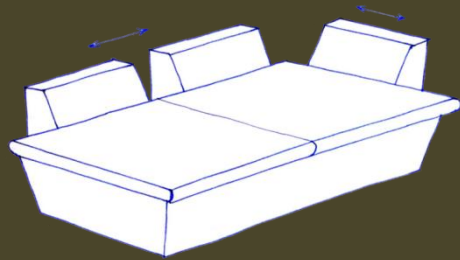
Task oriented

Without back support

With back support



With back support



Mock-up Rig

Without back support

Duration – 7 min

- Good lumbar support
- Leaning on one hand – Takes 70% of upper body weight
- No head support



After 30 min

Disaster

- Severe shoulder and elbow pain.



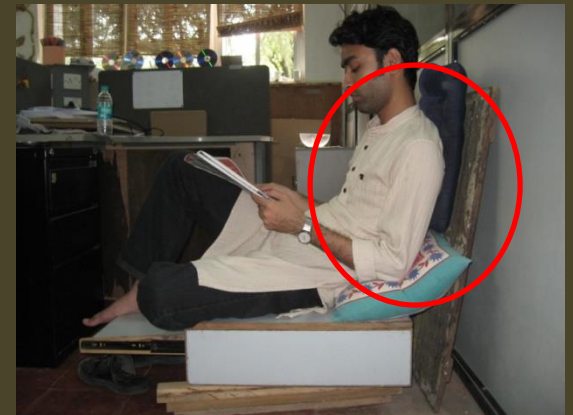
Mock-up Rig

With back support

Duration – 15 to 25 min



65 min



Mock-up Rig

With back support

More height



Product brief

Essential elements of the product

- Full back support
- Leg rest (in stretched position)
- It should not cause knee problems or other ergonomic problems while getting in and out of the chair.

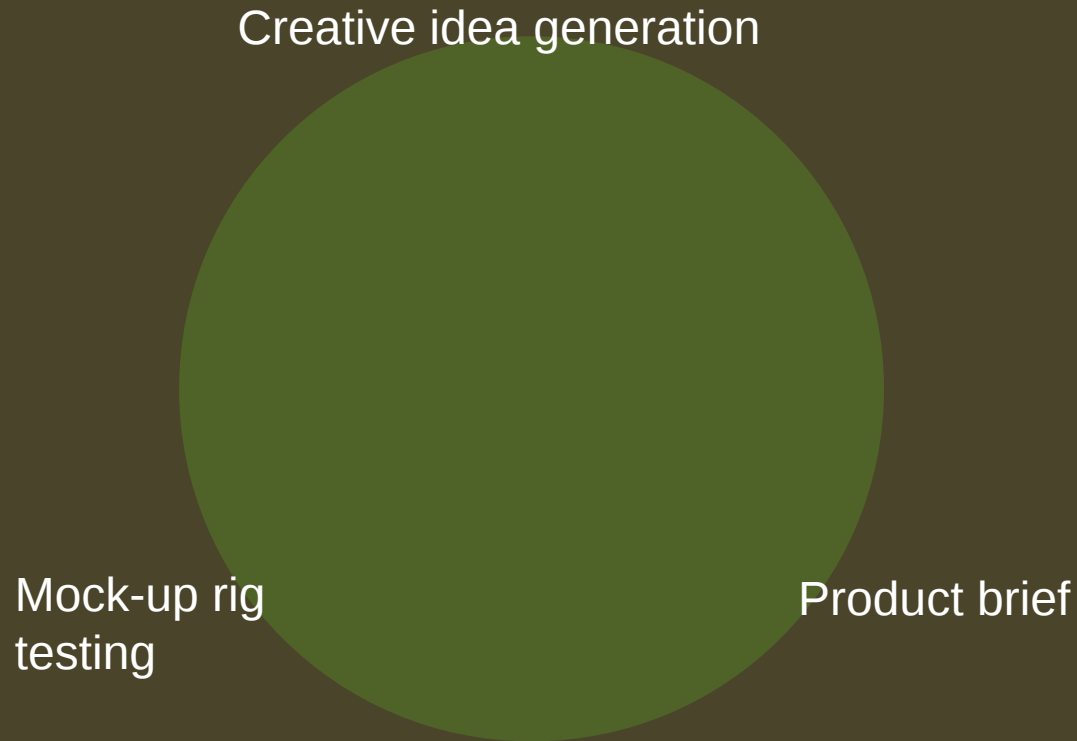
Desirable elements of the product

- Inclination adjustable backrest
- Neck support
- Lumber support (apart from back rest)
- Height adjustable or multilevel leg rest
- For individual seating

Optional elements of the product

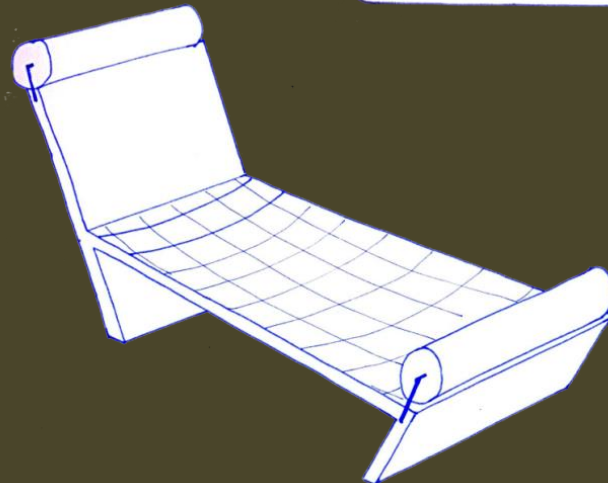
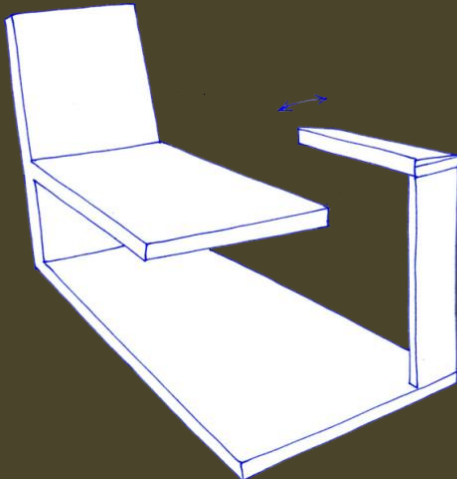
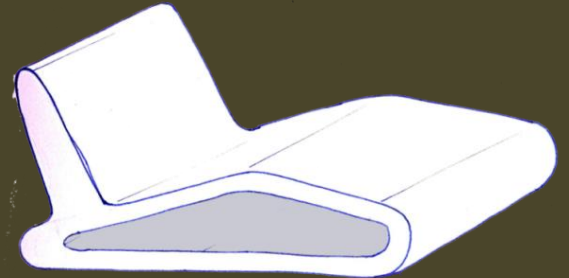
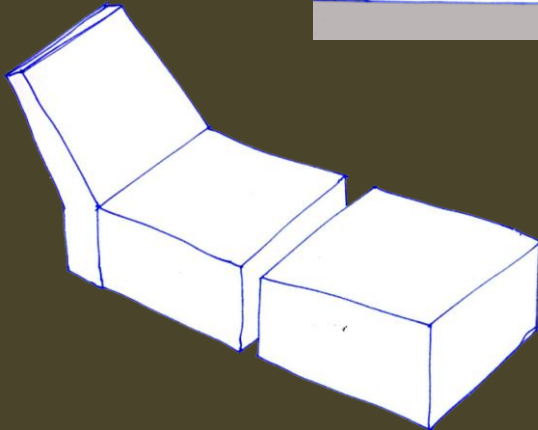
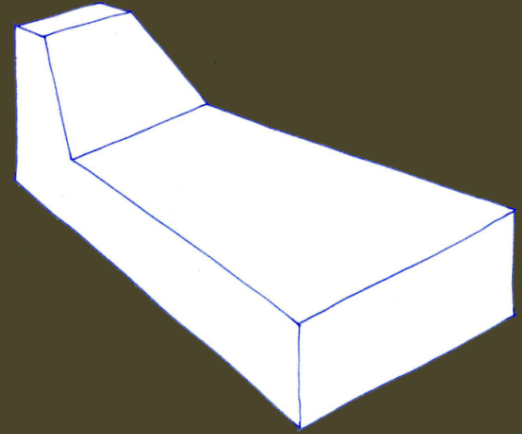
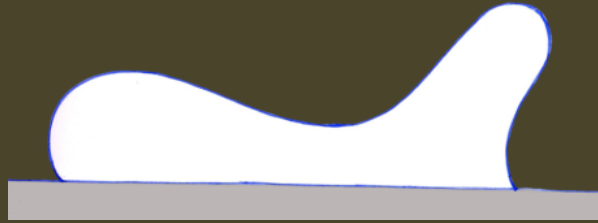
- Height adjustable seat
- Folding – for smaller footprint (for middle class)
- Adjustable headrest
- Modular – can be converted into multiple seating
- Folding back – lower back and full back
- Caster wheels

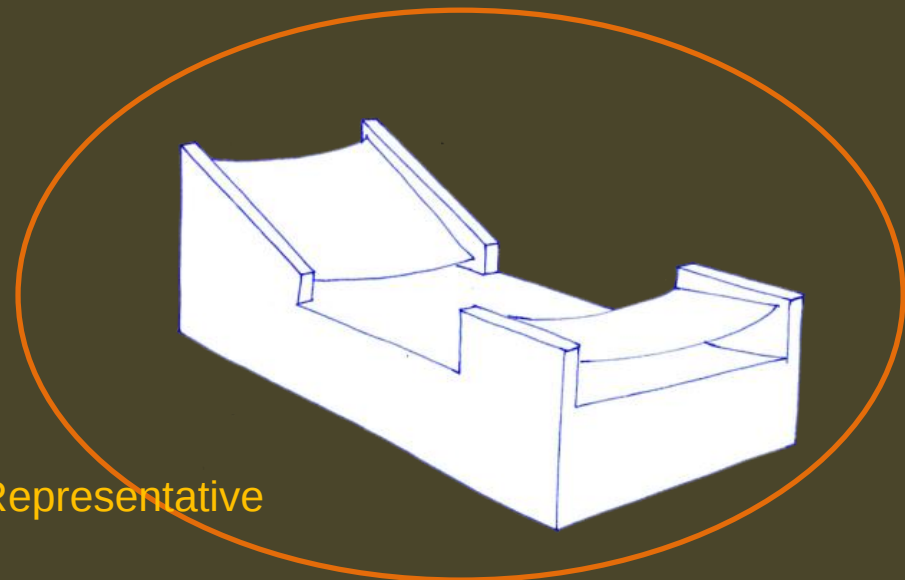
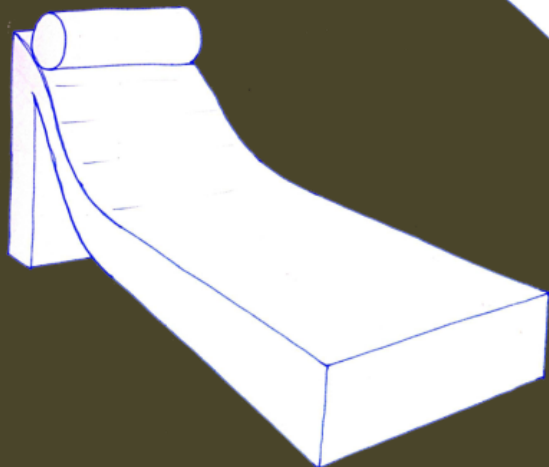
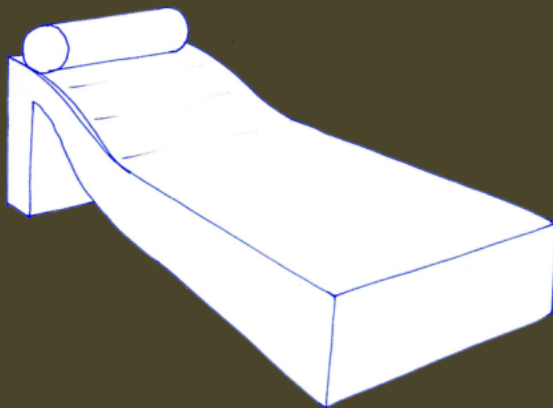
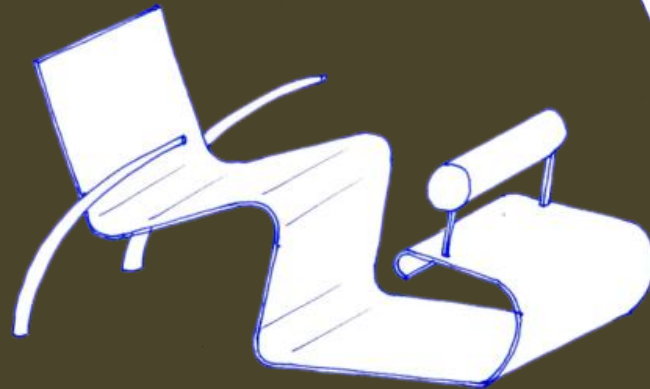
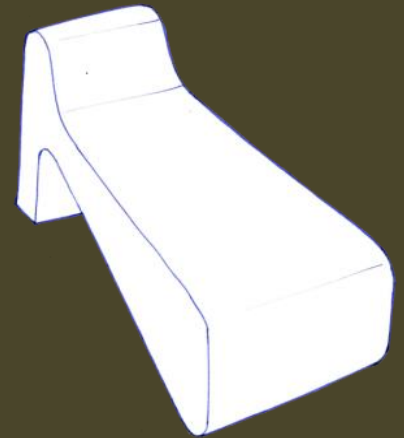
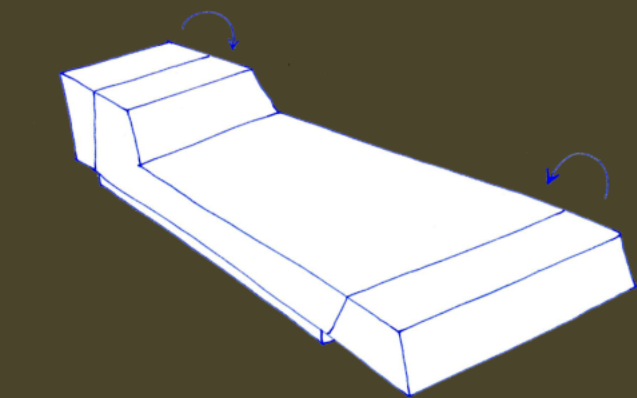
Ideation and concept generation



Cluster 1

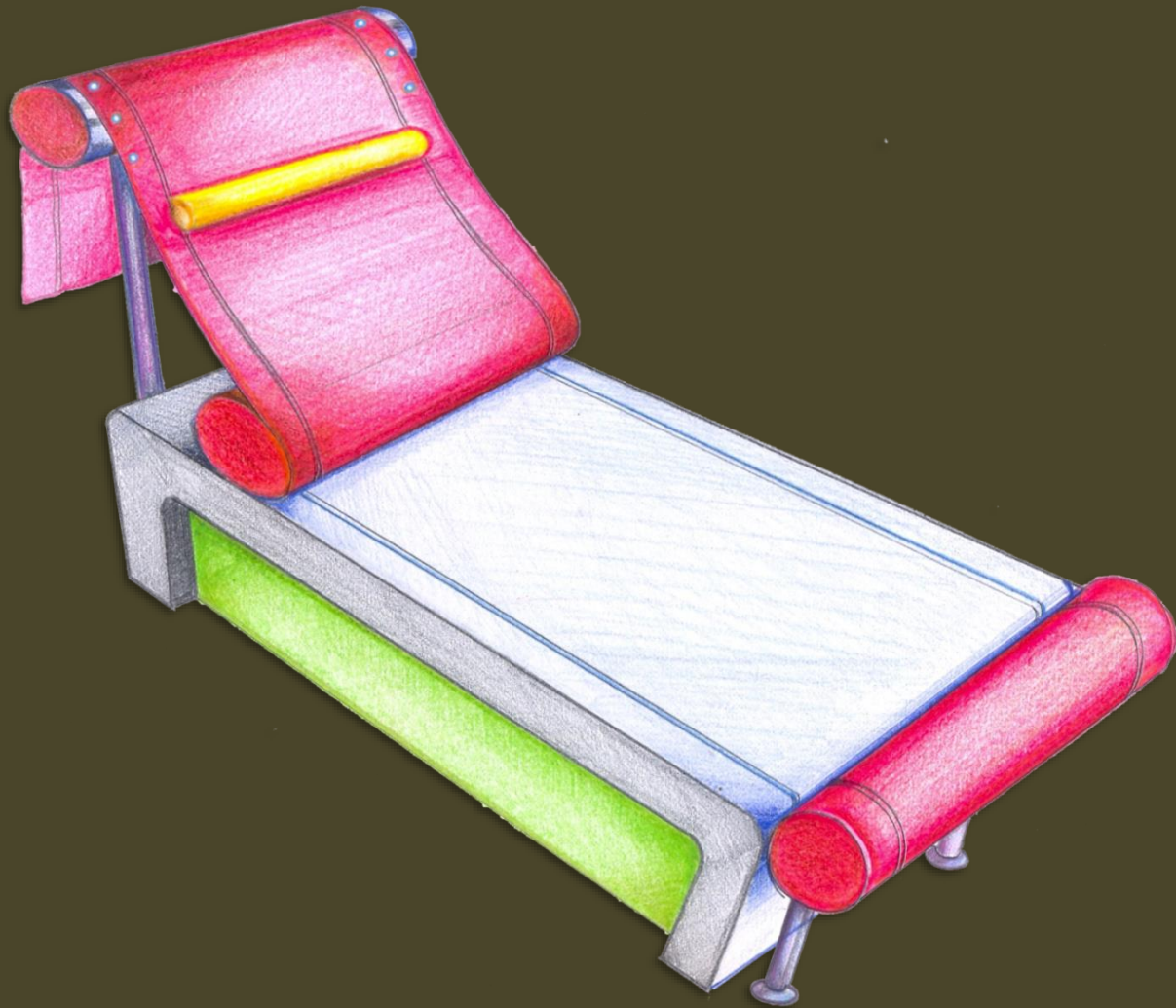
Side entry - Non foldable





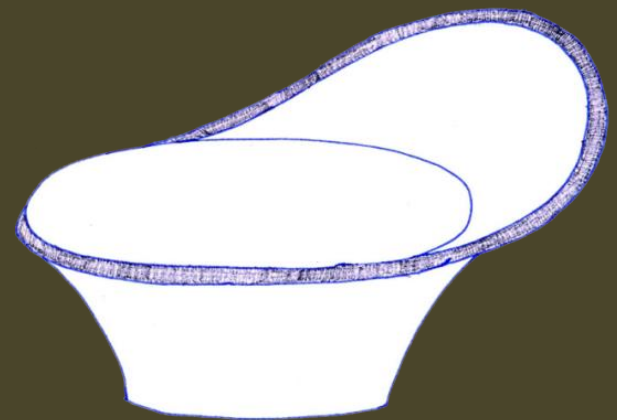
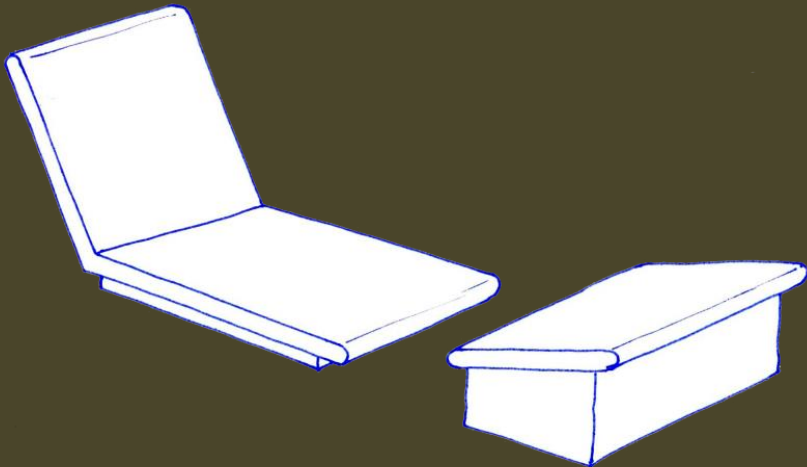
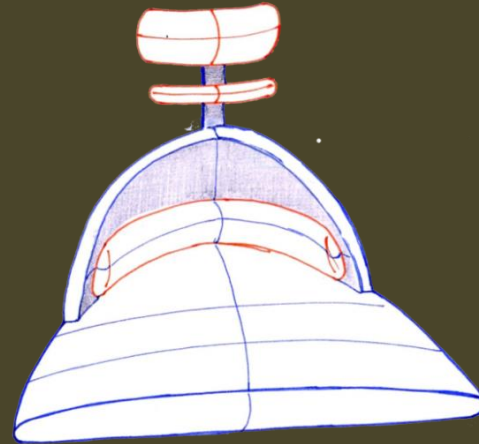
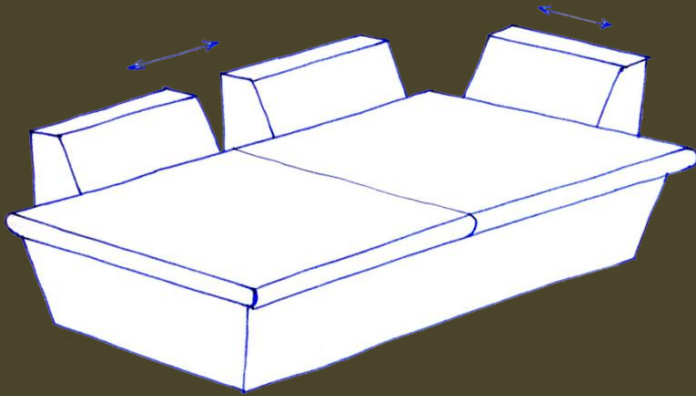
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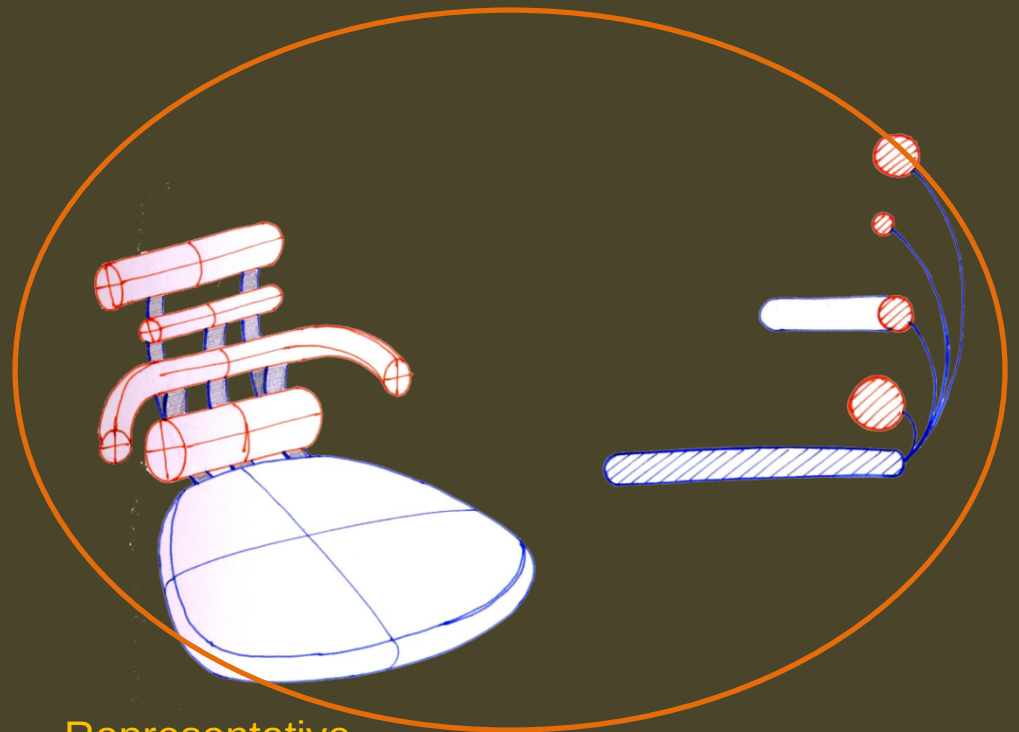
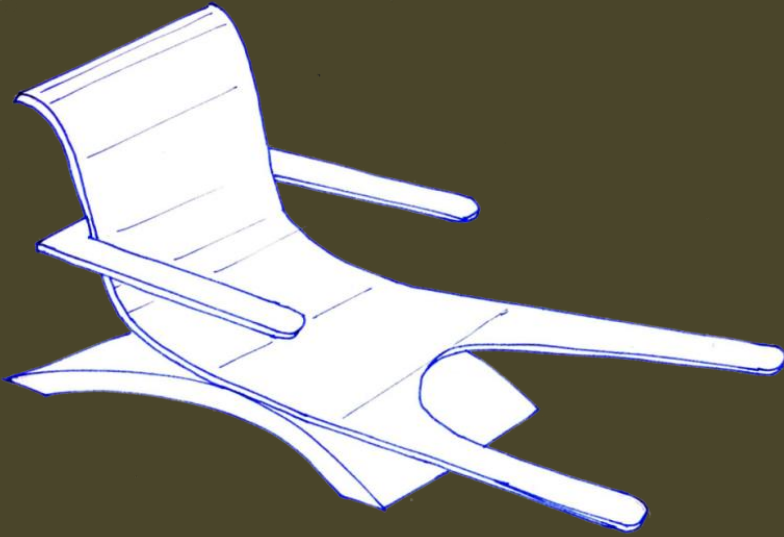
Concept 1



Cluster 2

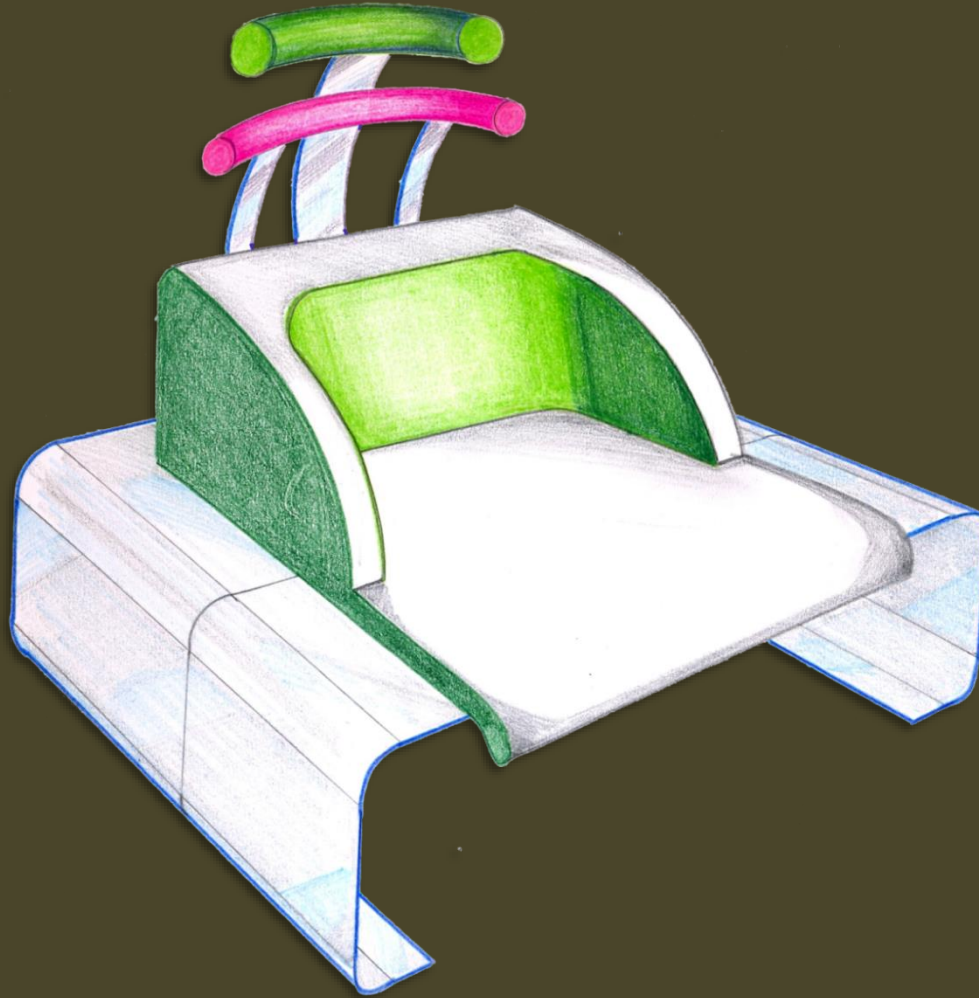
Front entry - Low Height, Non foldable





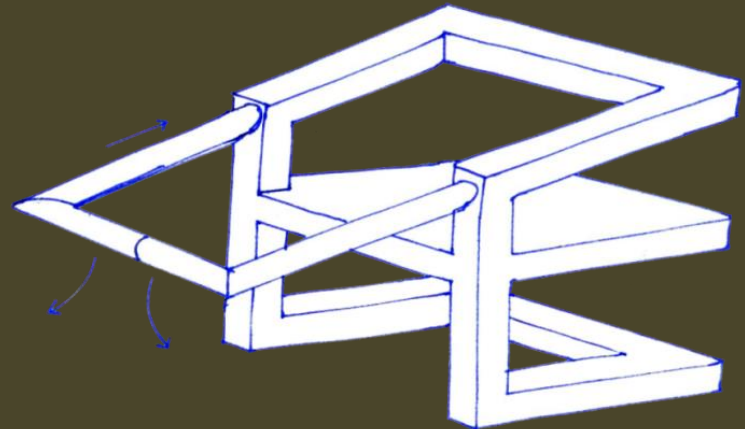
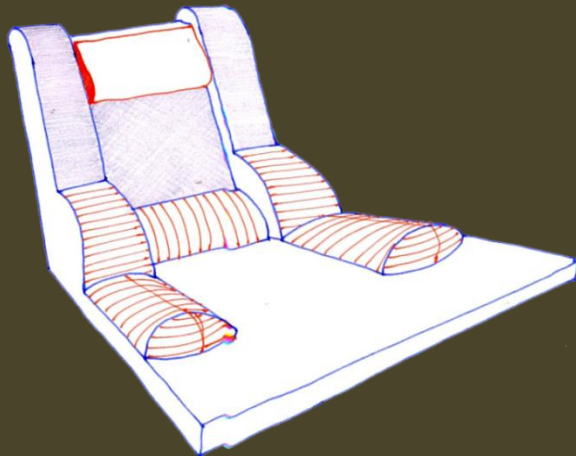
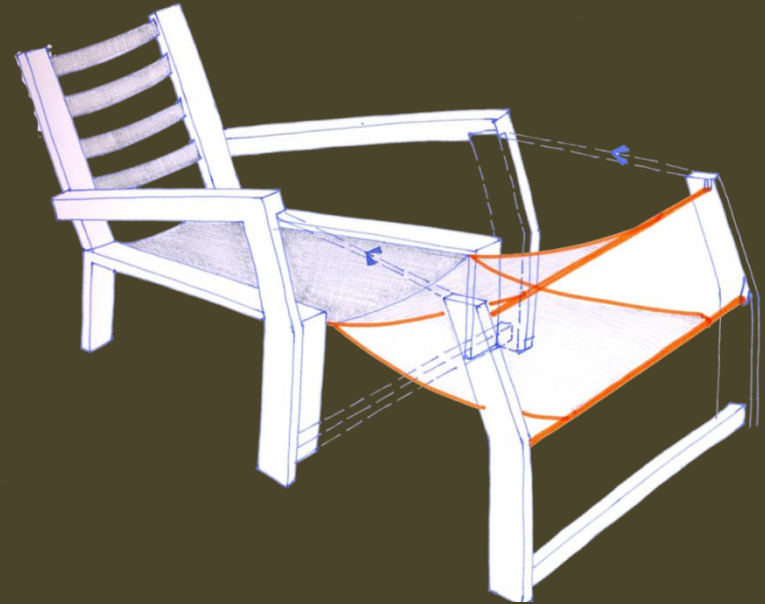
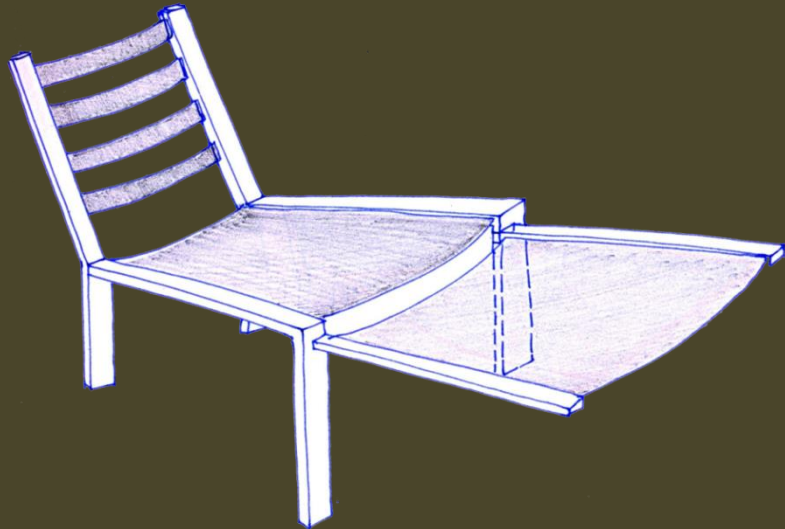
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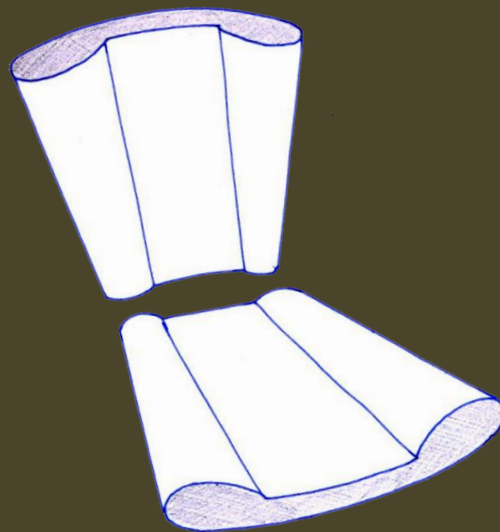
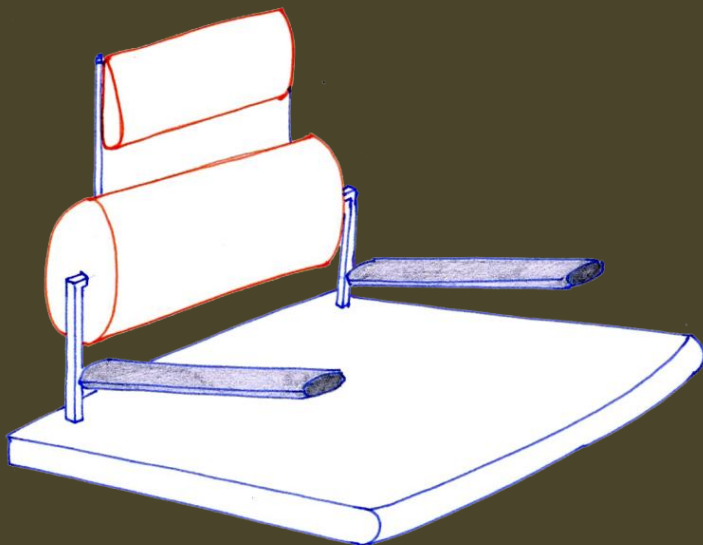
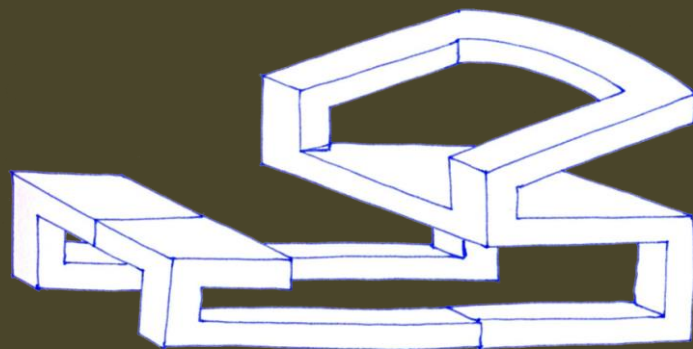
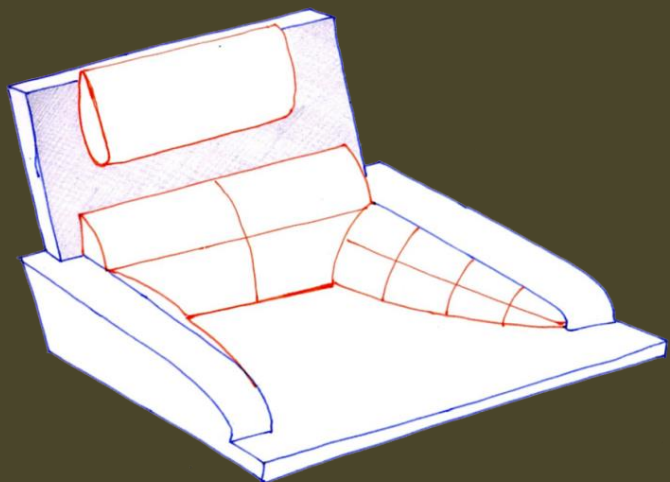
Concept 2

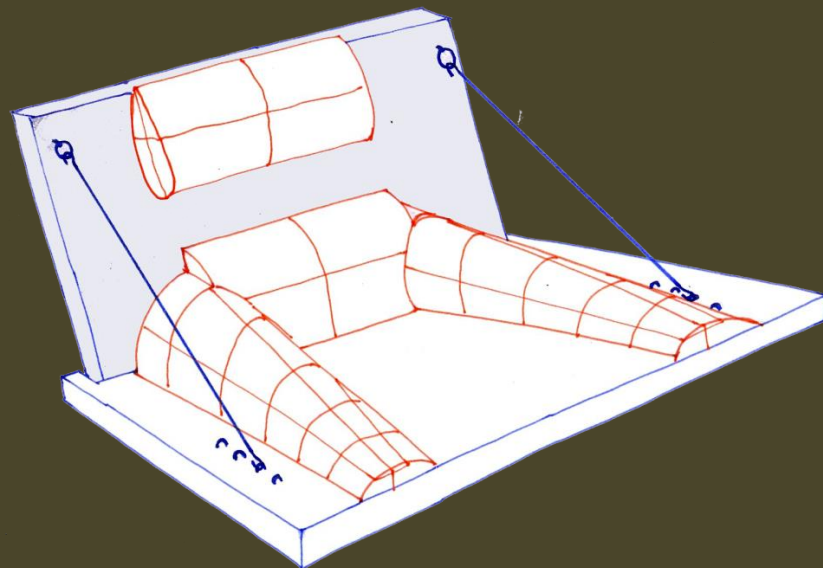
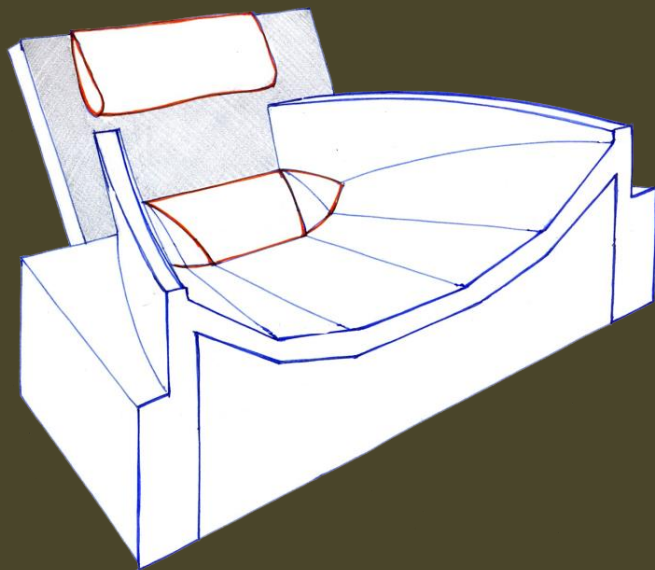
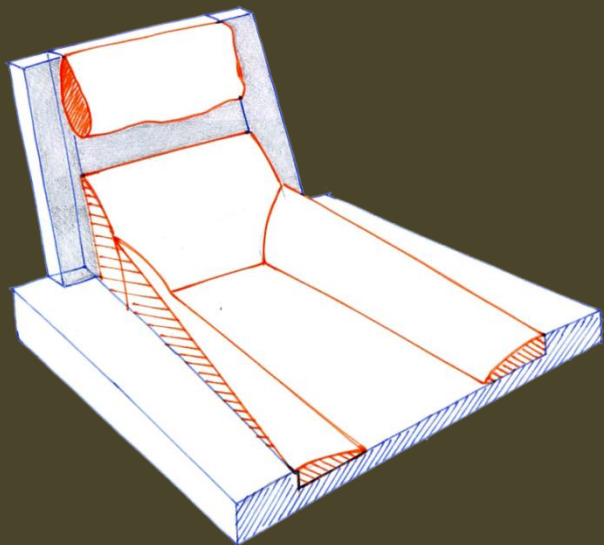


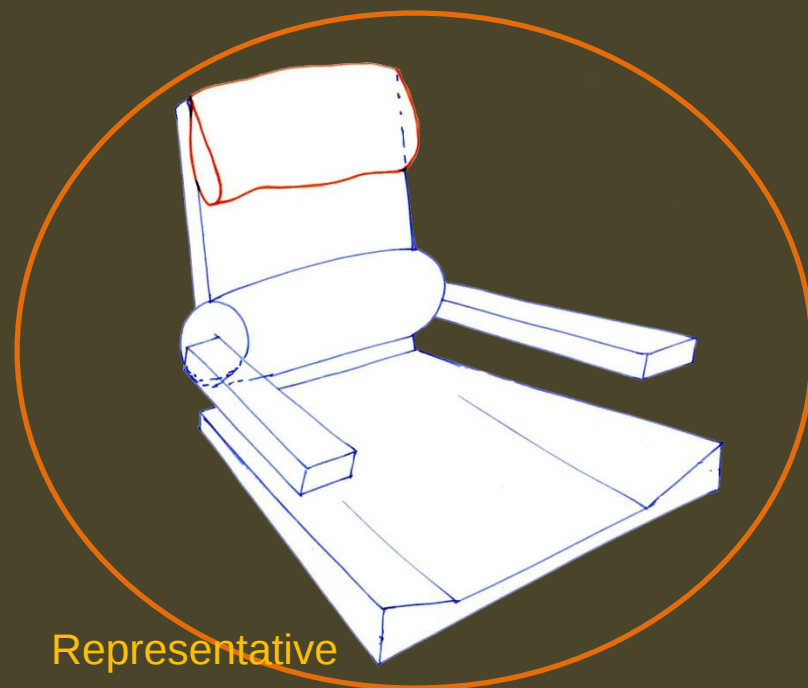
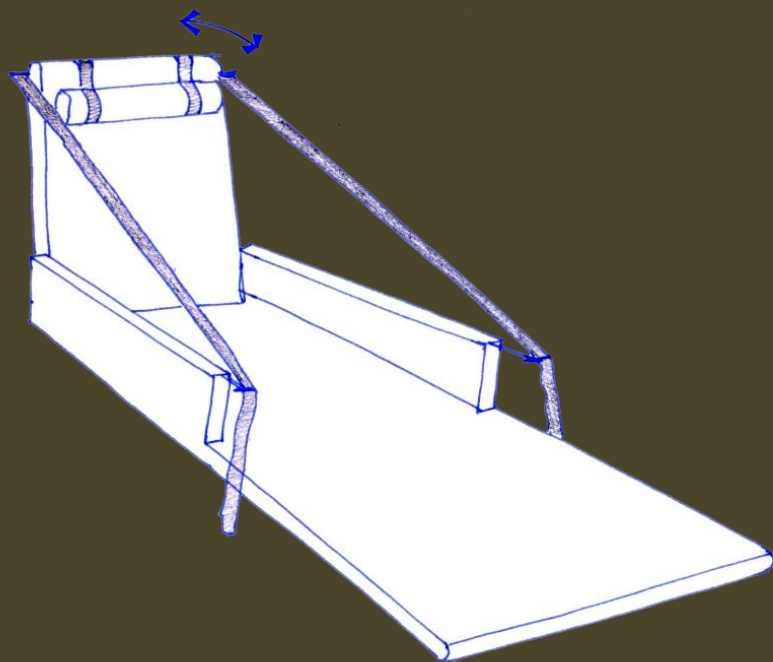
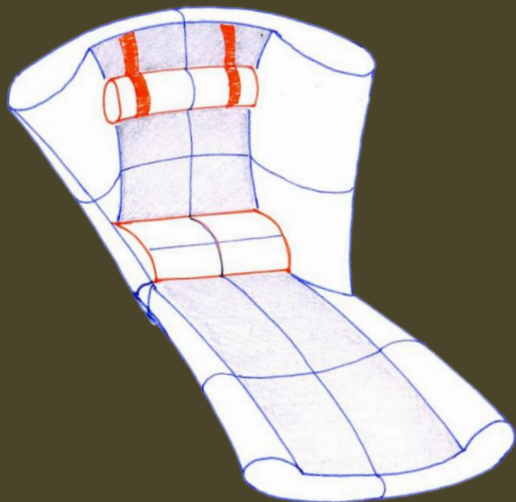
Cluster 3

Front entry - Foldable

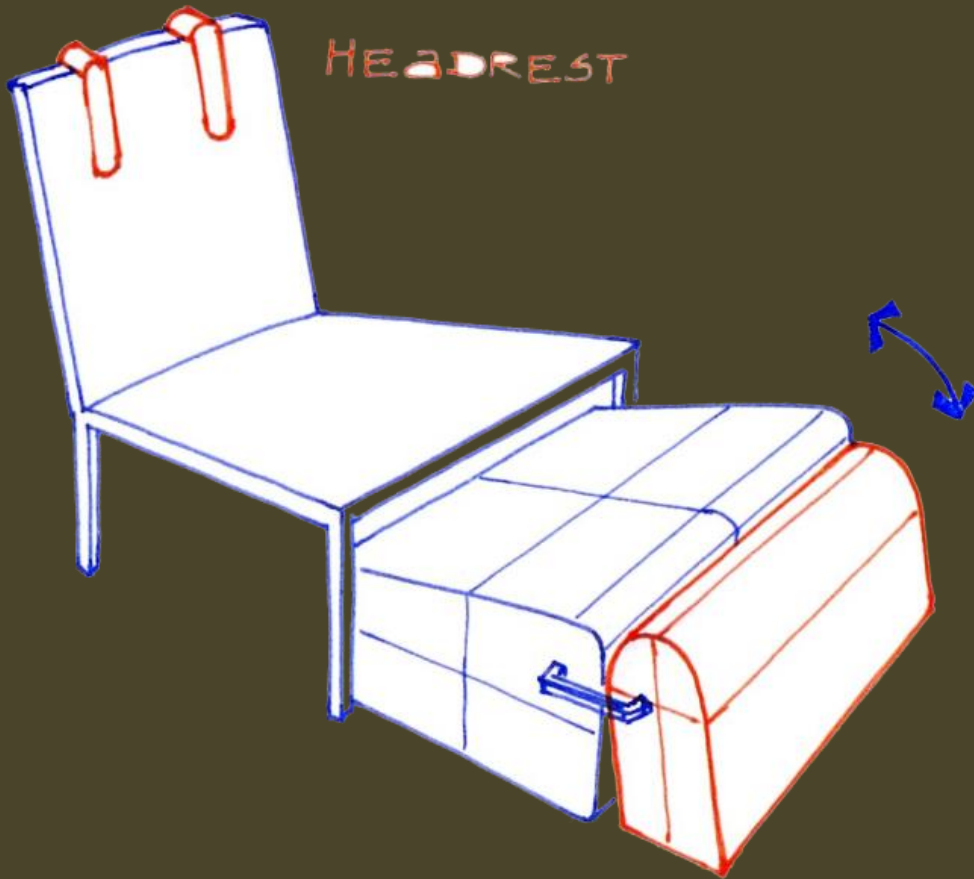




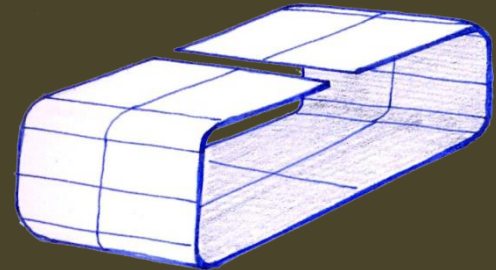
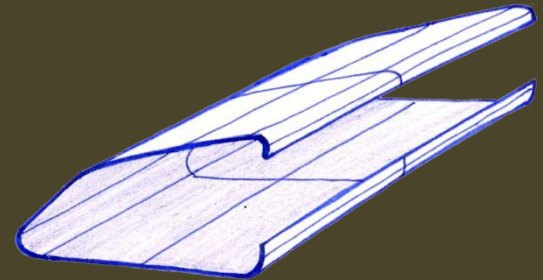
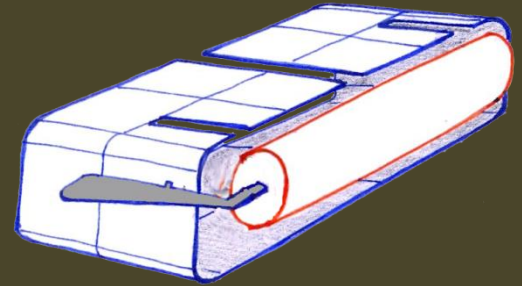
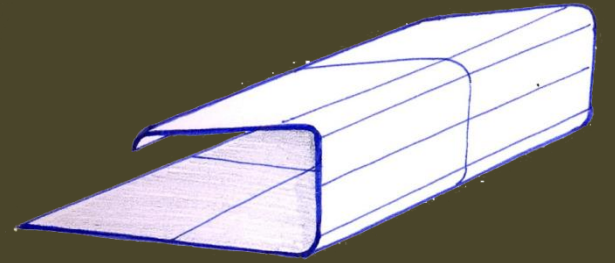




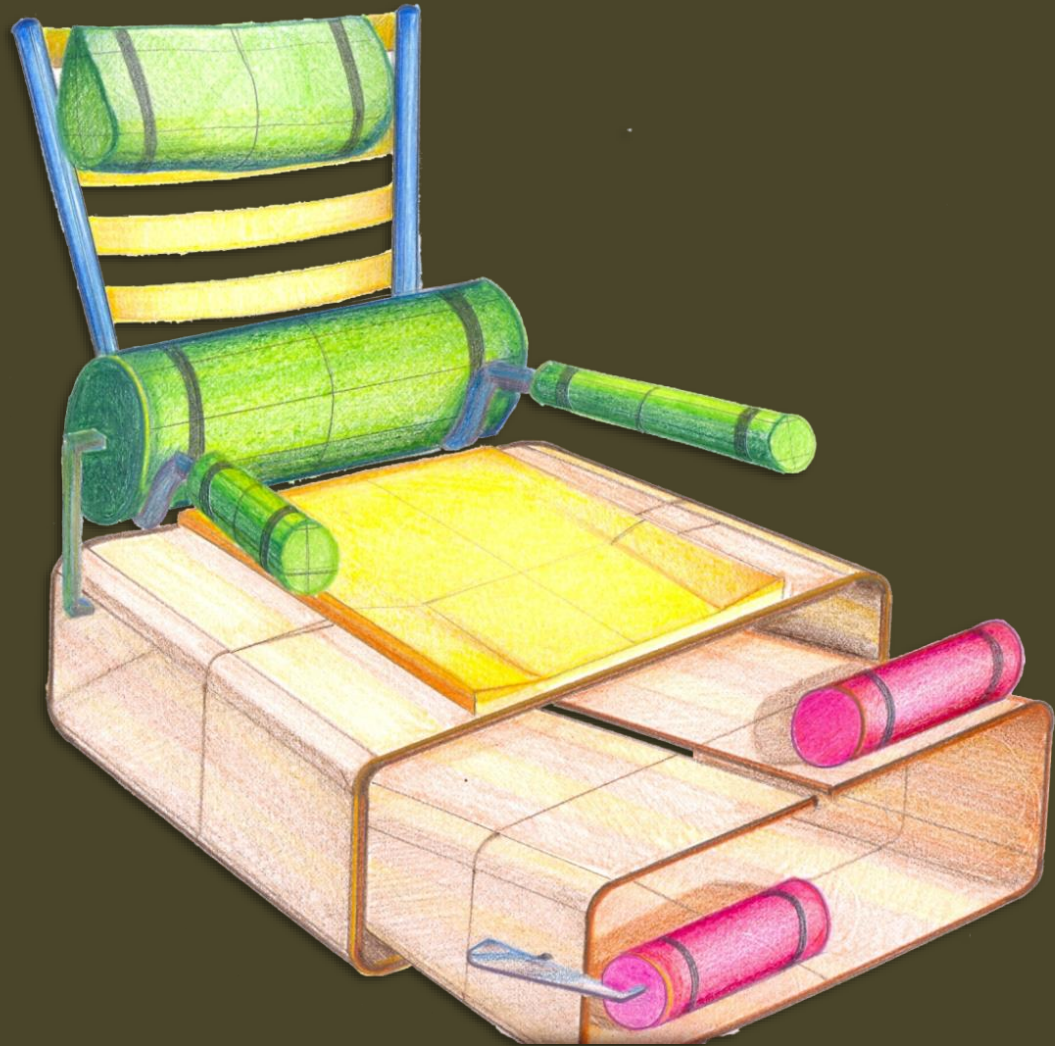
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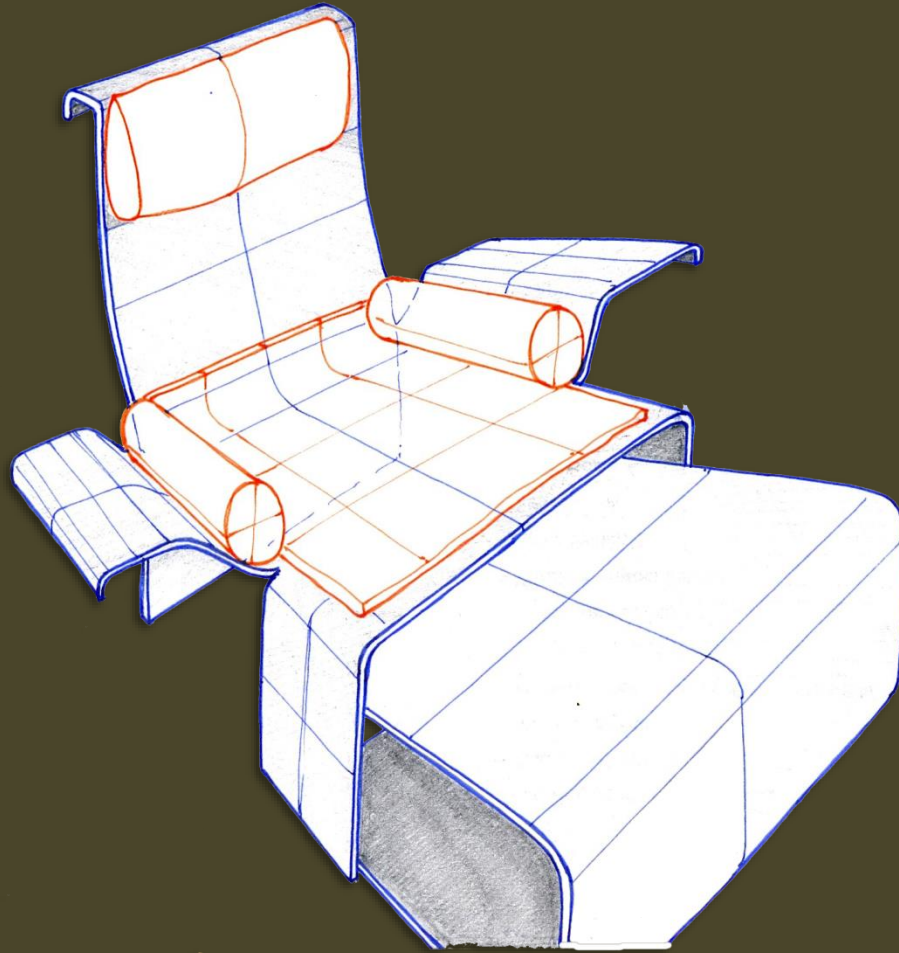
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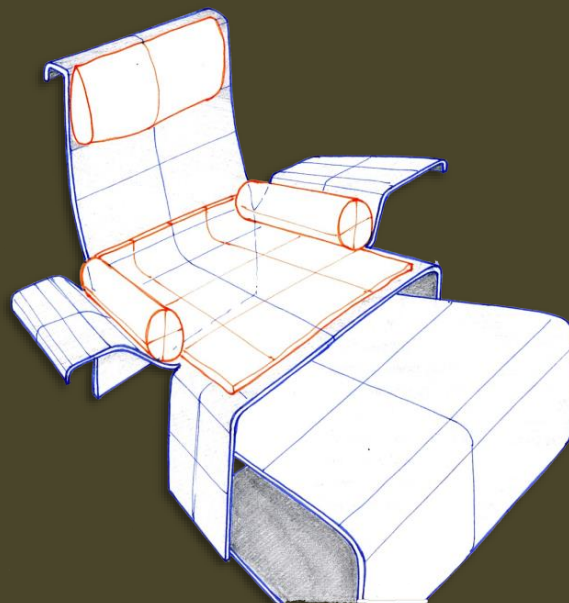
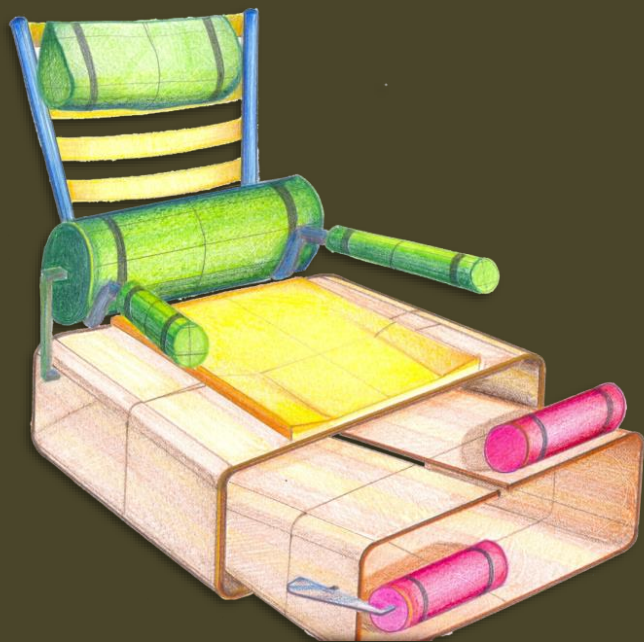
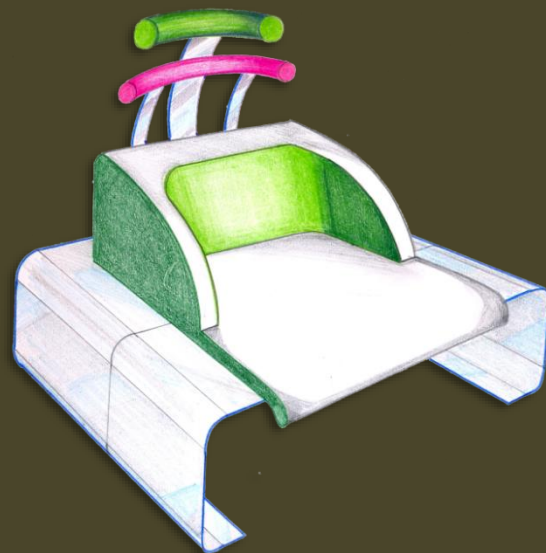


Concept 3

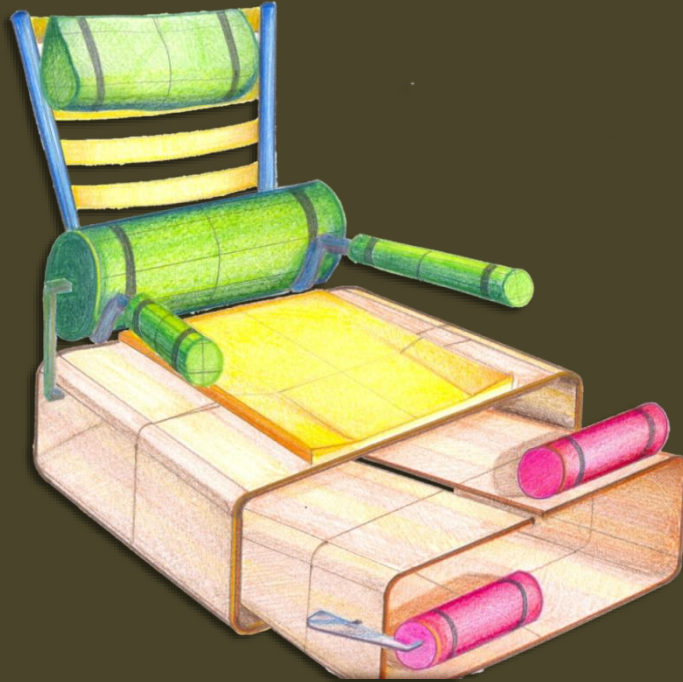


Concept 4



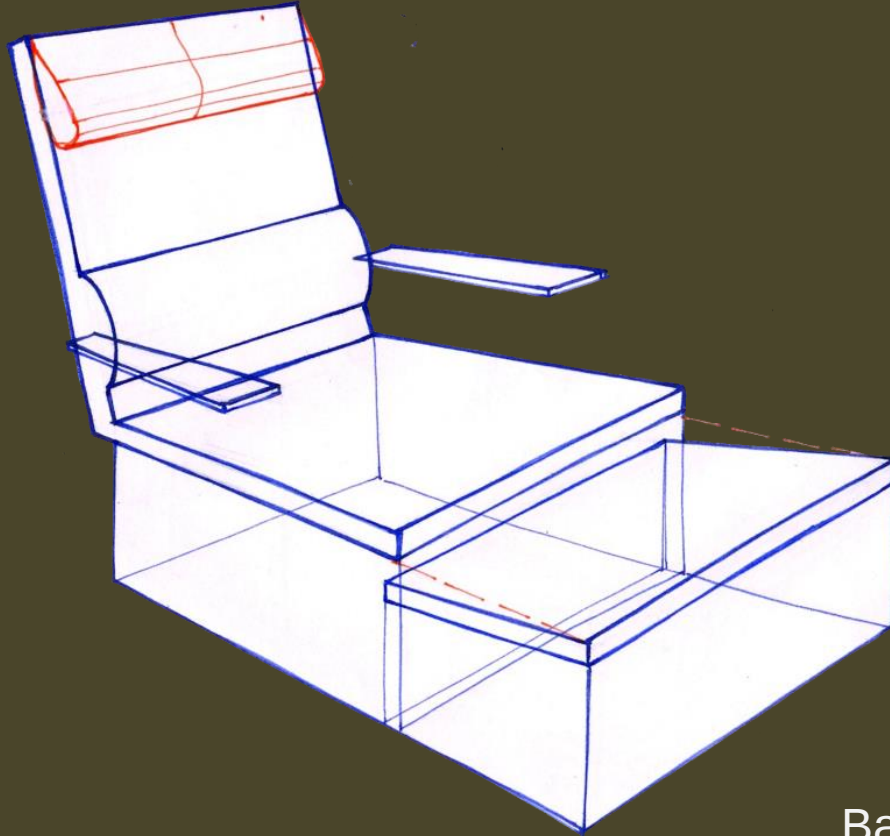


Concept evaluation

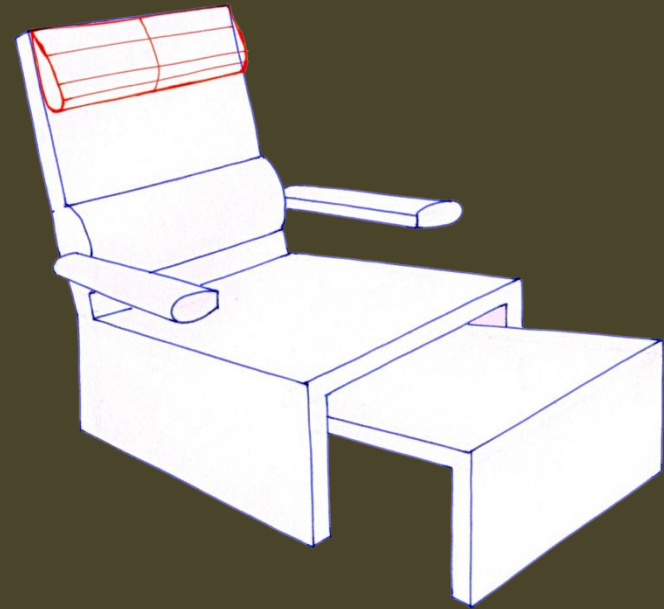
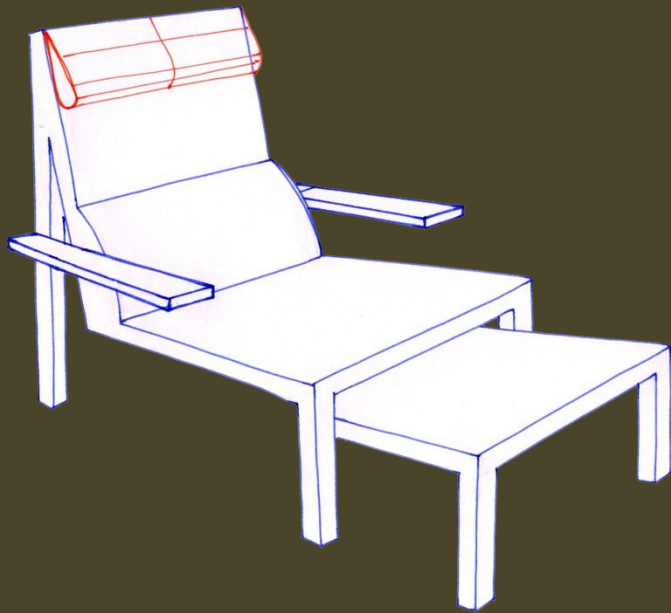


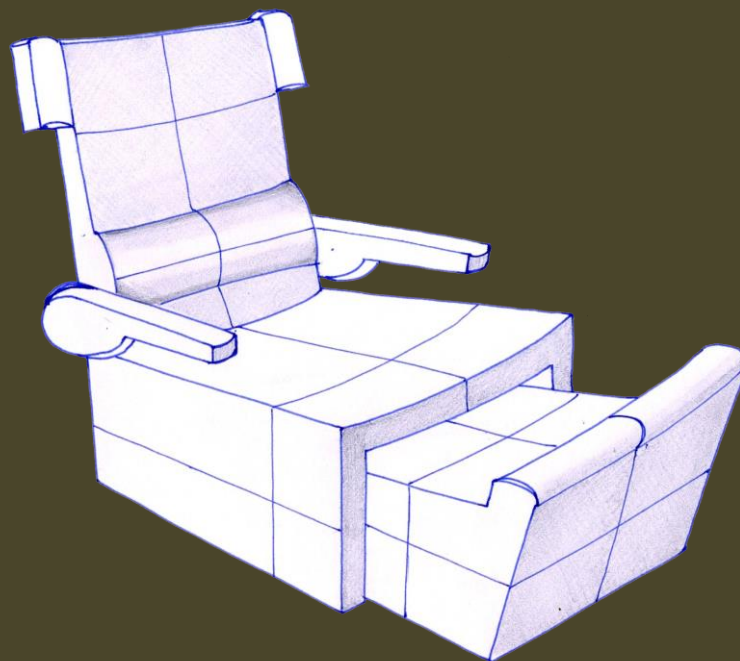
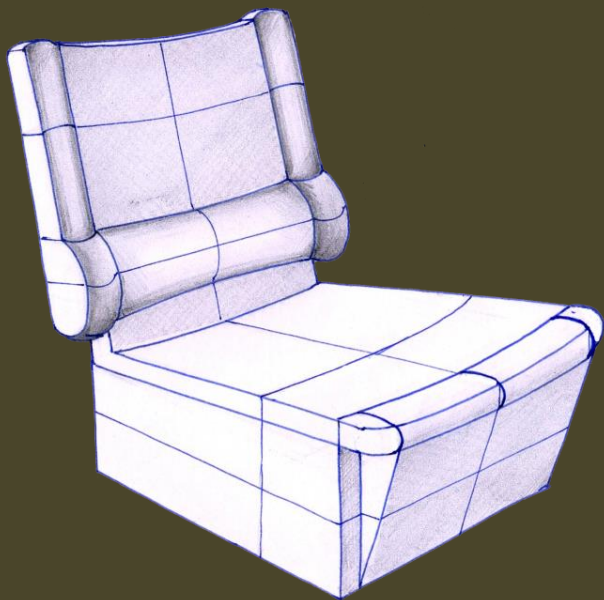
Anthropometric dimensions

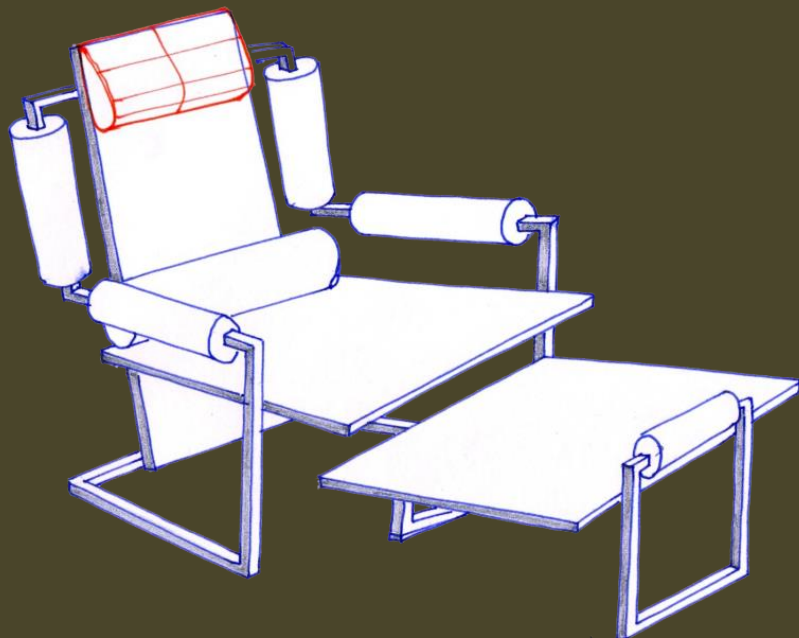
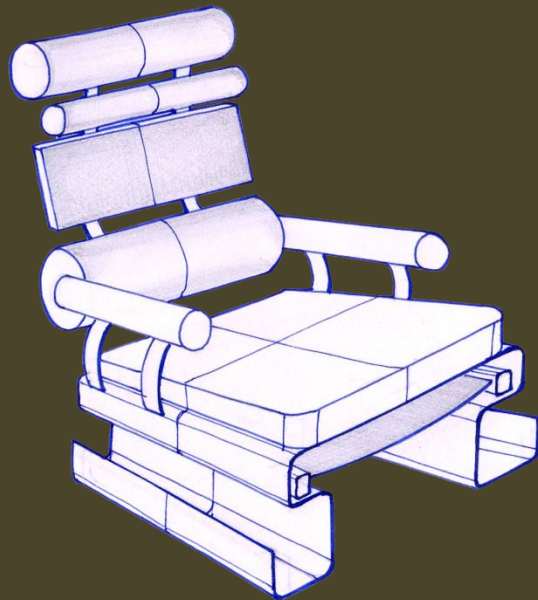
Exploring the concept further



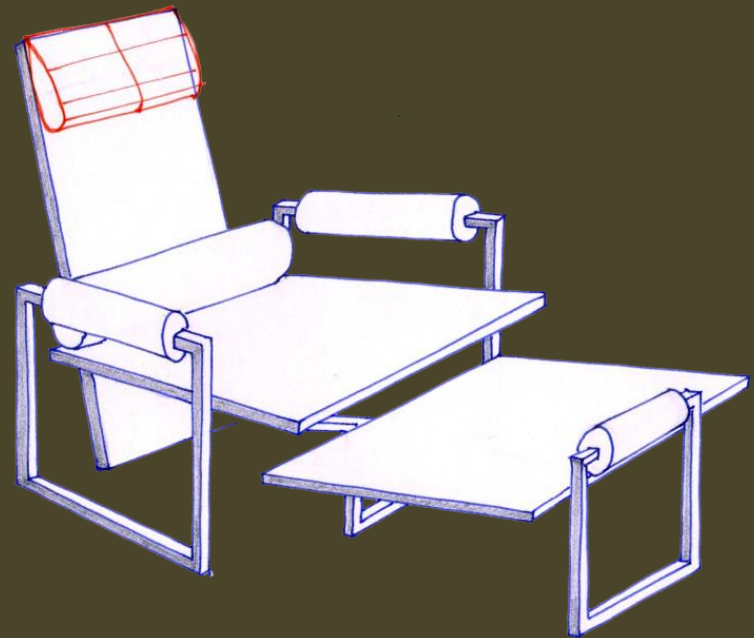
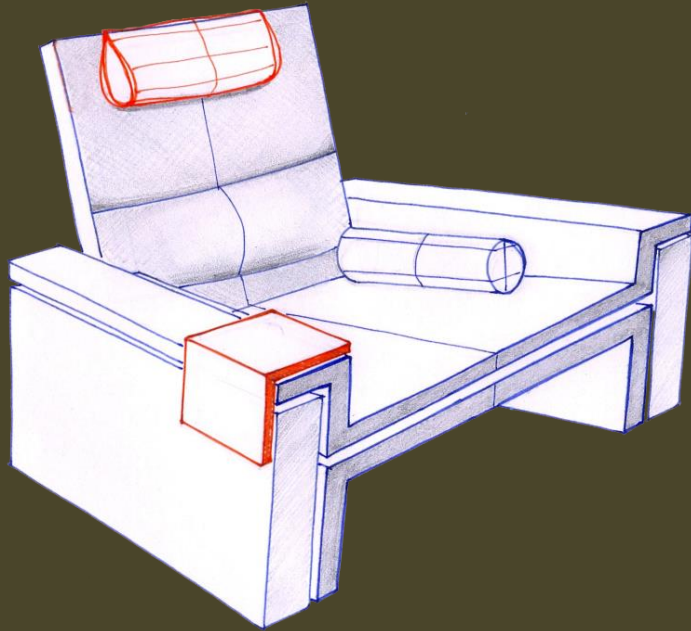
Basic Rig







Two options selected



Now, what next???

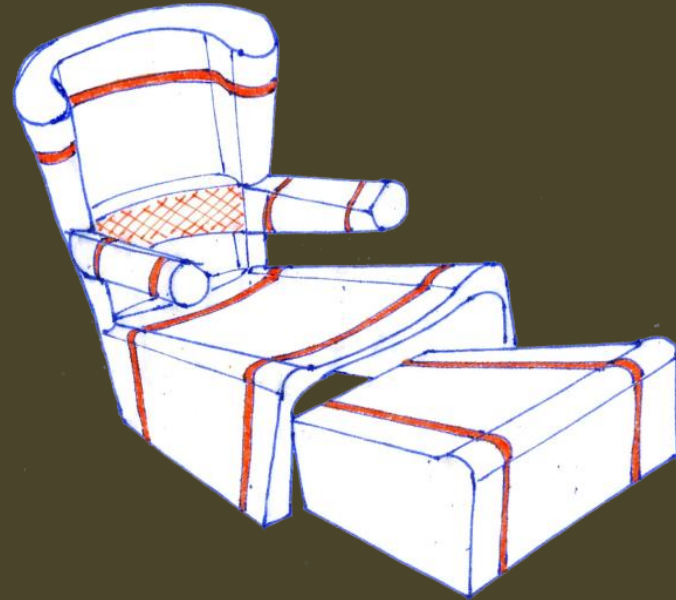
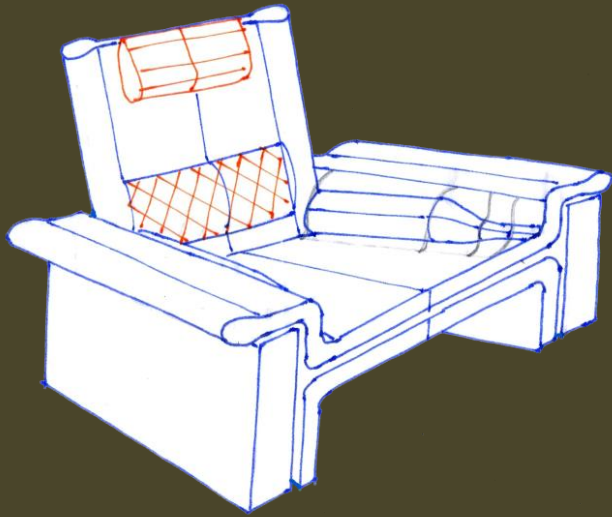
Option 1

Explore only Indian expression in terms of the metaphors, visual clues, motifs and decorative elements.

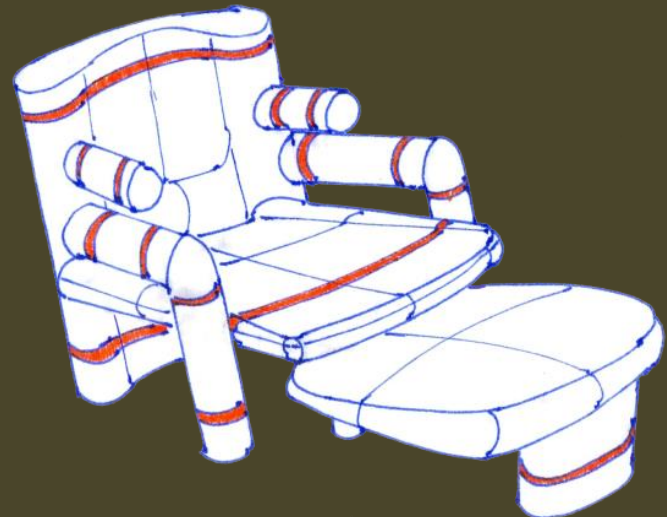
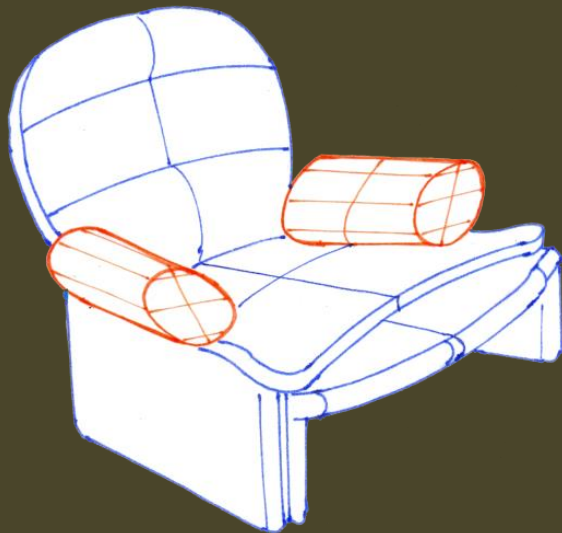
Option 2

Explore the form in terms of the special requirements and conditions with respect to the typical Indian sitting style.

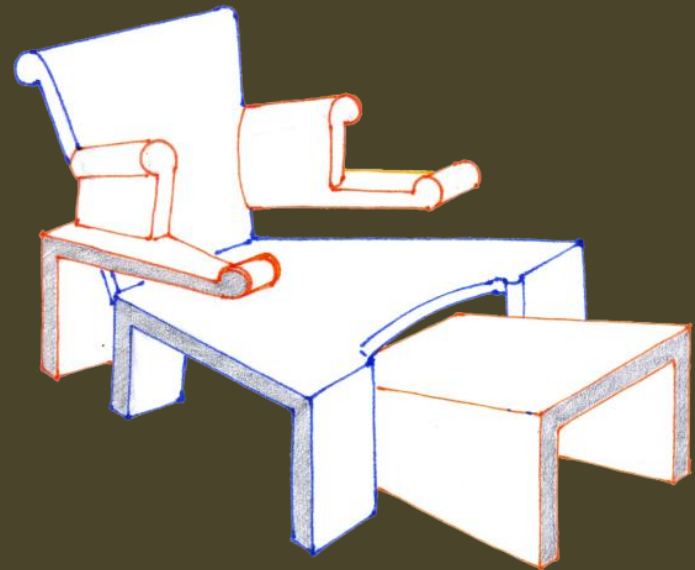
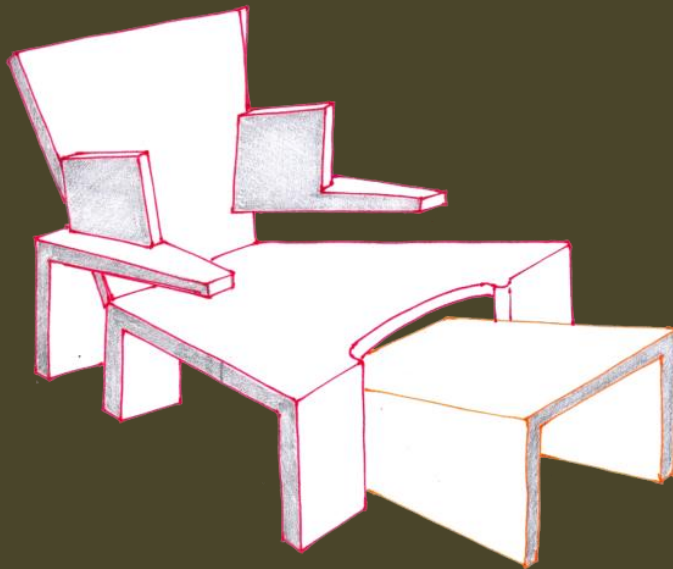
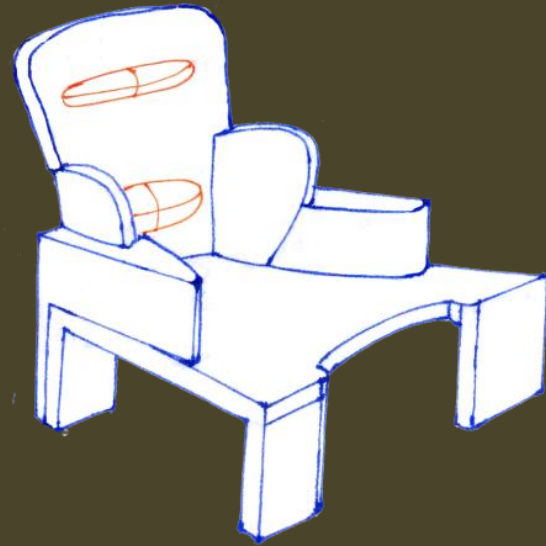
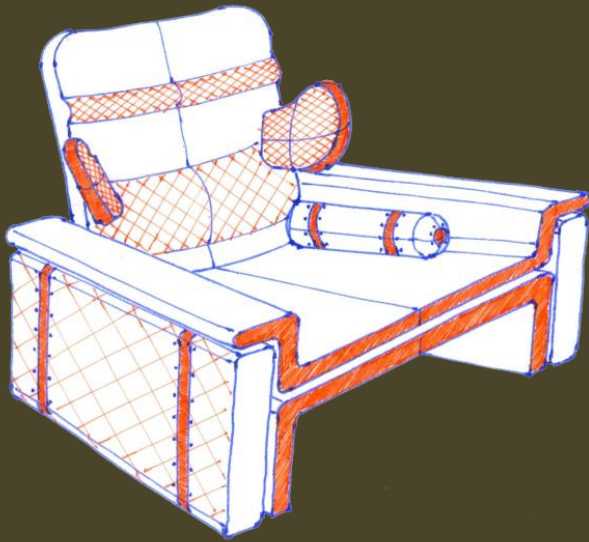
Indian expression

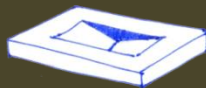
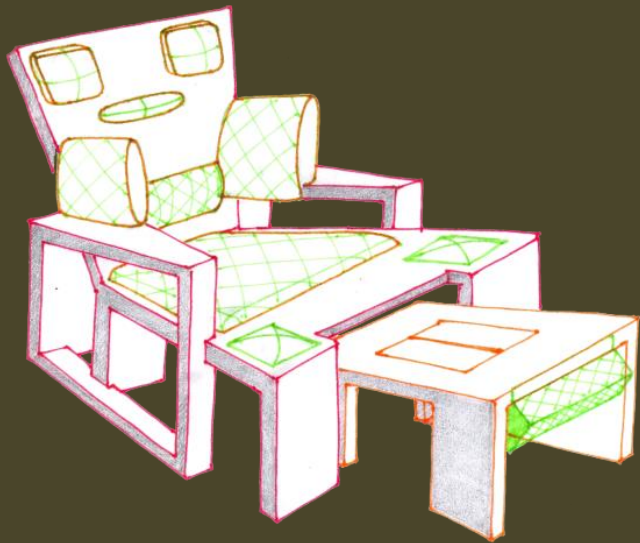


Top view

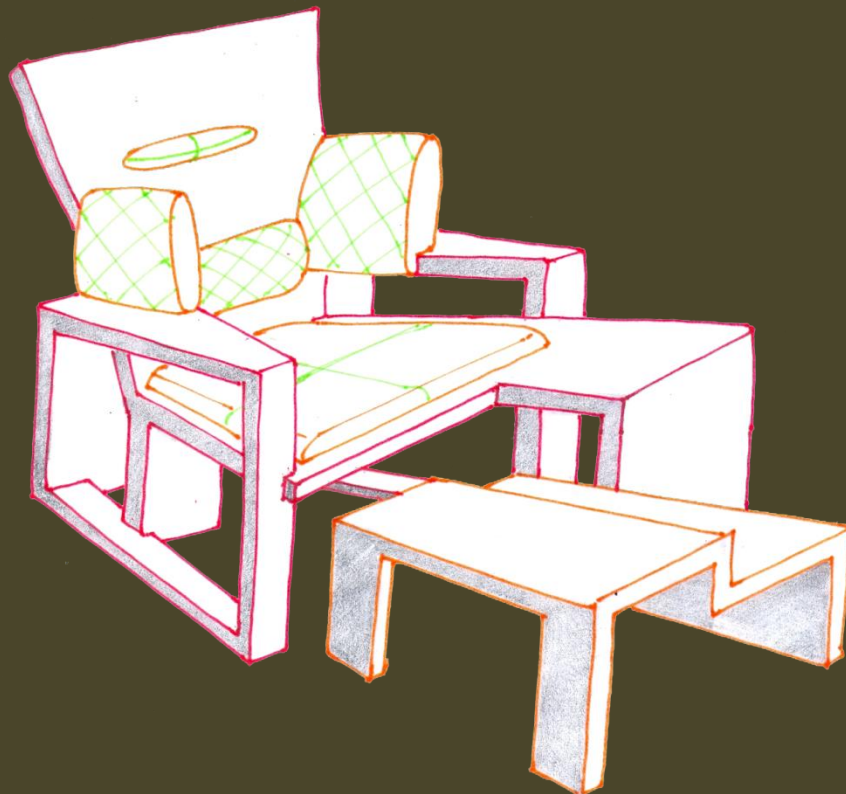


Sitting requirements



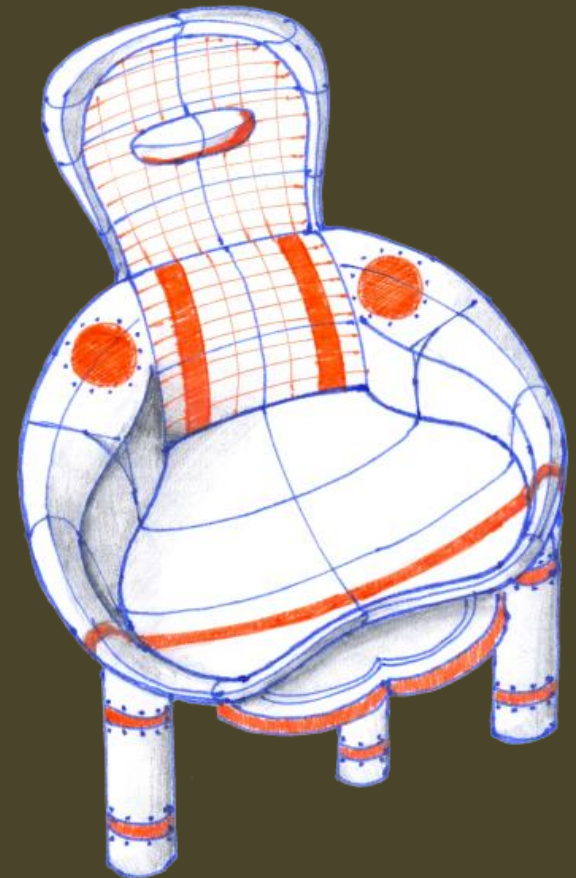
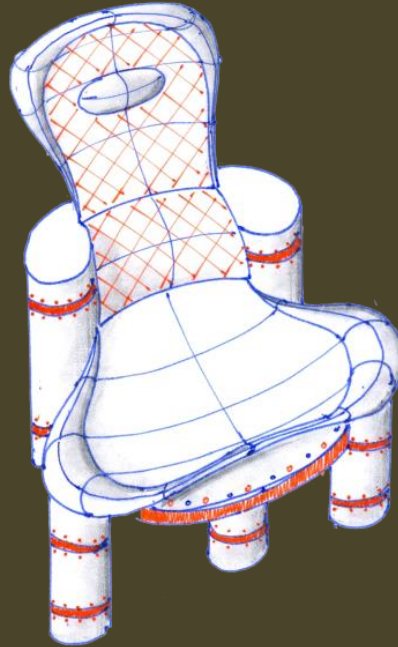
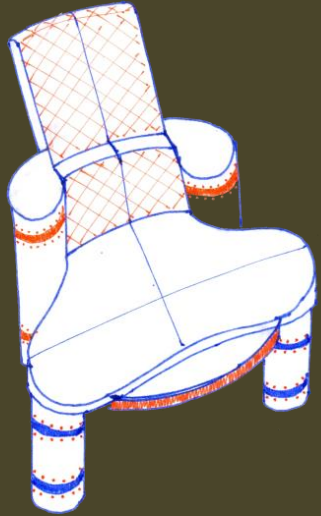


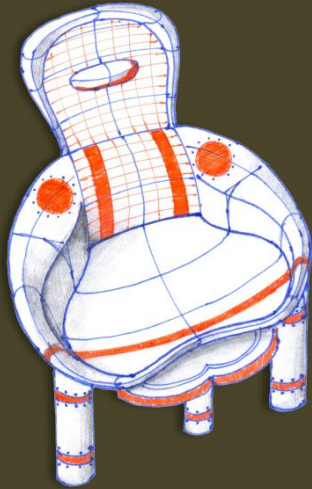
EXTENSIBLE
LEG SUPPORT
SECTION





Indian expression and Sitting requirements





Supports Indian sitting postures, looks Indian
but does not gel with contemporary interiors.

THE SOLUTION LIES HERE...



Supports Indian sitting postures gel with contemporary
interiors but does not have visual elements defining its
Indian identity

Exploratory models

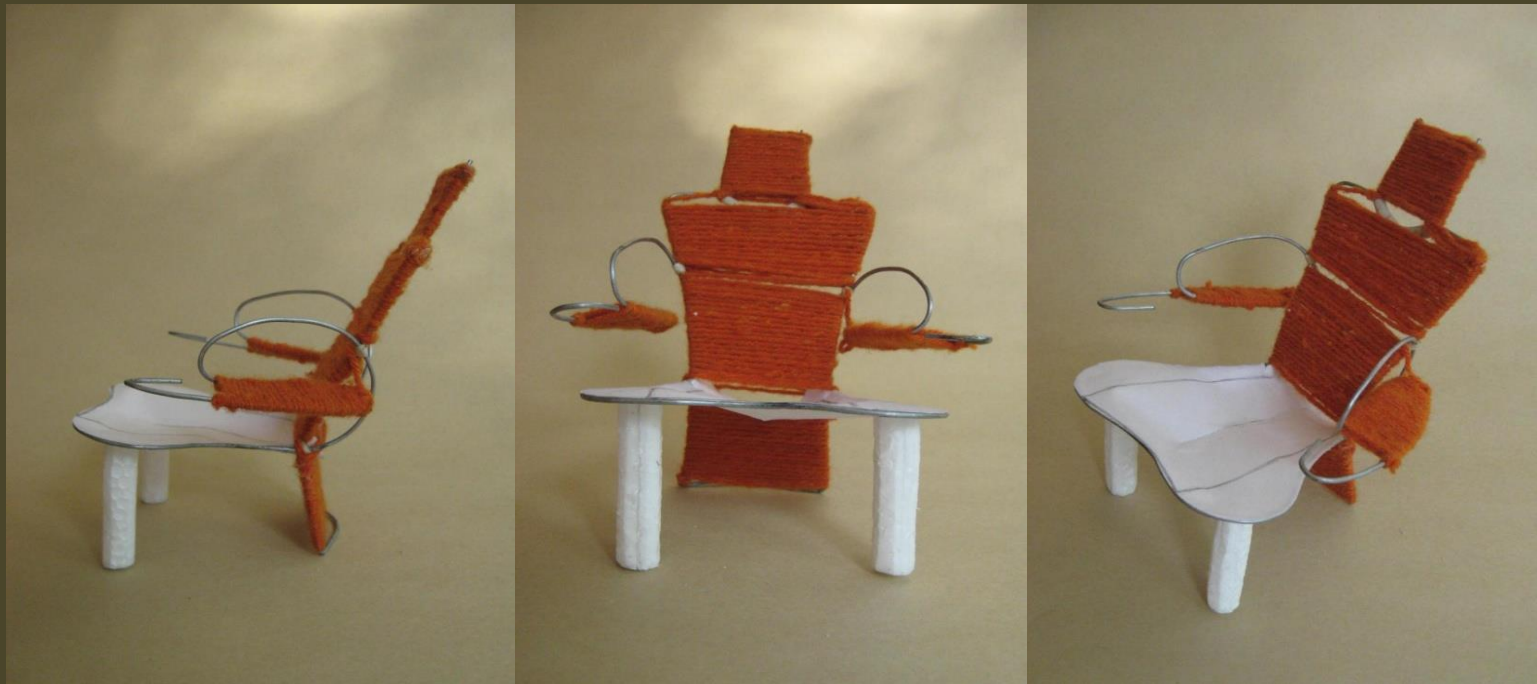


Contemporary visual language

No Indian identity



Contemporary visual language
No Indian identity



Contemporary visual language

Indian identity

Reference to body posture

Further exploration

Refined concept



Closed position

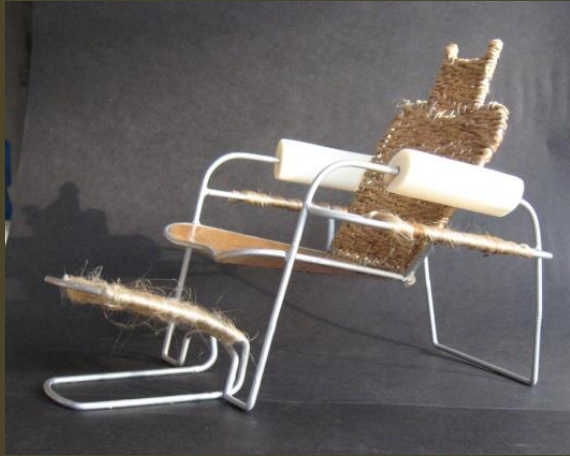
Open position



Simplifying the elements



Final concept





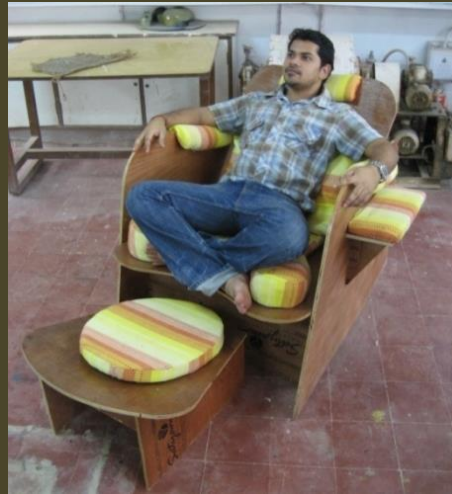
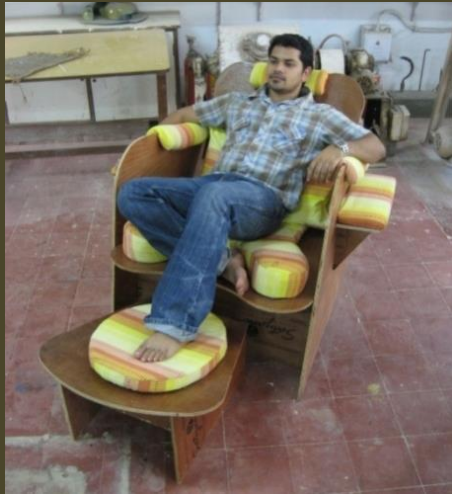
User testing

After finalizing the concept, a true scale plywood rig was made to test the chair for different sitting postures





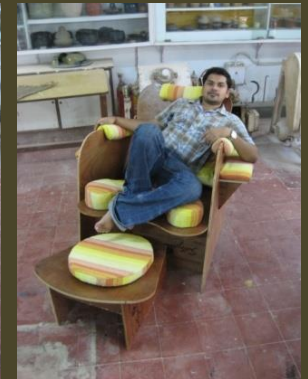
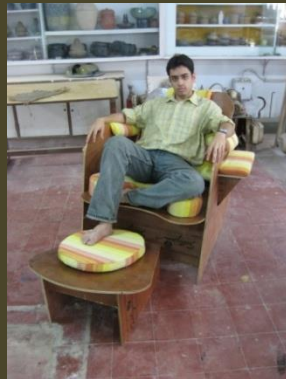






Design Achievements

- Specifically for Indian sitting style
- Flexibility – Supports different sitting postures
- Indian expression with contemporary looks
- Innovative support system for arms, knees



Limitations

- Cost was not the consideration

 - (For upper middle class of the society)

- Ergonomics – No innovations – Use of existing data

- No testing like seat angle, backrest inclination

 - (But it was not the focus of the project.)

- Original intention – True scale mock up model

 - Time and finishes consideration

 - True scale rig – for the seating experience

 - Scaled model – for the visual expression

 - More refinements and fine tuning after user testing – Time factor

Thank you...!!

Special thanks

Ameya Surve

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