

Design Thinking

*"Every object tells a story if you know
how to read it"*

-Henry Ford

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01

Lessons from Objectified Movie & Bauhaus Movement

Dipal Chaya

Objectified

- The Chair



Hella Jongerius - East River Chairs

Beautiful and reliable products that give rise to an emotional response towards it.

There was one moment in the film where Hella Jongerius from Rotterdam talks about giving an individualistic character to an industrial product – to make a seemingly inanimate object that you bought just out of necessity an integral part of your life, it becomes a part of your story, it becomes a part of you.

She explains that just like how looking at art there is an emotion that gives rise in you, so should another industrial object. She goes on to talk about the chair, yeah that same chair that dad always uses to prefer to sit on because of the comfort it provides – it has perfect cushion, a smoothly curved arm rest to relax your arms on, the wheels that never break, the reclining feature that you can blindly trust and push you back onto the back rest with all your force and know it wouldn't break. That wooden chair has become an iconic symbol staple to him.

“Everything has a personality: everything sends an emotional signal. Even where this was not the intention of the designer, the people who view the website infer personalities and experience emotions.”

— Don Norman, Author of *Design of everyday things*

The Chair

Emotional Design

I personally am intrigued by such object that deeply... deeply have such an emotional impact on the person that it truly transforms that person's life. It's imperative that the product you provide has to offer them accomplish their objectives as proficiently and successfully as conceivable. But you moreover ought to centre on their reactions, which are normally emotional. Emotions are at the heart of how we interpret reality. Such object over a period of time increases in value to you. I believe the reason for this emotional response and increase in value can be attributed to two common traits between all such products:

1. The object never failed in providing you the objective it was purchased to achieve; They are the most reliable and comfortable in their function,
 2. They maintain a beautiful form that has simplicity.
- Such products just exude the effort that has been put in to it by everyone involved in making it.

On understanding more about the psychology behind emotional design, I understood:

Emotional design is the concept of how to create designs that evoke emotions which result in positive user experiences. Designers aim to reach users on three cognitive levels - visceral, behavioural and reflective - so users develop only positive associations towards the product.

1. Visceral - Users' gut reactions to or their first impressions of your design; e.g., an uncluttered user interface suggests ease of use.
2. Behavioural - Users subconsciously evaluate how your design helps them achieve goals, and how easily. They should feel satisfied that they're in control, with minimum effort required.
3. Reflective - After they encounter your design, users will consciously judge its performance and benefits, including value for money. If they're happy, they'll keep using it, form emotional bonds with it and tell their friends. [interaction-design.org]

To apply emotional design, you first need a good functional design to work with. You also need to gain a deep understanding of your users. It should feel different yet simple, reliable, pleasurable portion of users' lives. Suiting users' needs and sentiments give a great impression. The feelings your product summons in clients, these sentiments will influence the bottom line. Indeed a minor oversight can trigger the off-base impression by and large.

The fact is that the emotional design of a product or service affects its success—and thus the bottom line.

Bauhaus Movement

Bauhaus—“construction house”—originated as a German school of the arts in the early 20th century.

Founded by Walter Gropius, the school eventually morphed into its own modern art movement characterized by its unique approach to architecture and design.

Today, Bauhaus is renowned for both its unique aesthetic that inventively combines the fine arts with arts and crafts as well as its enduring influence on modern and contemporary art.

Style of Bauhaus :

A combination of the Arts and Crafts movement with modernism, as evident in its emphasis on function and, according to the Tate, its “aim to bring art back into contact with everyday life.” Thus, typical Bauhaus designs—whether evident in painting, architecture, or interior design—feature little ornamentation and a focus on balanced forms and abstract shapes.



Art:

In art, this emphasis on function is apparent in the balanced compositions of abstract paintings.

The paintings typically pair flat planes with overlapping shapes to suggest dimensionality + artists often produced abstract sculptures, avant-garde collages, and modernist posters featuring bold typography and blocks of color.



Architecture:

In this style is characterized by harmoniously balanced geometric shapes and an emphasis on function.



Characteristics:

1. No border between artists and craftsman.
2. The artist is an exalted craftsman.
3. Form follows function.
4. Gesamtkunstwerk or the complete artwork
1. True Material
2. Minimalism
3. Emphasis on technology
4. Smart use of resources
5. Simplicity and Effectiveness
6. Constant development

02

Visual Culture & Art Analysis

Pranali Patel & Sohil Soni

Graphic Design & Visual Culture



Types of Images

1. Connotative - We can understand the meaning of the image immediately by looking at it.
2. Denotative - methods of making, focuses on form and meaning.

Building Blocks of Art:

- Dots
- Lines
- Shapes
- Form
- Colour
- Texture

Tools to read Art:

- Symmetry vs Asymmetrical
- Composition - Overall Balance in the Image
- Axis - Movement and dynamism
- 3Dimensional vs 2Dimensional
- Light and Depth - Shadows and Highlights
- Forms (it is broader definition of shape)
- Framming - Front View, Sectional View, Orthographic, Isometric, etc
- Color = hue (Shades) + Value (Lightness)
- Perspective - form of displaying the real world by playing with size and distance, cente of focus, vanishing point.
- Visual Hierarchy - the way in which eyes move through the scene.

Critiquing Art

Devolved Parliament



Devolved Parliament is a 2009 oil-on-canvas painting by Banksy, replacing British politicians debating in the House of Commons with chimpanzees. sold for £9.9 million.

- Concept
- Immersive and detailed expression of monkeys
- The Change of intensity of light.
- Perspective, It shows you the world from an objective view a naked view of whats going on in the parliament.
- Like how he didn't pay attention to what time it is.

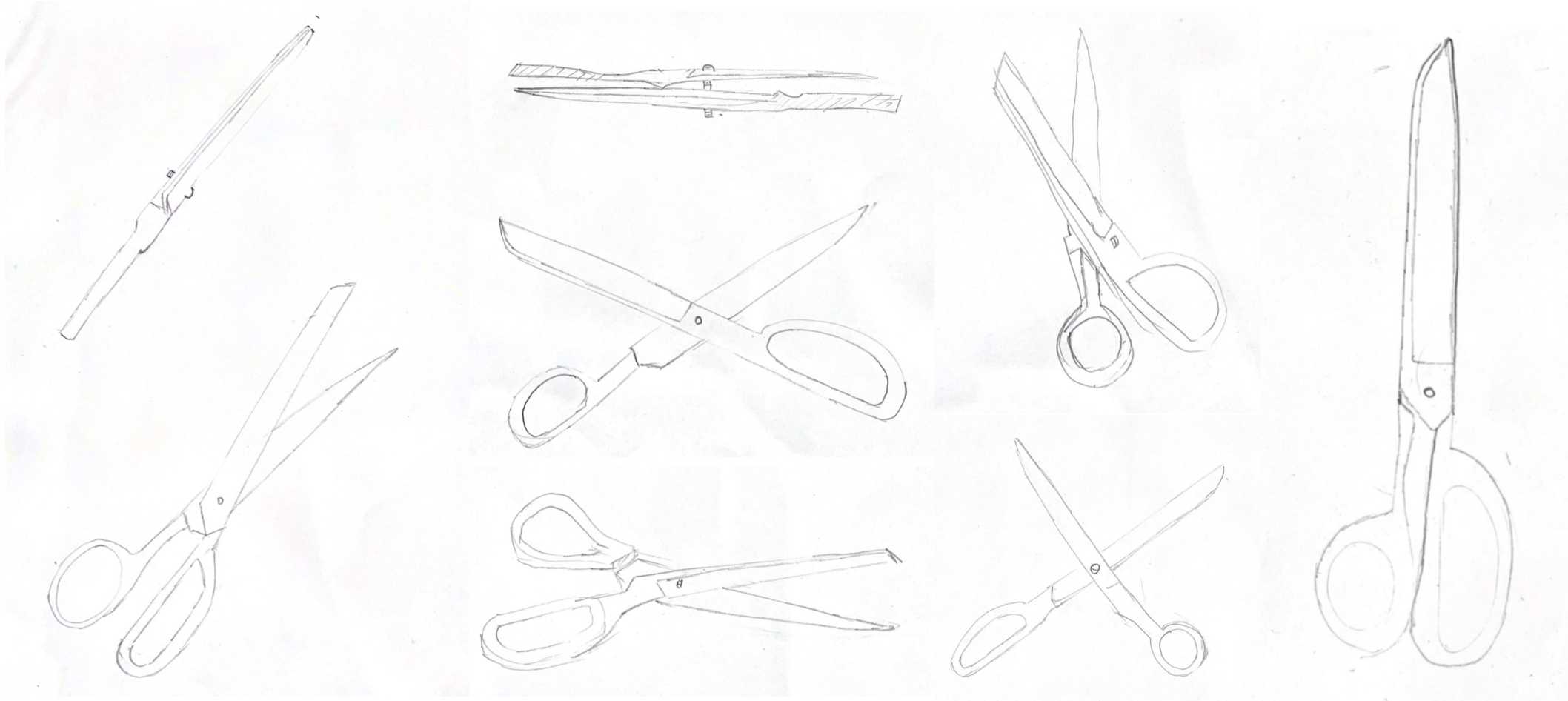
The Scream



The Scream is the popular name given to a composition created by Norwegian Expressionist artist Edvard Munch in 1893.

- It just exudes a feeling disturbance.
- The person seems out of control, like he is being distorted from everywhere.
- Except for the concrete road, everything is changing.
- His face is not too familiar that makes it uncomfortable.
- The dark-green overpowers its darkness on the happy blue color

Sketching - Scissors



03

From Analog to digital - Poster Designing

Pranali Patel & Sohil Soni

Poster

Concept Note:

Minimalism as well as function were the two main characteristics of a scissors that we wanted to put emphasis on.

The dotted bordering the scissors signifies that its entire life will be guided by those dotted lines that it will have to trace on.

The Slice as a word and the visual synonym of it being sliced at the exact location as which denotes the function of the scissors

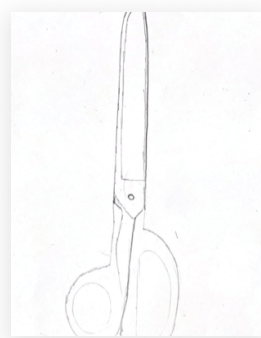
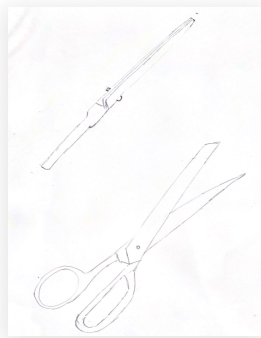


Making of Poster

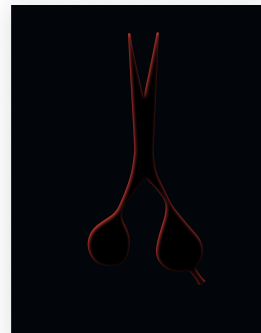
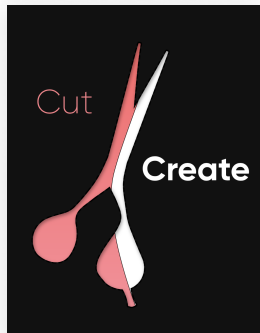
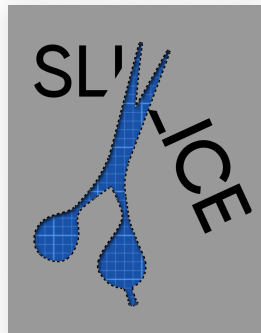
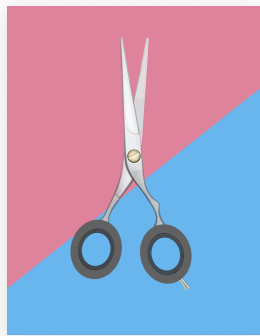
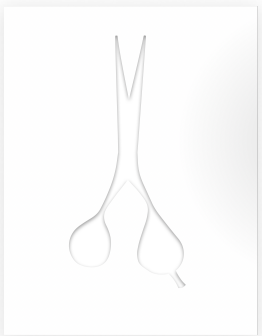
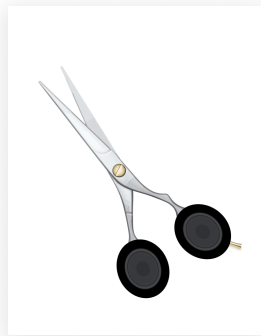
(Group Activity)



Sketches:



Iterations:

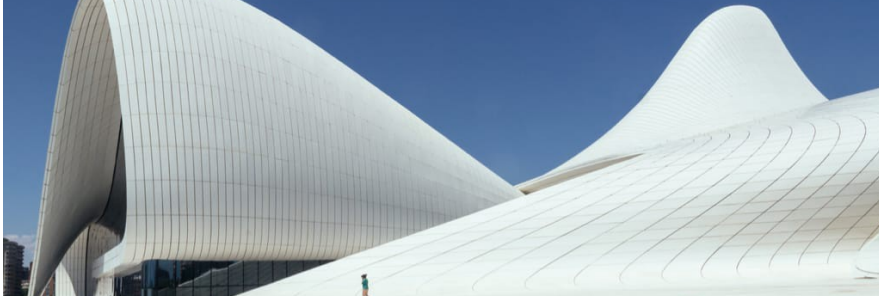


04

Computational Design, 3D Modeling & Parametric Bench Design in Rhino

Dhruv Seth & Bhavleen Kaur

Computational Design

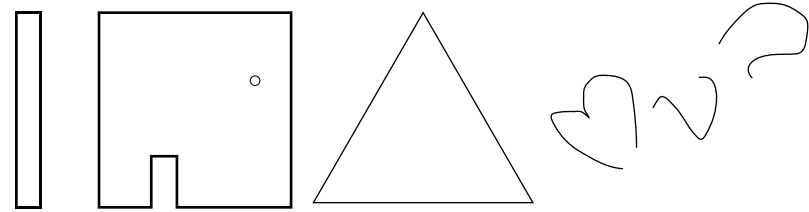


“Computational design” we refer to the use of computers and algorithms in order to achieve the digital creation of geometries through a mathematical approach.

Computational design is an excellent tool to deal with customization. Since it is a design tool, it enables the creation of lightweight parts, adaptable to the needs and personal taste of the individual. It allows the export of digital files for precise 3D printing. Thus, computational design finds many applications in the creation of personalized prosthesis and orthosis parts.

Here we do 3D Modeling/Computational Design using Rhino 3D Software

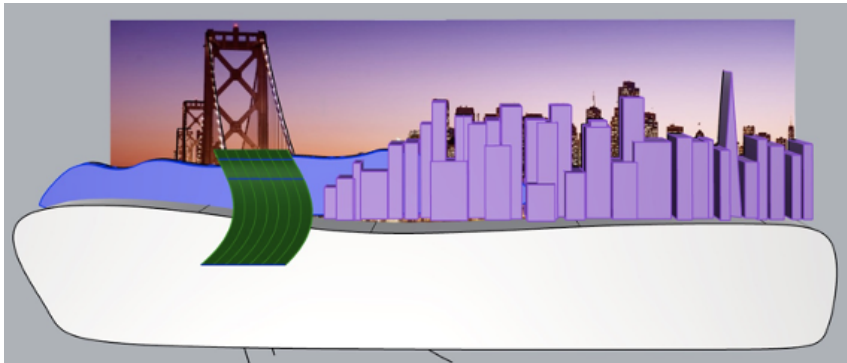
Rhino – Basics



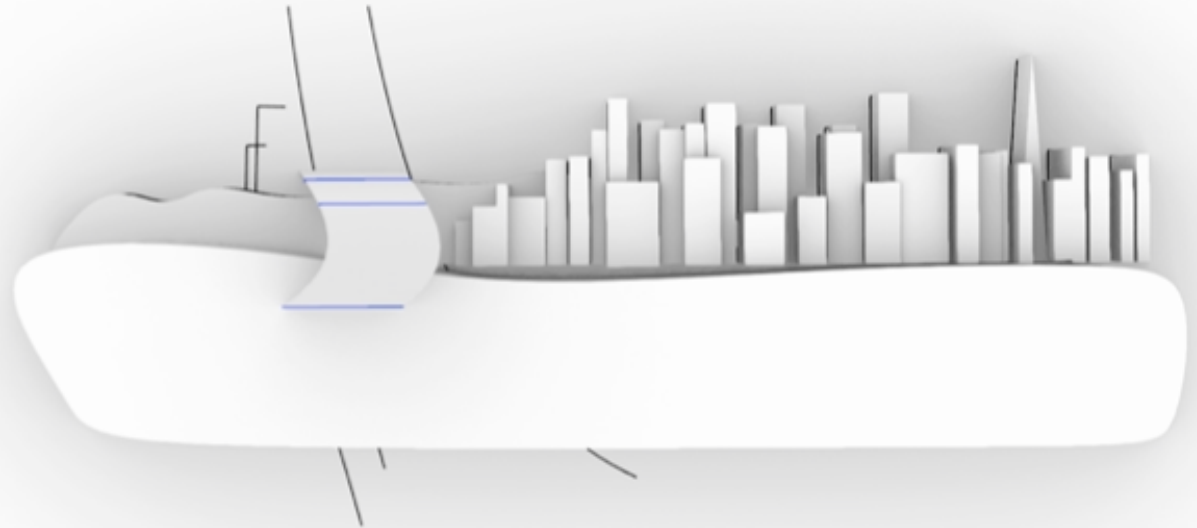
Commands Learnt:

- Join
- Group/Ungroup
- PolyLine
- Point
- Pencil
- Rotate
- Scale
- Array
- Polygon
- Text
- Trim
- Curve
- Cap
- Boolean Union
- Boolean Difference
- Align
- Rectangle
- Loft

3D Modeling - Rhino

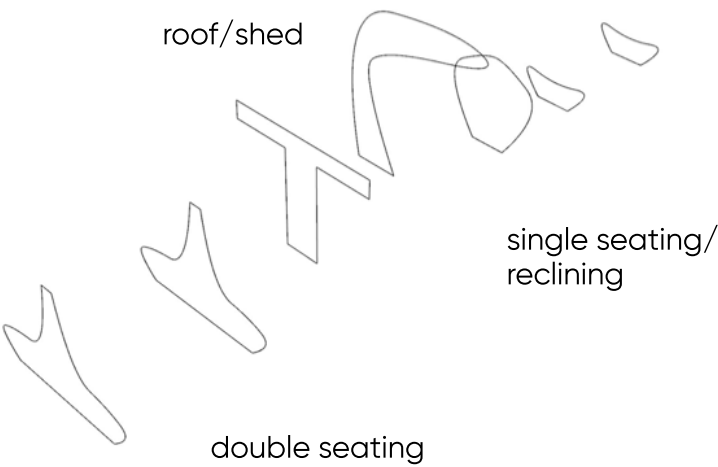


Trying to recreate the city
landscape in rhino

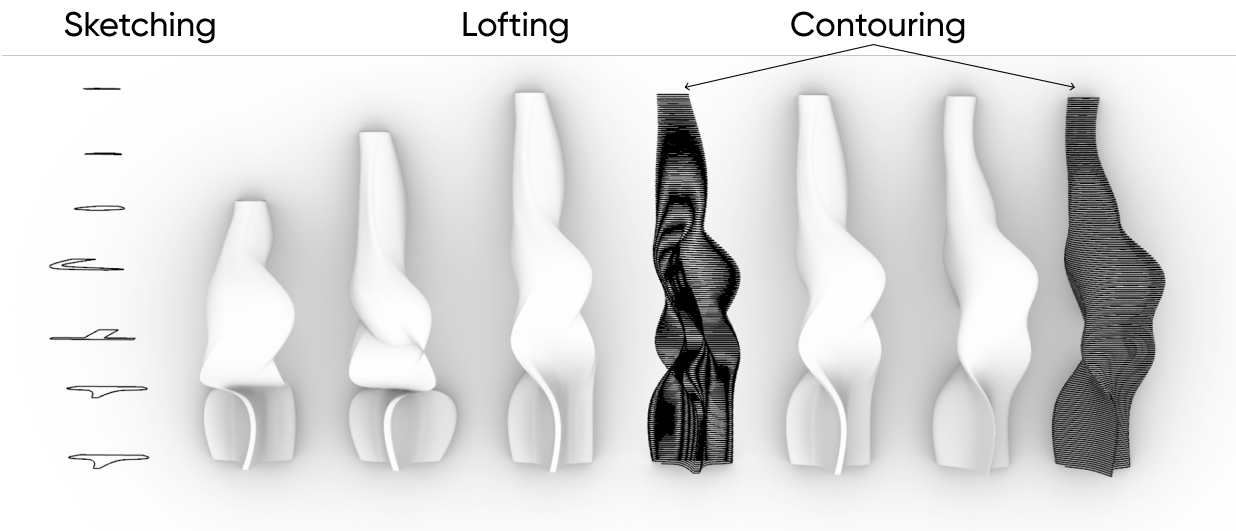


Parametric Bench

Outline:



Iterations:



Parametric Bench - Design Finalisation

LOFTED

1



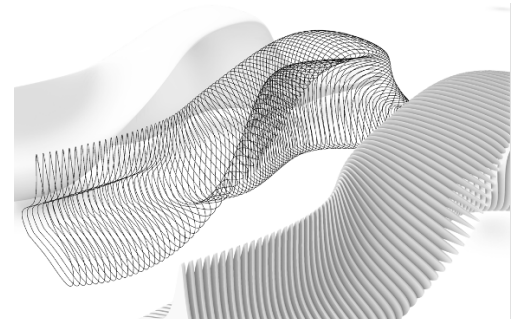
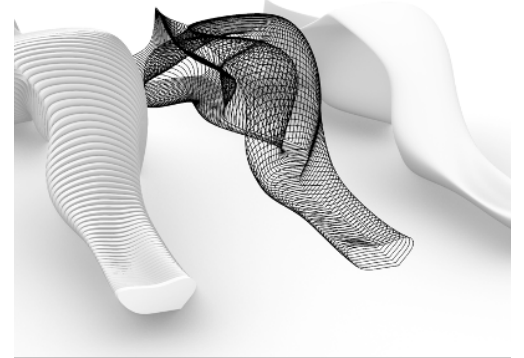
CONTOURED

2

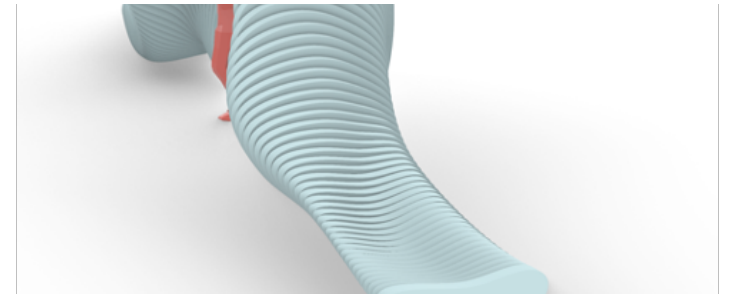
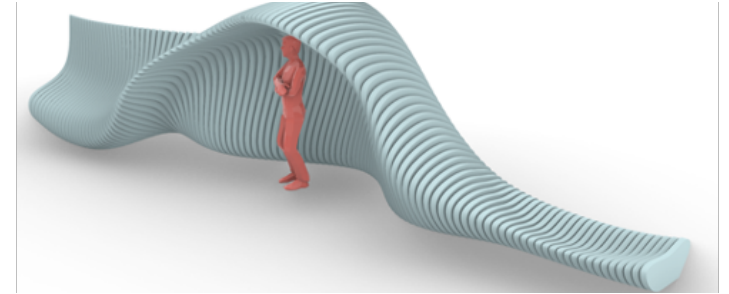
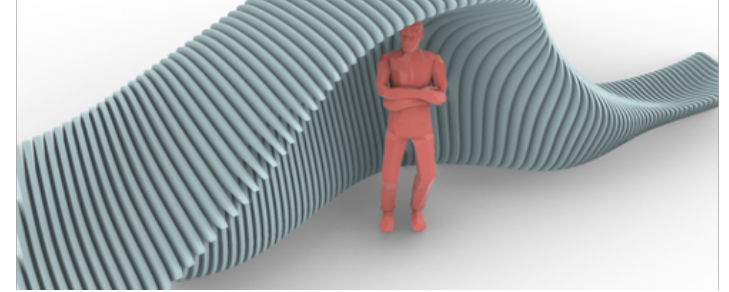
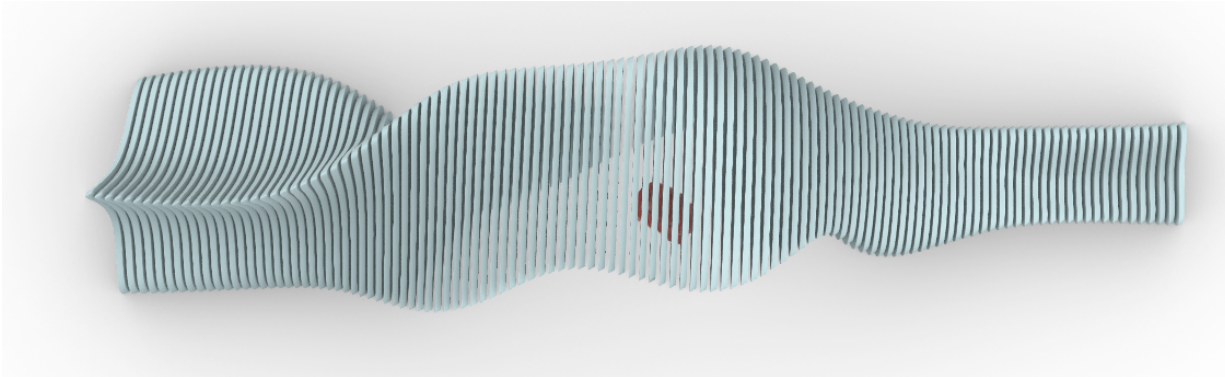
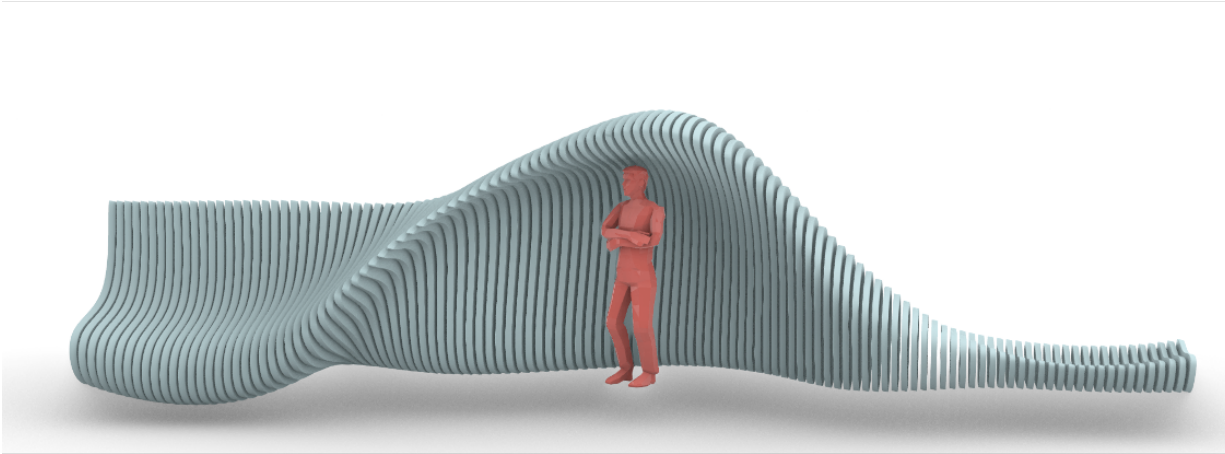


EXTRUDED

3



Parametric Bench-Renders



05

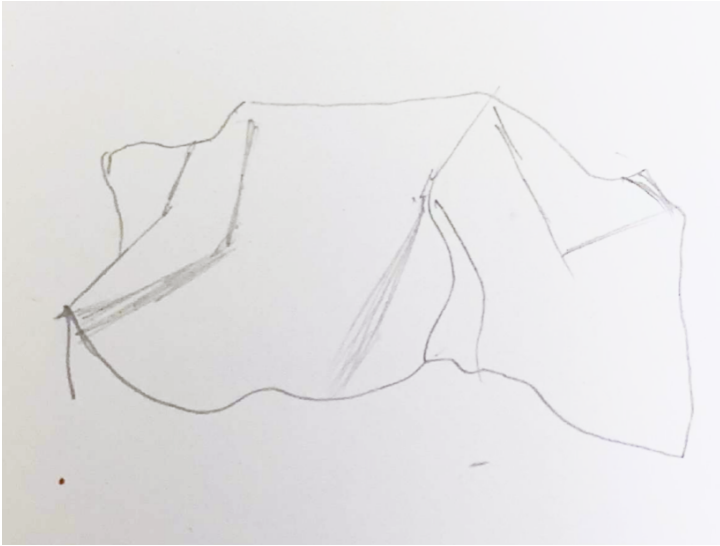
Innovation in Design & Human Centered Design

Shweta Manikshetti

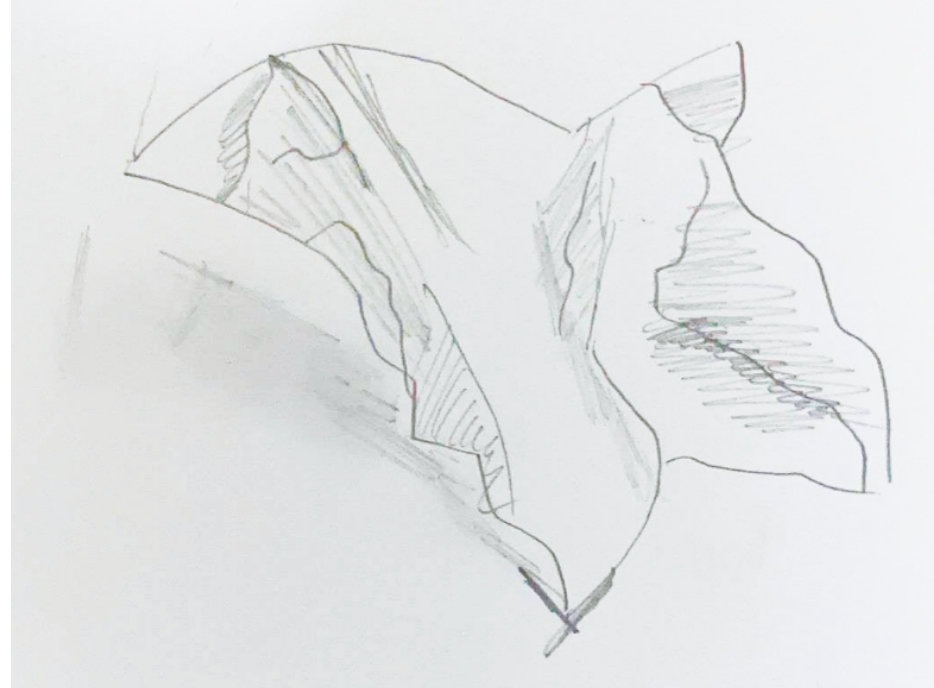
Crumbled Paper

Drawing the crumbled paper in a minute or two with as much details as possible.

Attempt 1



Attempt 2



Learning from this task includes:

1. Importance of observations while sketching
2. Noticing how light reflects and creates inner shadows
3. How shadows can help give depth to an image
4. Learned how to fake draw and when can you it.

Sense of Space



1. Relaxing
2. Continuous wind breeze
3. Scent of wet soil, petrichor
4. Fun times of swing
5. Parrots sitting on trees



1. Always bright filled with liveliness
2. Continuous chatter and sometimes intense gossip
3. Noise of Melodramatic Shows and numerous Bollywood movies



1. Cramped but bright
2. Productive
3. Go to place when my back and neck starts to hurt after sleeping long hours on the bed



1. Spending endless nights preparing for engineering entrance exams
2. Stressful memories
3. Cozy but helps me focus on one single thing at a time
4. Parents room so all the memories of parents supporting me during exam times.

Wallet Design – My Ideal wallet

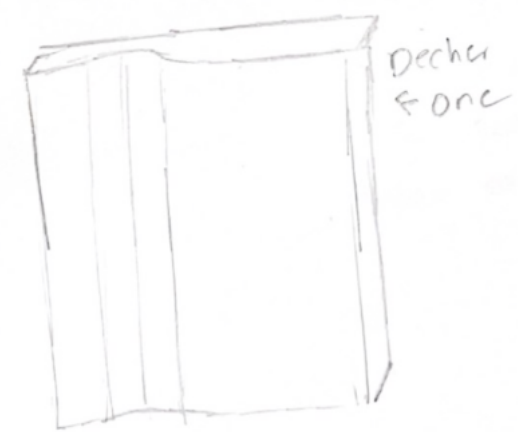
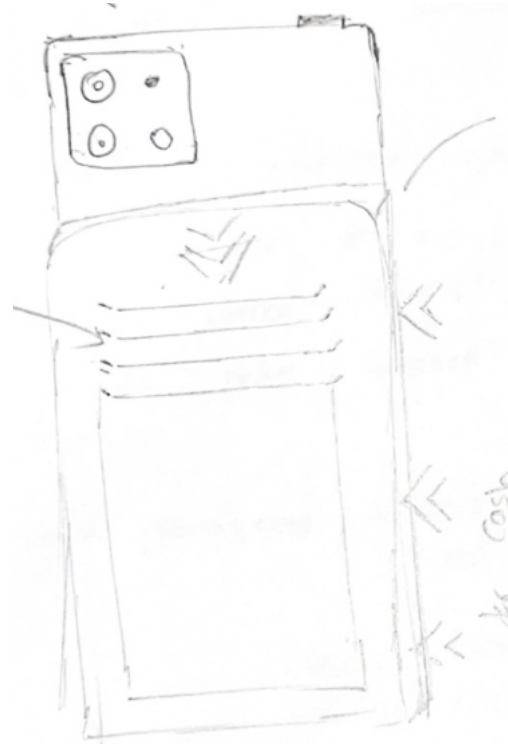
Considerations of design:

1. Easy to take out and add cash
2. Always next to phone
3. Sleek in design and structure
4. Cloth based rather than plastic based

Characteristics:

- Multiple Sleeves for handling cards and ID's
- Portable and Sleek
- Easily Slippable on Phone
- Decker based wallet to have an option to add Cash too in it.
- Compressed at one end for sturdy grip onto cash

Sketches:



Problems:

- Wireless Charging
- Removal of Cash
- Not ideal for cash

Wallet Design - For Partner

1 Interview: Start by Gaining Empathy

Start by gaining empathy

1. Interview (ask open ended questions)

Q1) What according to you is a wallet?

Q2) What constitutes in your wallet?

Q3) What is the most imp/necessary thing you keep in a wallet?

Q4) Where do you usually keep your wallet?

Q5) What is the biggest trouble when using a wallet?

Q6) How often do you take your wallet out?

Q7) How much does the look matter?

Q8) Rating for current wallet 1 to 10

Q9) Rating for next wallet 1 to 10

Q10) Pictures

Abhinav

Digital, no cash, emergency in 500 200

Redesigned pouch

Driving license, credit cards, small pouch, home keys, car keys, extra cash, phone also in pouch

2 Digging Deeper

2. Dig deeper: Dig for a story (feeling, emotions, asking why?)

What's important for your partner who the person is as a person.

Saibaba (coldest friend, believer)

Convincent

Size

length bigger

water proof

black (goes with everything)

backpack

3 Reframing the problem:

3. Reframe the problem

Capture findings - preferred satchel with a utility backpack.

goals & wishes - what is your partner trying to achieve?

A satchel large, secure, waterproof, black in color

Insights - what something you see about your partners esp that maybe he or she doesn't see?

He likes having backups but prefers a satchel as his personal bagpack.

An earnest friend believer.

4 Point of View: *A Satchel of the modern man*

Abinav Kumar a resident of the bustling city of Bombay needs a way to securely & safely keep all his precious belongings in an organised way. He doesn't want to be dependent on anyone to keep his things & most importantly likes to travel light but in style, hence the reason to make for him an item used by the king since the renaissance period but revamped for the modern technophile.

4. Point of view

Abhinav Kumar a resident of the bustling city of Bombay needs a way to securely & safely keep all his precious belongings in an organised way. He doesn't want to be dependent on anyone to keep his things & most importantly likes to travel light but in style, hence the reason to make for him an item used by the king since the renaissance period but revamped for the modern technophile.

A satchel for the modern man.

Wallet Design - For Partner

5 Illustrating 5 radical ways to meet your user needs:

1. Saddle strap to have padding for resting easily/
diff ways for



2. Plain black waterproof material
large in size & lightweight material

3. Small pockets & sleeves
to keep different diff things in organised
way, more compartments

4. Diff. locking mechanism for easy to
use yet be secure from theft.

5. modifiable/customisable compartments.

(highlight the user to defend your ideas)

6 Sharing solution & Capturing Feedback

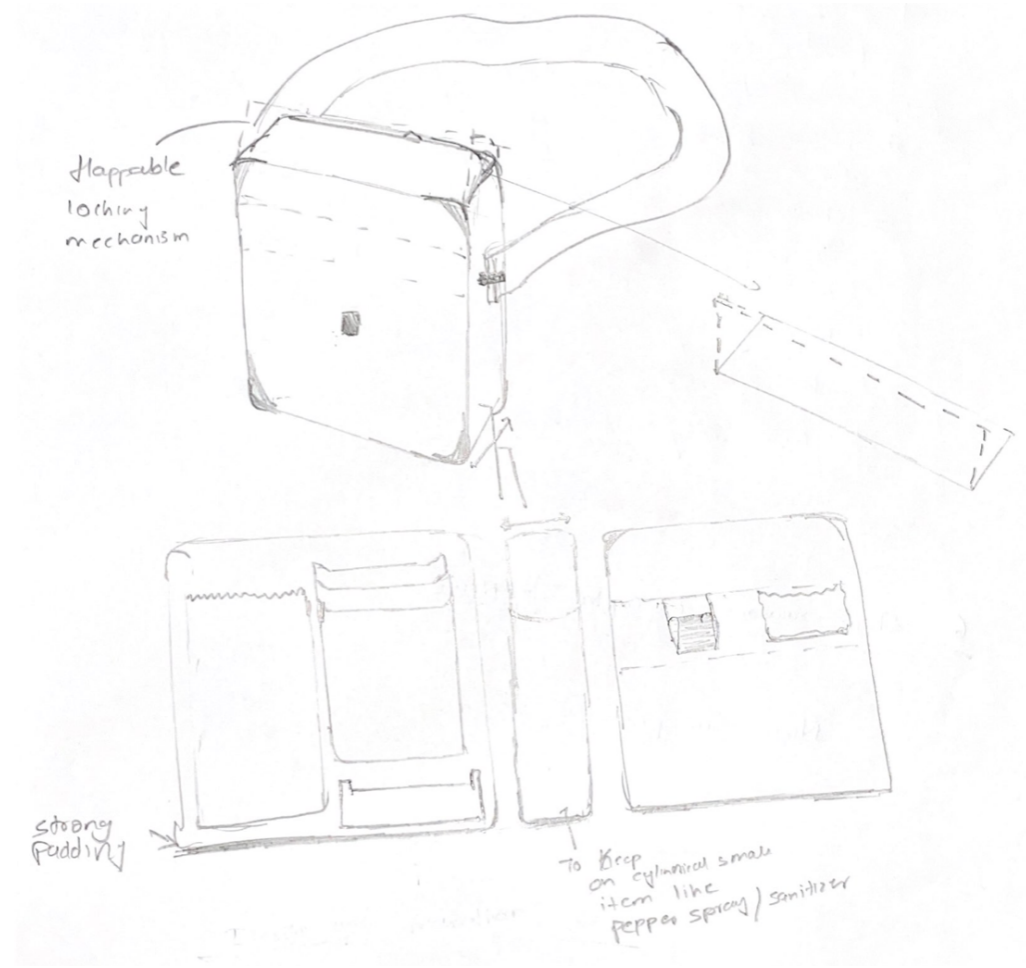
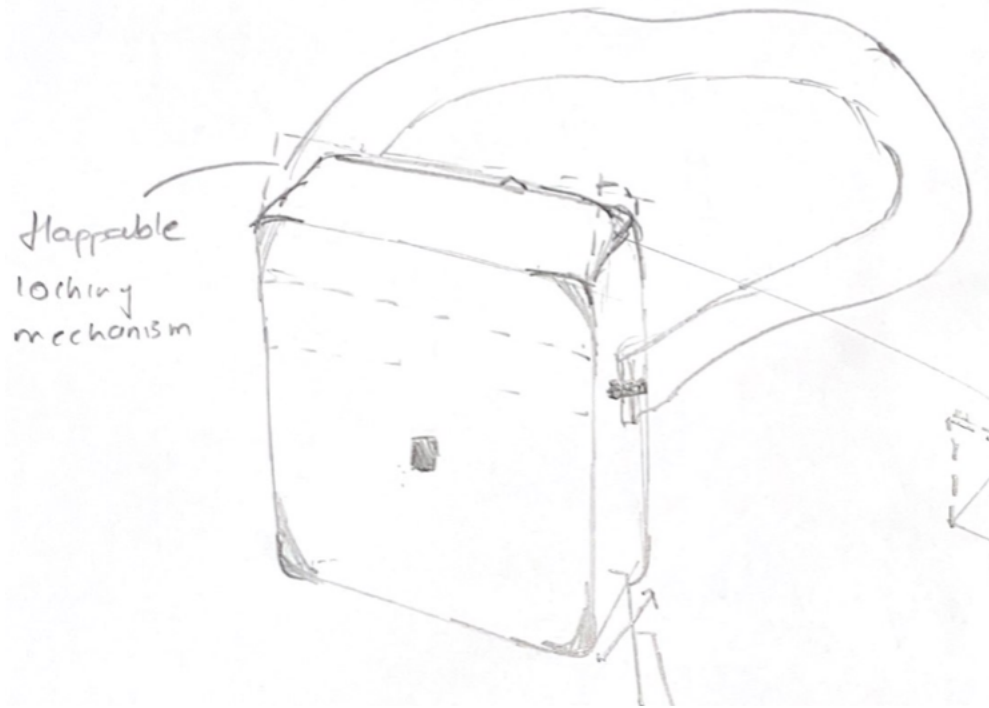
Easily openable
Compartmentalised
Secure
Black in color
Waterproof

6. Share solutions & capture feedback.

Note in particular

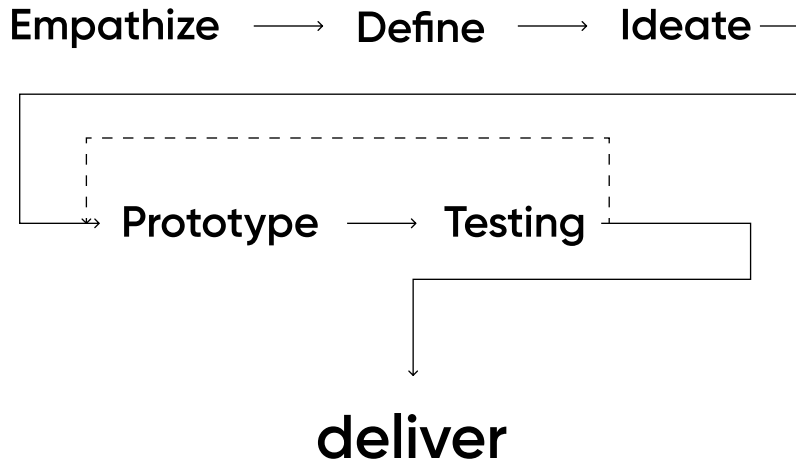
Wallet Design - For Partner

7 Reflecting and generate a new solution:



Design Process Methodologies

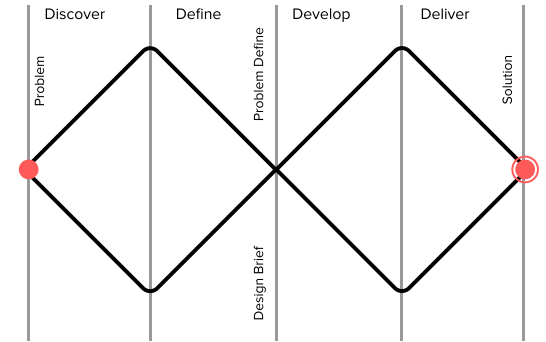
user-centric:



problem-centric:

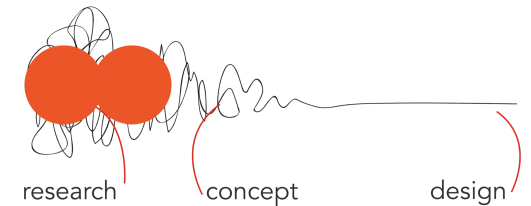
Double Diamond

Double Diamond emphasises on the “divergent” and “convergent thinking”, where first many ideas are created, before refining and narrowing down to the best idea. This is happening twice in this model—once to confirm the problem definition and once to create the solution.



Squiggle Method

The journey of researching, uncovering insights, generating creative concepts, iteration of prototypes and eventually concluding in one single designed solution. Beginning on the left with mess and uncertainty and ending on the right in a single point of focus: the design.



Problem Solving by Design

1 What is the one problem that needs to be solved and must be solved right now?

Transform the field of engineering from a course (theory) based approach to a project based approach
Engineering by definition means - the branch of science and technology concerned with the design, building, and use of engines, machines, and structures

But what colleges are more focusing currently is on just information and theory behind working and not tinkering the minds of the young technocrats to think in terms of developing solutions

2 Tensions (Finding reasons why this problem really exists?):

- Economic Times points out that 20-33% out of the 1.5million jobless engineers in India are passing out every year to run the risk of not getting a job at all, most things they learn in college translates little to none in the real world
- Theory based approach although gives students a lot of knowledge about the problem but helps little when it comes to utilising it in real life.
- 90% of the male probably not fit enough to be called engineering colleges but students still take admissions either to call themselves an engineer or to fulfil their parent
- The theory based approach focuses more on intellect (which will soon be replaced by computers) rather than the creative problem solving skills.

3 Ideal Scenarios (What If's):

- Instead of Learning about Fluid dynamics and Vibrations in the last semester, we start engineering an aircraft wing from first year of joining college'
- Instead of different departments, we have different hobbyist groups - interested in learning and developing a particular thing they always wanted to'
- Rather than giving marks based on how much you can remember on paper, you can get rewards for how much your product best suits the problem you tried to solve
- Rankers get replaced by most innovative project
- Classroom's get replaced by just huge and open lab
- Teachers get replaced by alumni or engineers who have built the product that you are trying to build.

4 Coming up with something preposterous:

- They don't ask you for which department do you want to join instead they ask what is it that you want to build?
- Instead of conducting lectures in college, they just open up all the labs and ask us for just a final big project.
- Have exhibition like college crunch (tech crunch for college) rather graduation ceremony.

Extra Info:

- Plausible - Something probable but unlikely.
- Probable - What is likely to happen
- Possible - What we know that can already happen
- Preferred - Ideal Scenario
- Possible and probable are based on events already occurred now.
- Plausible and Preferred are dependent on your ability to bring that change that you want.

Thank You!

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