

# Wrap

Experiments of curating indoor  
objects with a quilted fabric system

Master Thesis by Junhan Zhang  
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**LUND**  
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## **Wrap**

**Experiments of curating indoor objects  
with a quilted fabric system**

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## Abstract

The purpose of this project is to explore the relationship between people and their home environmentt.

In modern apartments with limited space, the distinct silhouette of individual furniture becomes blurred when they are placed alongside numerous other objects. Sometimes, people unintentionally overlap or layer these items, further blurring their boundaries.

Inspired by this observation, I began experimenting with textiles to actively merge various objects found in living areas.

The system I developed is based on layers of stitched patterns. A plaid pattern is used to enhance the overall appearance, secure the puffy batting, and allow for cutting or folding in different directions. Lone lines can be transformed into straps for wrapping, while closed shapes are incorporated to ensure the joint furniture piece maintains its original functionality.

The soft silhouettes from quilted fabric offer possibilities for interactions between people and the objects.

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## Introduction

During my six-year journey in the realm of art and design, my focus has always been about the profound connection between objects, ourselves, and the world around us. I've come to realize that no design exists in isolation; it thrives and evolves within its environment. What truly fascinates me is how objects can take on new meanings as they interact with their surroundings, and how our surroundings shape our creative process when designing products.

Coming from an artistic background, I tend to value the emotional resonance of an object more than its problem-solving capabilities. For my Master's Degree Project, I want to delve deeper into this approach. I want to explore the hidden emotional values that permeate our daily lives and see how they can offer practical value. It's an honest exploration, rooted in simplicity, aiming to bring forth a genuine connection between design and our lived experiences.

## Where I Started

In our living spaces, large and small products abound, and due to the constrained nature of modern apartments, the interplay between these objects is much closer than one might imagine.

When a chair finds its place within a room, it never stands alone. It becomes a gathering spot for books, clothes, and even dishes, while tables host an array of items and extension sockets hide beneath their surfaces. Nearby, refrigerators hum alongside shelves teeming with countless other possessions.



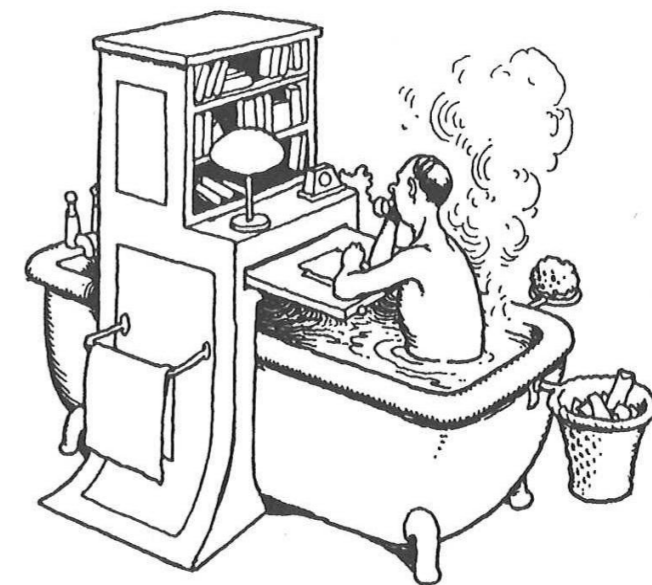


After being showcased in product shots, where it stands alone and grabs all the attention within a spacious photo booth, a product can never replicate that feeling of emptiness once it is purchased and placed among hundreds of other items in a real home.



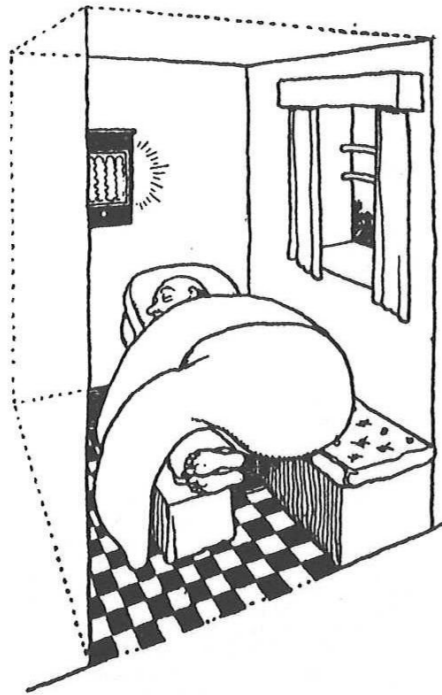
Heath Robinson shared his imaginative perspective on living in small apartments in his book, *"How to Live in a Flat."*

The book showcases Robinson's drawings portraying everyday life in Britain after the First World War. Within the limited space of compact flats, he presents creative solutions for saving space. For instance, he combines a bathtub with a writing desk, allowing business professionals to work while enjoying a shower.



*The Combination Bath and Writing Desk  
for Business Men*





Bedroom Space Economy

*"Equally noteworthy is the tendency to combine things, so that nearly every article of furniture is something else as well. ... It is hard to say precisely what purpose is served by joining everything together in this fashion; but there is no doubt that those who like this kind of thing will find it just the kind of thing they like."  
(P.44-p.47)*

The motivations behind combining furniture may vary, whether it's for space-saving purposes, time efficiency, or innovative merchandising. Regardless of the underlying reasons, furniture combination continues to hold promise even after a century has passed. In today's world, where apartments often lack efficient space and people, particularly the younger generation, frequently move from one place to another due to life's uncertainties, there is a need to explore new ways of merging furniture to adapt to our current living environments.





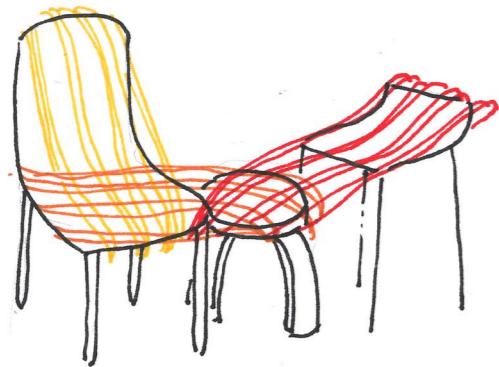
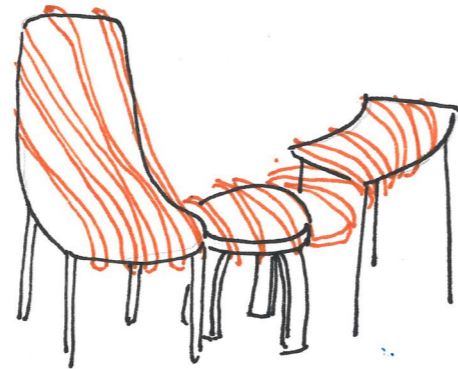
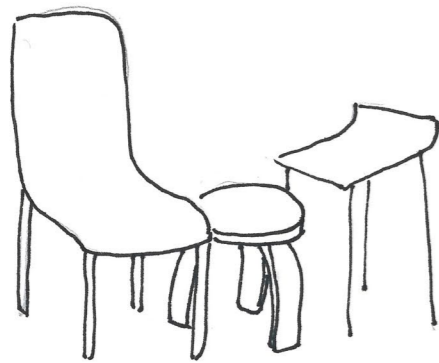
Despite the space-saving benefit, merging objects together also brings interesting views on how furniture can be in people's daily lives.

In fact, we have already been unconsciously engaged in the practice of "building our own furniture." One of the finest illustrations of this can be found with "the chair" that many of us keep in our bedrooms. Regardless of the brand, material, or outward design, these chairs eventually assume a similar appearance when concealed beneath layers of dirty clothes. The chair's distinctive features fade away, and its form becomes smooth and indistinct as it melds with the surrounding garments, resulting in a new, softer shape.

## Brief 1.0

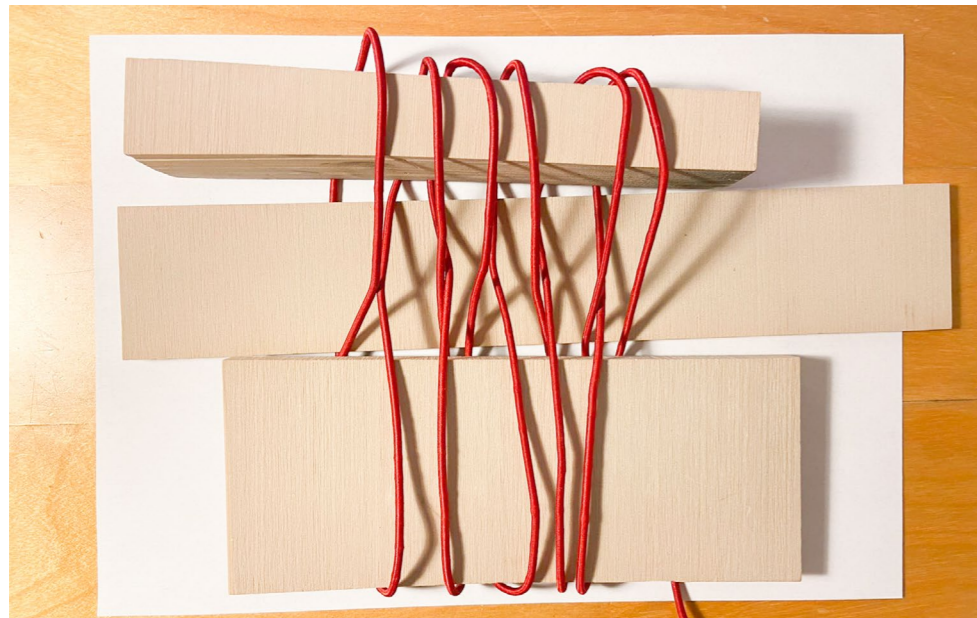
I started to examine the placements and relationship between the home furnitures. They each have their own clear outline and function, but features become blurry when multiple of them are next to or overlapping each other.

What will they be like if they are intentionally arranged or grouped together?



## Experiment 1.0 - Rope

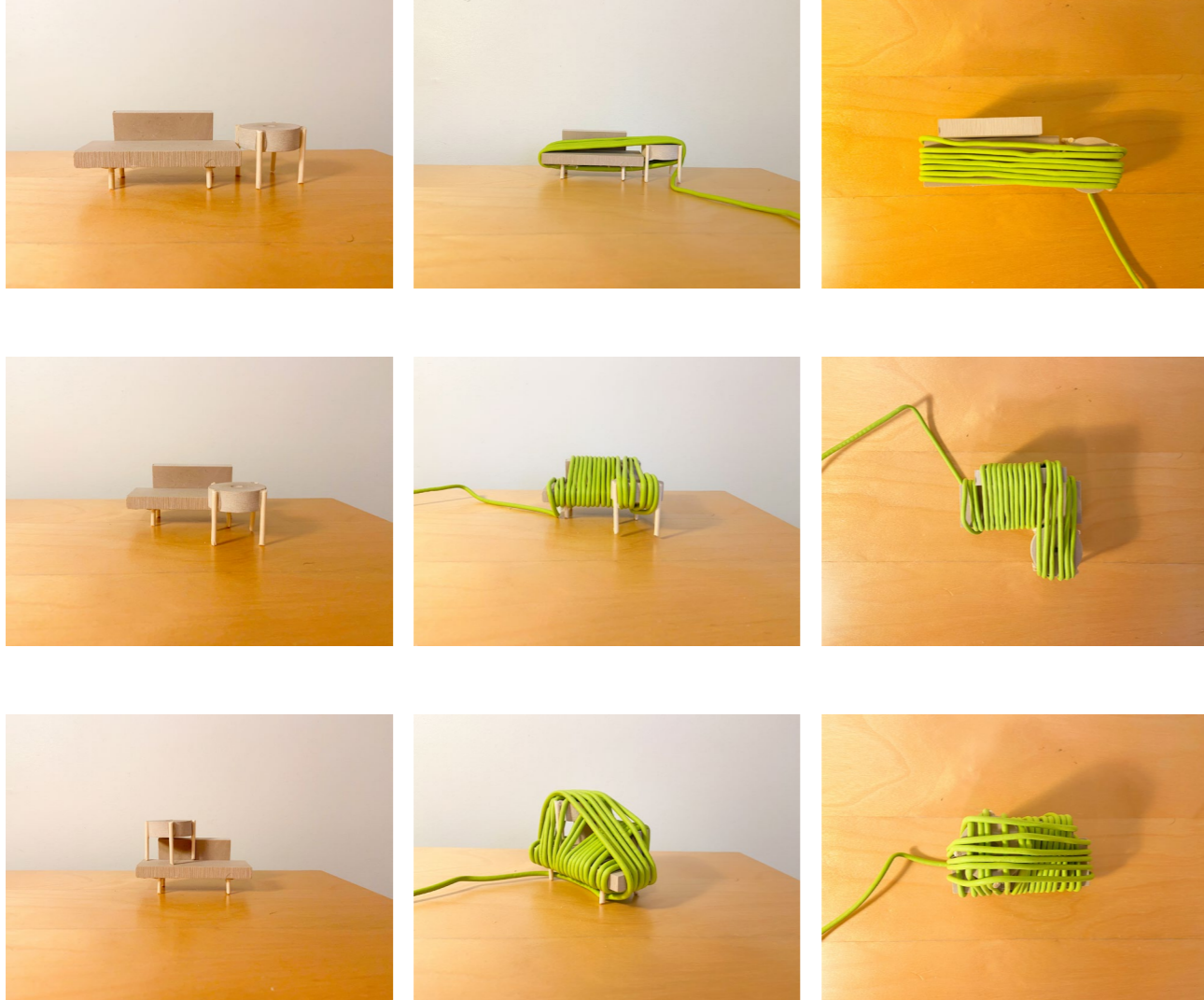
Use only rope to group the objects.



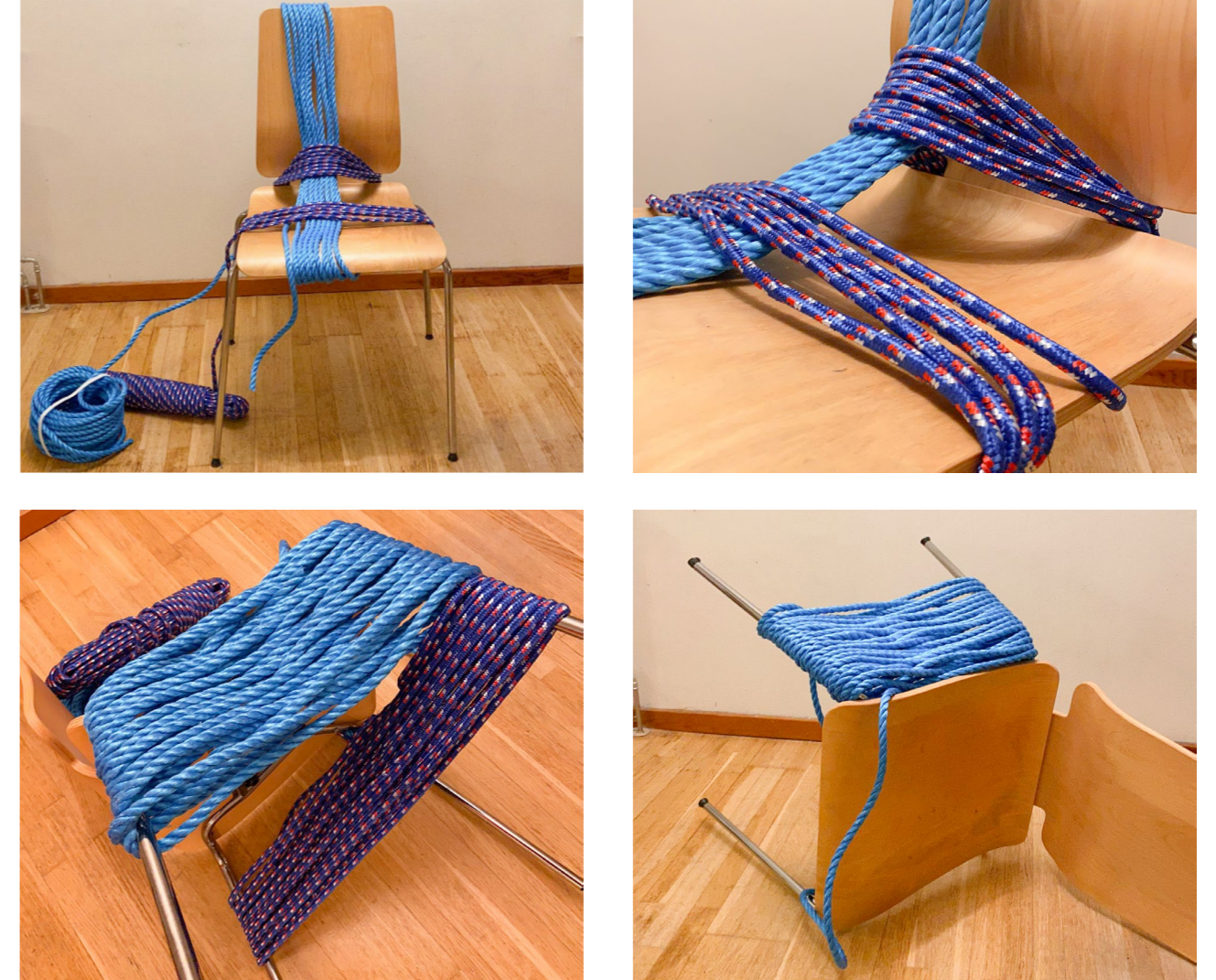
I had the idea of using rope first. Rope is a strong material often used to wrap and tie multiple objects together.

I found wooden blocks of varying widths and heights to create a rough representation of different household objects. I then wrapped a rope around them in different ways to see how the rope would act as an additional layer on the blocks.

It seemed that the rope served the purpose of joining the blocks together, while also covering and smoothing their edges.



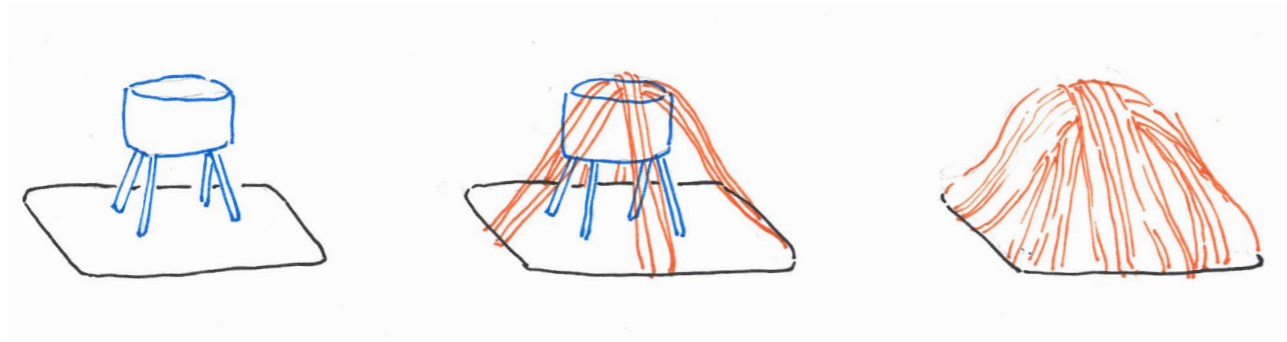
testing rope wrapping on scale models



testing rope wrapping on real furnitures



To reduce the number of ropes required for wrapping, I pondered whether it would be feasible to incorporate an additional frame on the floor and secure the ropes to it. This approach would necessitate fewer ropes and make tightening them easier.



However, the drawbacks of this method became evident. For the frame to serve its purpose, it would need to be affixed to an interior surface, like the floor, effectively rendering the merged object immobile. Moreover, attaching a frame to the floor through screws is neither practical nor aesthetically pleasing.



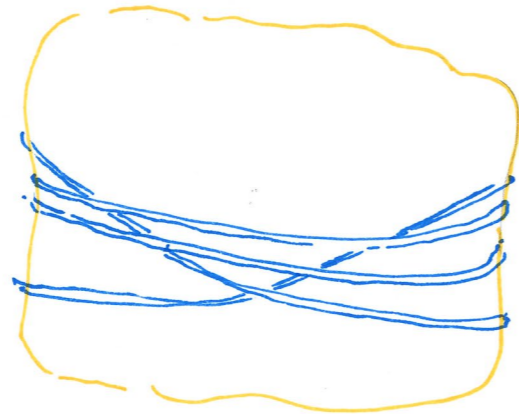
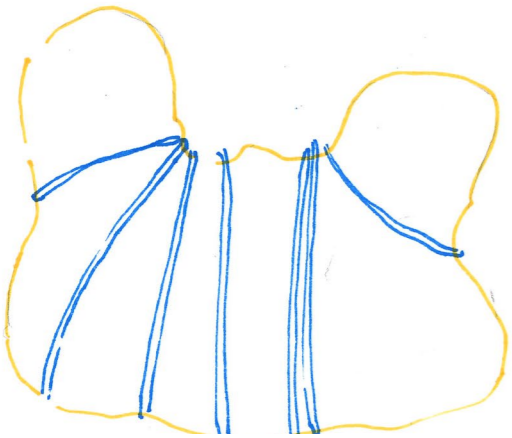
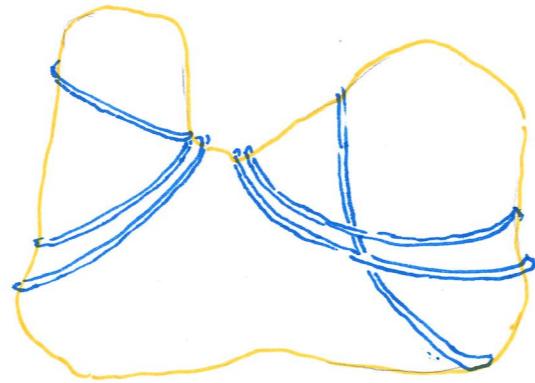
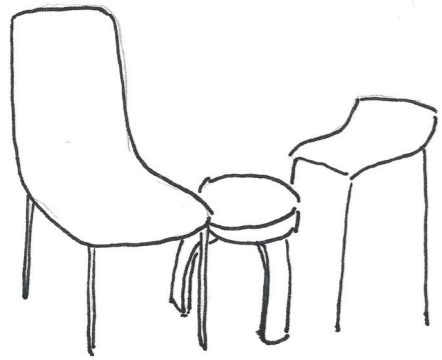


The experiment revealed the downsides of using rope for wrapping objects.

While the rope seemed to cover the surface well on the scale model, I faced difficulties in the process. Due to the different shapes of the objects, there were limited angles and positions to securely wrap the ropes.

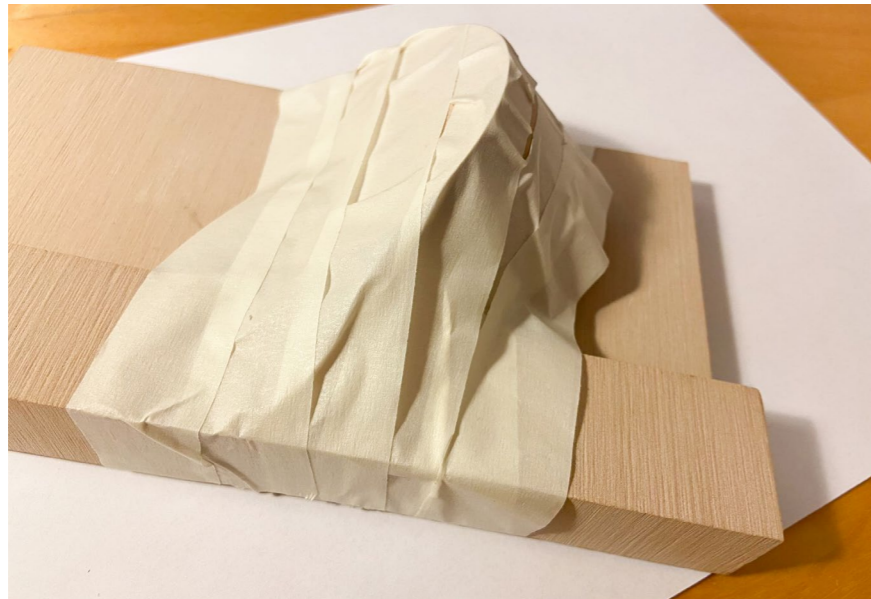
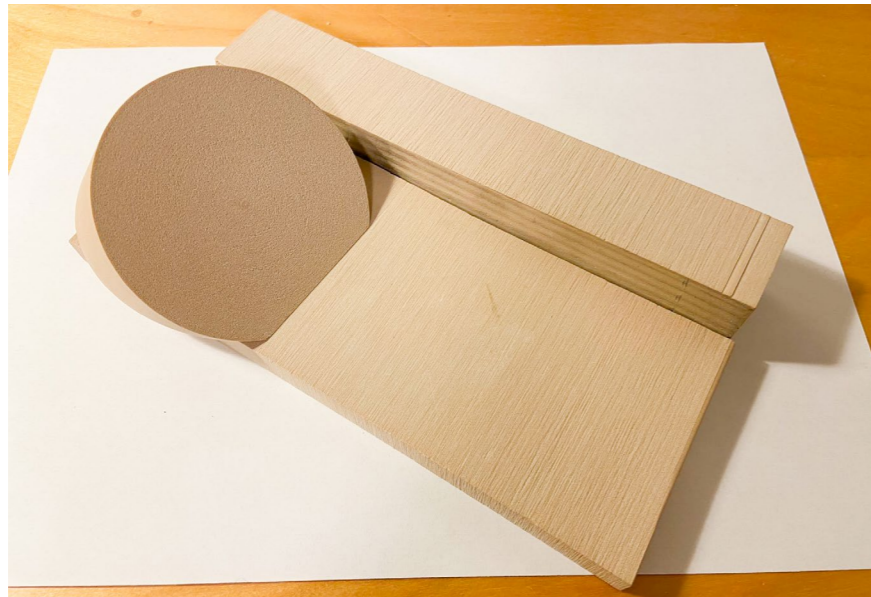
These challenges became more evident in the full-scale experiments. Not only did I struggle to wrap the ropes around the chair, but I also realized that a significant amount of rope was used for just a small part of the experiment. Almost half of the 30-meter nylon rope was gone before I even finished covering a quarter of a single dining chair.

Although using only rope as the covering material created a unique appearance and blurred the object's shape, it was not practical for actual products. The process was not easy, and a lot of material was wasted.



## Experiment 2.0 - Rope & Fabric

Use fabric to cover the objects,  
and then use rope to secure.



To begin, I gathered some scrap wood pieces in various shapes, representing different household objects. I initiated the experiment by using masking tape to soften the edges. With two to three layers of tape, the once sharp edges became smoother, and the transitions between shapes became more seamless.

Next, I applied this method to actual furniture, using masking tape to fill the gaps. By simply bridging the space between two dining chairs, they transformed into a bench. Additionally, when I inverted one chair and connected the silhouette from its foot to the back of the other chair, they took on the shape of a lounge chair.

At this stage, the test pieces are not functional, but they effectively demonstrate the potential of what a joined object can become.



During the process of wrapping the objects with cloth and rope, I drew considerable inspiration from the works of Christo and Jeanne-Claude, particularly their art installations of packages and wrapped objects. Their creations showcased the captivating and enigmatic beauty of everyday objects, their forms obscured yet alluring. However, there is a distinction in our approach. While the artists stripped away the practicality of the objects to preserve their essence, I sought to explore the potential for new practical values that lie beneath the veil.





I continued my experiments by covering the scale models with a cloth and using a rope to attach it. Encouraged by the results, I decided to try the same method on a larger scale. I put a big blanket over a second-hand plastic chair I found. Just by covering it with the cloth, the light weight chair transformed into a cozy armchair.

To add more to the composition, I placed a second-hand floor lamp with loose joints behind the chair and used the rope to hold everything together. This created a new object—a "lamp-chair" or a "chair-lamp". It gave me a fresh perspective to see them merged into one, still serving their original functions. The flaws or age of the individual objects either disappeared or added a charming touch, like the slanted pole of the floor lamp.

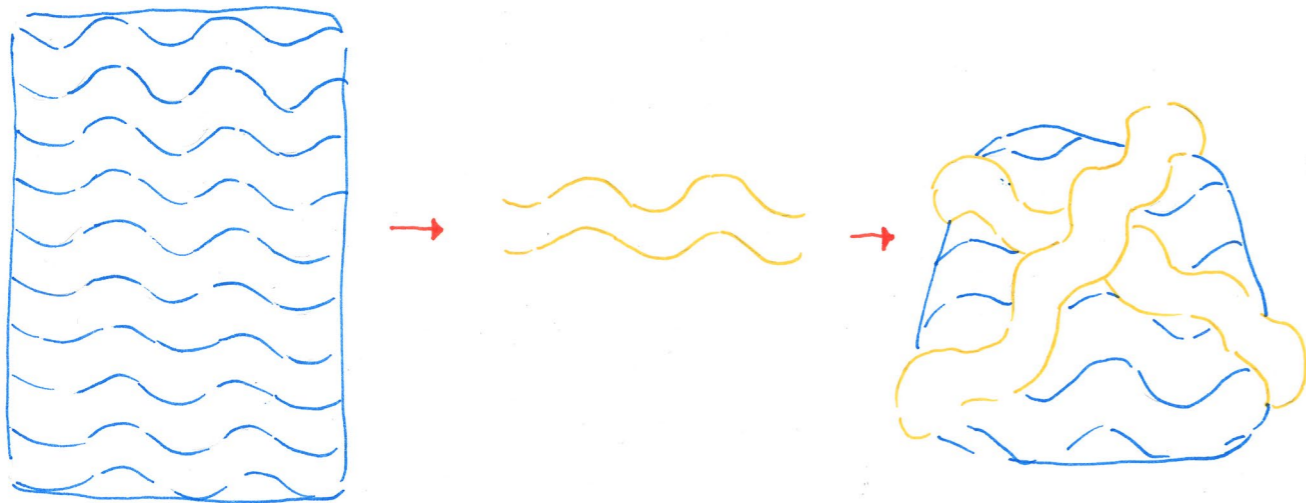
I also tried the same technique on a side table and a transportation trolley, resulting in a square chair with an oval backrest.

These experiments showed me the potential to create unique shapes by combining different objects.









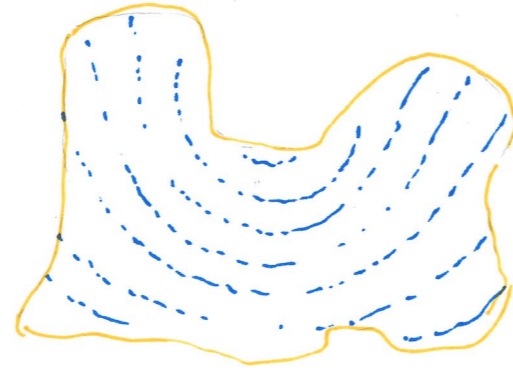
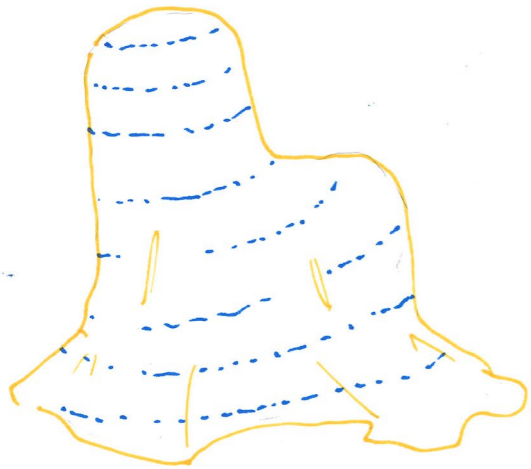
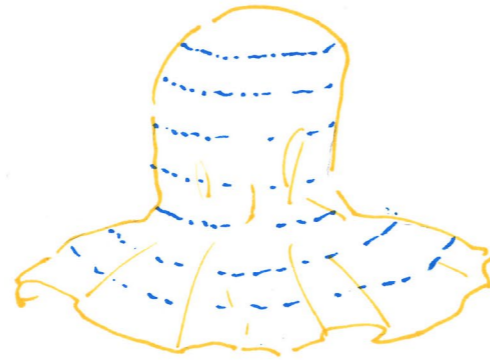
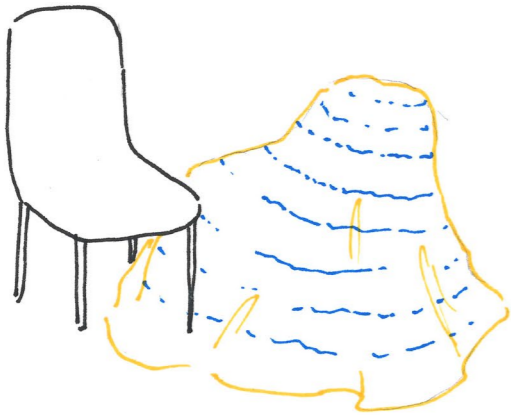
Experiment 3.0 -  
Pattern over Pattern

Use wavy rope on wavy pattern.



Building upon the previous successful method, I decided to explore further possibilities. While working with fabric, I discovered the charm of the patterns found on duvets. One particular pattern that caught my attention was the continuous wavy lines. I noticed that within the duvet, these wavy stitches provided a guide for securing the polyester fibers inside. This led me to consider incorporating the wavy feature into the rope, envisioning an intriguing combination of multi-layered 3D waves.

In the prototypes I created, the visual effect was indeed looking good. However, I encountered challenges of finding a universal length of rope to fit various securing sections or creating an extra-long and puffy rope that could be tightly fastened around the covered objects.



## Experiment 4.0 - Blanket with Closure

Design a blanket with specific  
dimension.

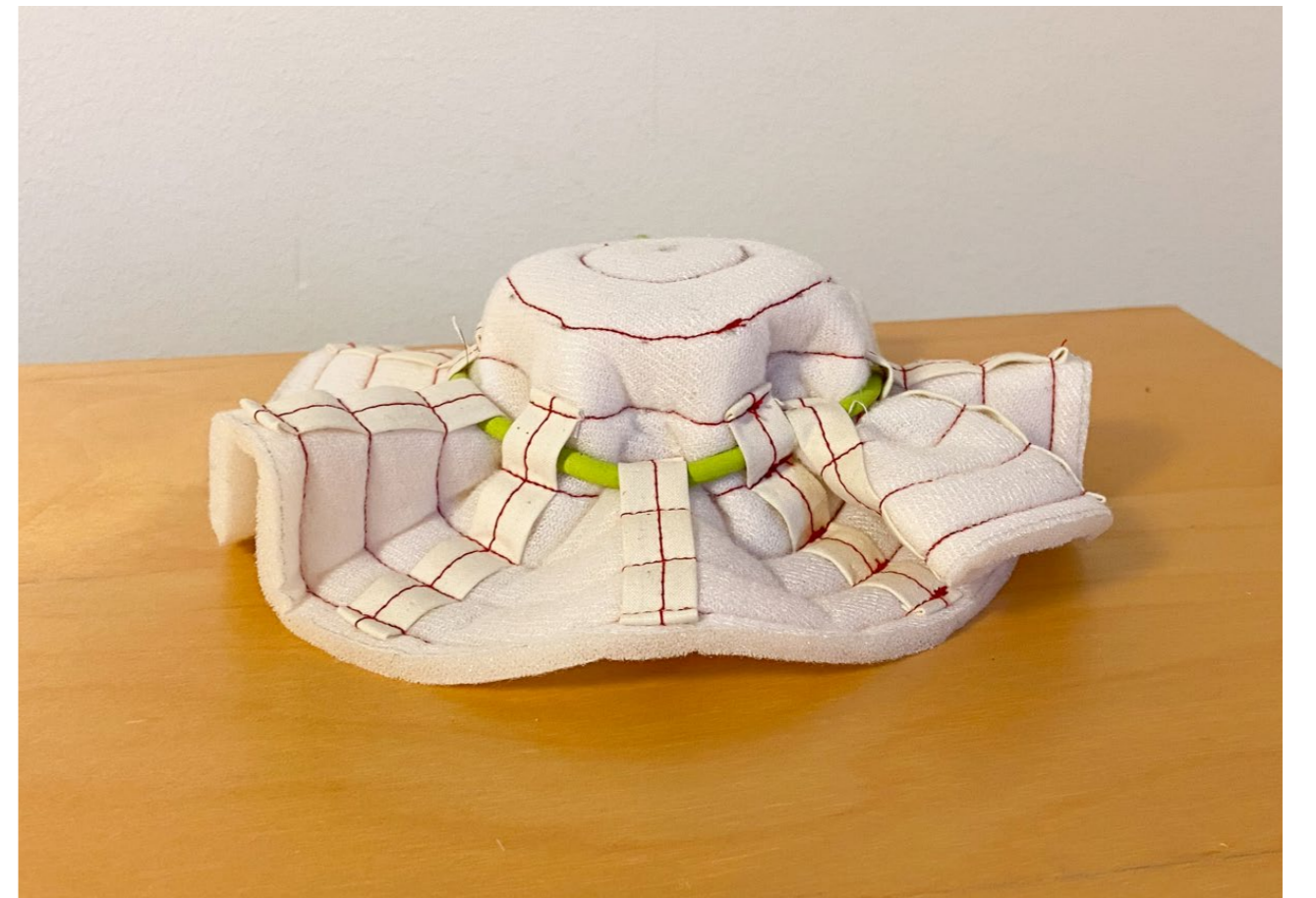


After the less successful attempts with rope variations, I shifted my focus to exploring the potential of the cloth. What if the rope and cloth were combined into a single unit?

With this idea in mind, I created a circular blanket as the foundation and added multiple loops all around it. Using concentric circle stitches, I replicated the evenly-spaced quilting stitches found on duvets and used them to secure the loops. This allowed a rope to be threaded through different sections of loops, enabling it to cover objects of varying sizes.

During my tests on the models, I found the stitch lines to be fascinating. The underlying shapes influenced the direction of the stitch lines, resulting in unique patterns on each object. The loops also aided in keeping the rope in place on the blanket.

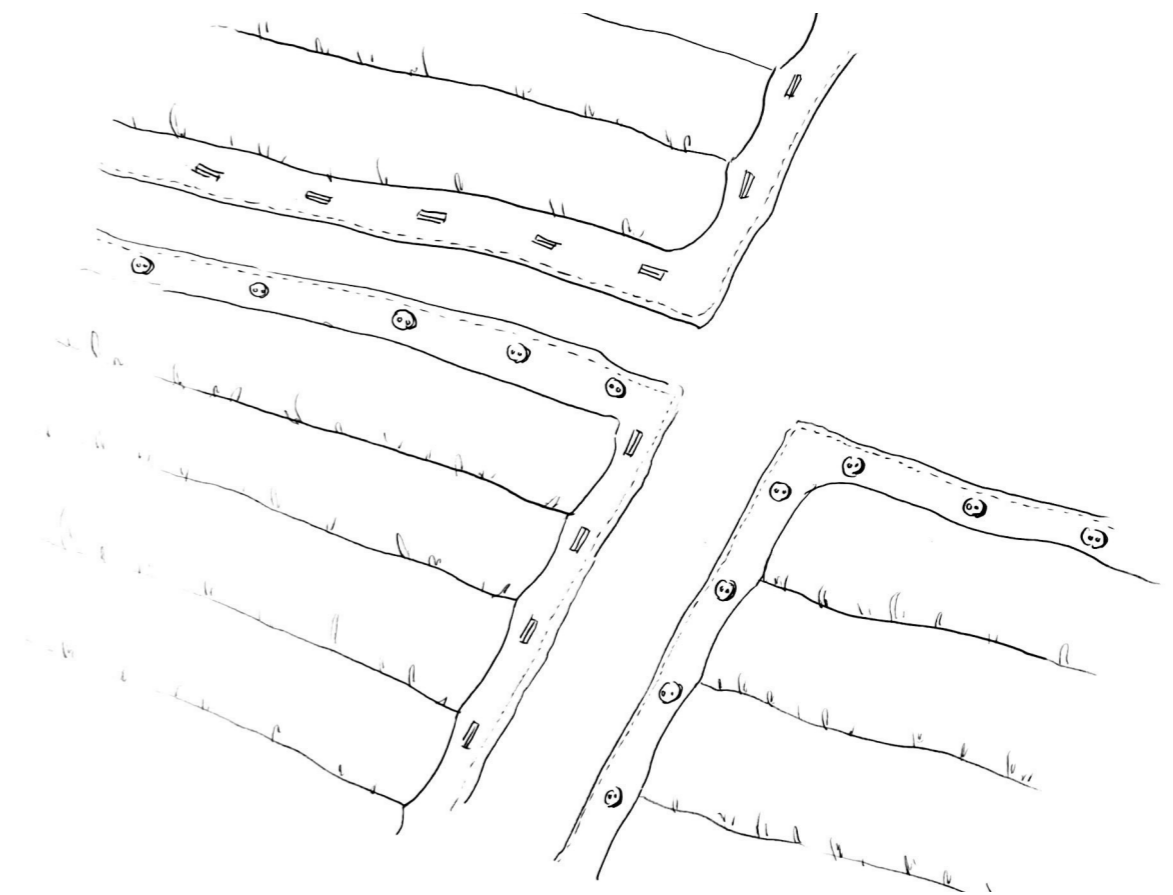
However, I encountered a limitation: one size could not fit all. If the object was too large, the blanket would not be able to cover it entirely. Conversely, if the object was small, the excess fabric on the floor could pose a hidden tripping hazard.





I also thought about making the blanket size adjustable by adding buttons or other closures on all sides. This way, the blanket could be made bigger or smaller depending on the need.

While this method may work theoretically, I sensed that this approach was getting too complicated for what I originally wanted.



## Likes and Don't Likes

After conducting the experiments and tests presented in the previous pages, I reviewed the results and analyzed what elements I wanted to retain and what aspects I wanted to discard.

What I liked:

1. The puffy patterns created through quilting textiles.
2. The flexibility of having an undefined size for the materials used.
3. Minimizing the involvement of separate elements.

What I don't want:

1. Complexity in the assembly process.
2. One-size-fits-all solutions that may not work for all objects.
3. Using too many different materials.

By understanding these preferences, I can now move forward with a clearer direction and focus on refining my approach to merging objects.

Where should I go from this point?

Should I design a series of blankets in different sizes?

Should I design a bulky "rope" material?

Or should I design a

## Quilted Fabric?

## Brief 2.0

Design a quilted fabric that serves as the merging method for objects, incorporating both covering and fastening features.

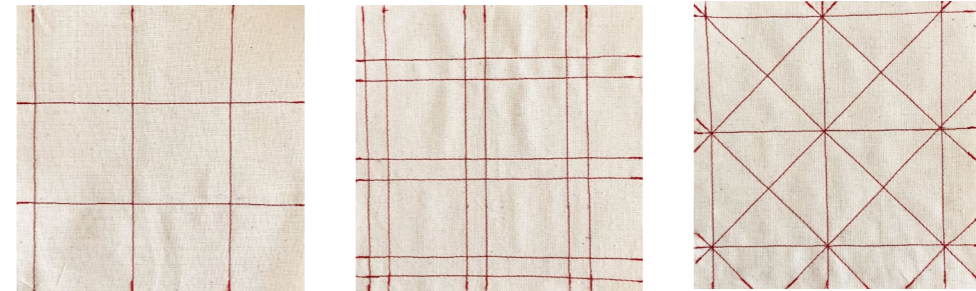


## Key Elements

I have divided the fabric into four main parts:

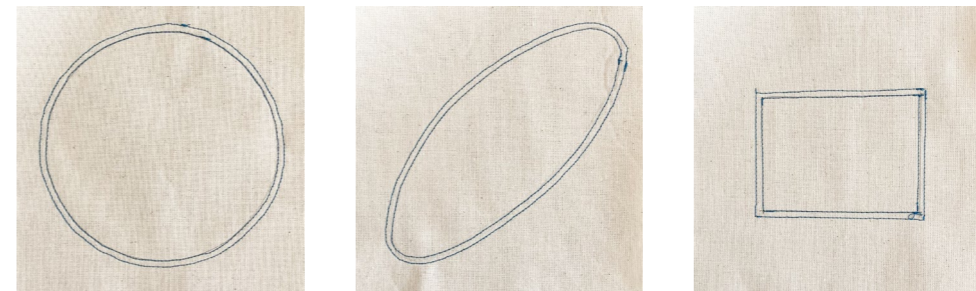
### Base quilting stitches

These stitch lines serve to secure the fillings and also act as cutting guides if the fabric needs to be resized to fit different objects.



### Cutting Holes

These closed shapes are cut out to allow functional parts, such as clocks, luminaires, and switches, to remain visible through the fabric covering.



### Straps

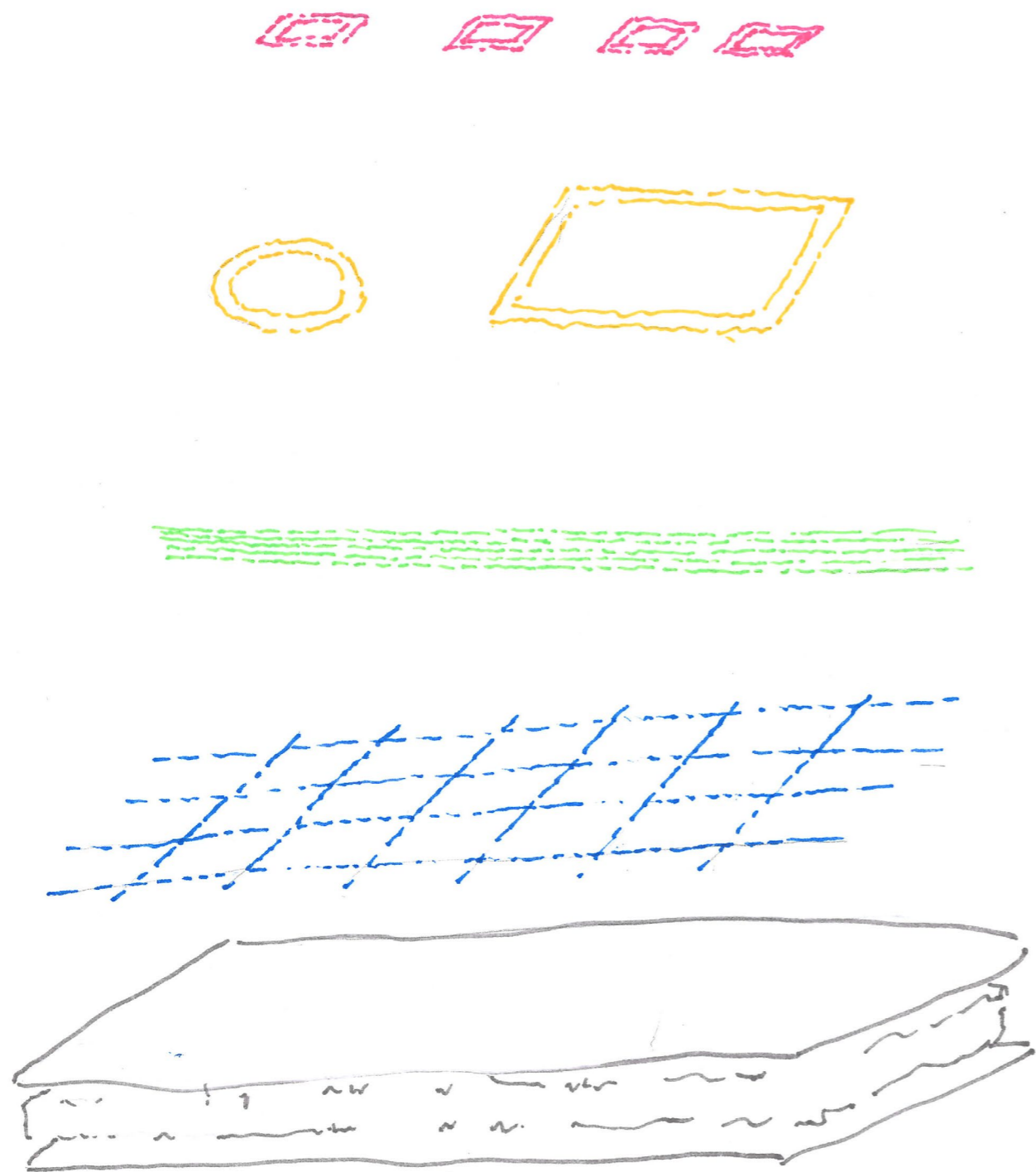
These long continuous stitch lines are made to be cut as the straps.



### Slots

These narrow slits are made to be cut open and allow straps to go through. The slots can either be individual shapes or incorporating with the quilting stitches.





slots

+

cutting holes

+

straps

+

base quilting stitches

=

the quilted fabric



The experiments in this project are playful, as is the colour palette.

## Prototypes Making



The decision to create a yardage fabric for the product was limited by the available materials and funds, so I opted to make a sample piece measuring 0.8 meters in width and 2.2 meters in length.

However, I encountered an immediate challenge when trying to create the prototype using an industrial straight stitch machine. The the batting between the top and bottom layers of felt fabric proved to be too thick, and the narrow space beneath the machine arm made it difficult to position the material for sewing. Even the simplest straight stitch became a challenge during the prototype phase.



## Prototypes Making

I was lucky enough to be able to find this lovely lady, Diane, who lives in Värnamo with her 2.6-meter wide long arm quilting machine.



I carried all the material to her home studio. With the help of the machine, I could try something that had been impossible for me to do by myself: a wave pattern.

First, we drew parallel wavy lines on pattern paper. Then, using either a laser or hand control, we traced these lines onto the layered fabric. Working together, we successfully created a 2.5-meter-long sample in just 4 hours, which was a significant improvement in speed compared to the week it took me to make a similar piece on my own.

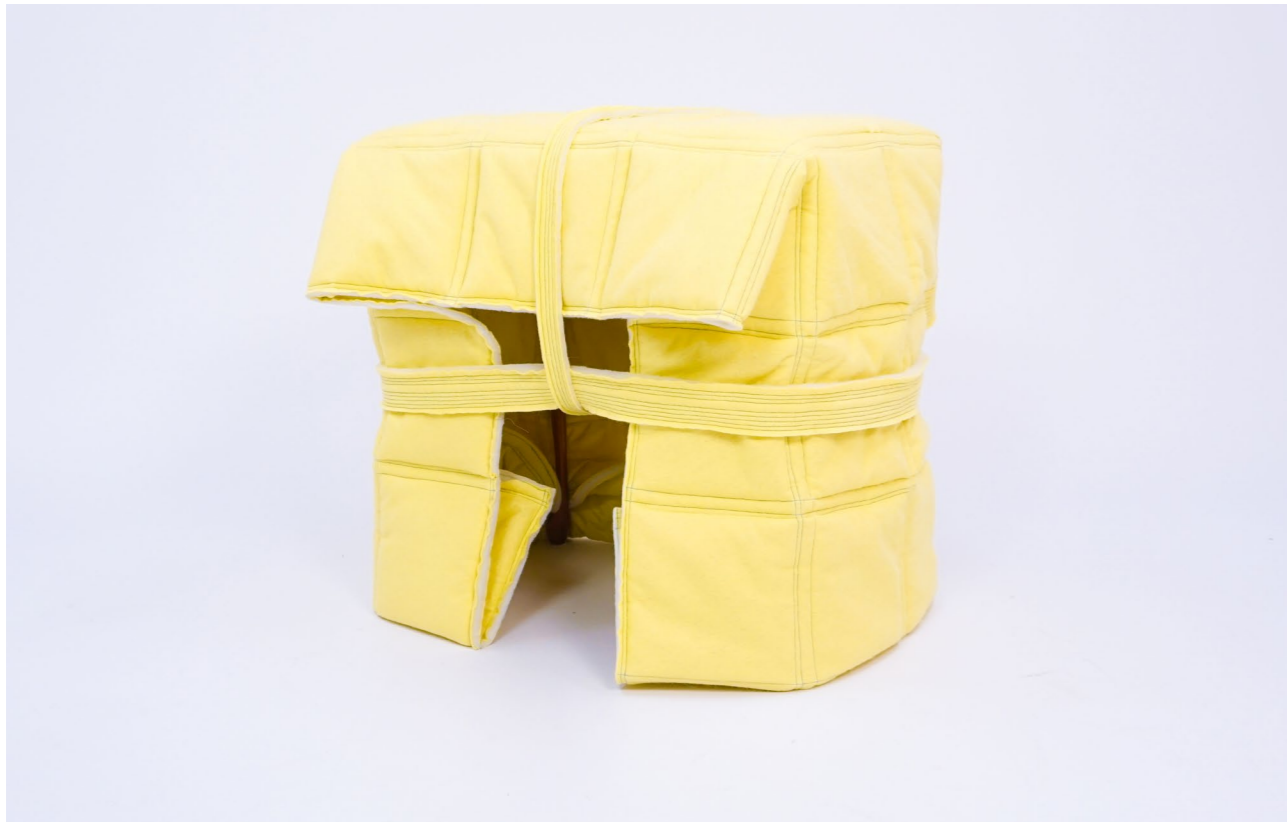


## The "Furnitures"

And here is how the "fabric"s happen to be like.



The "Furnitures"



A table? A chair?

Or a bench?

The "Furnitures"



Maybe a sofa?



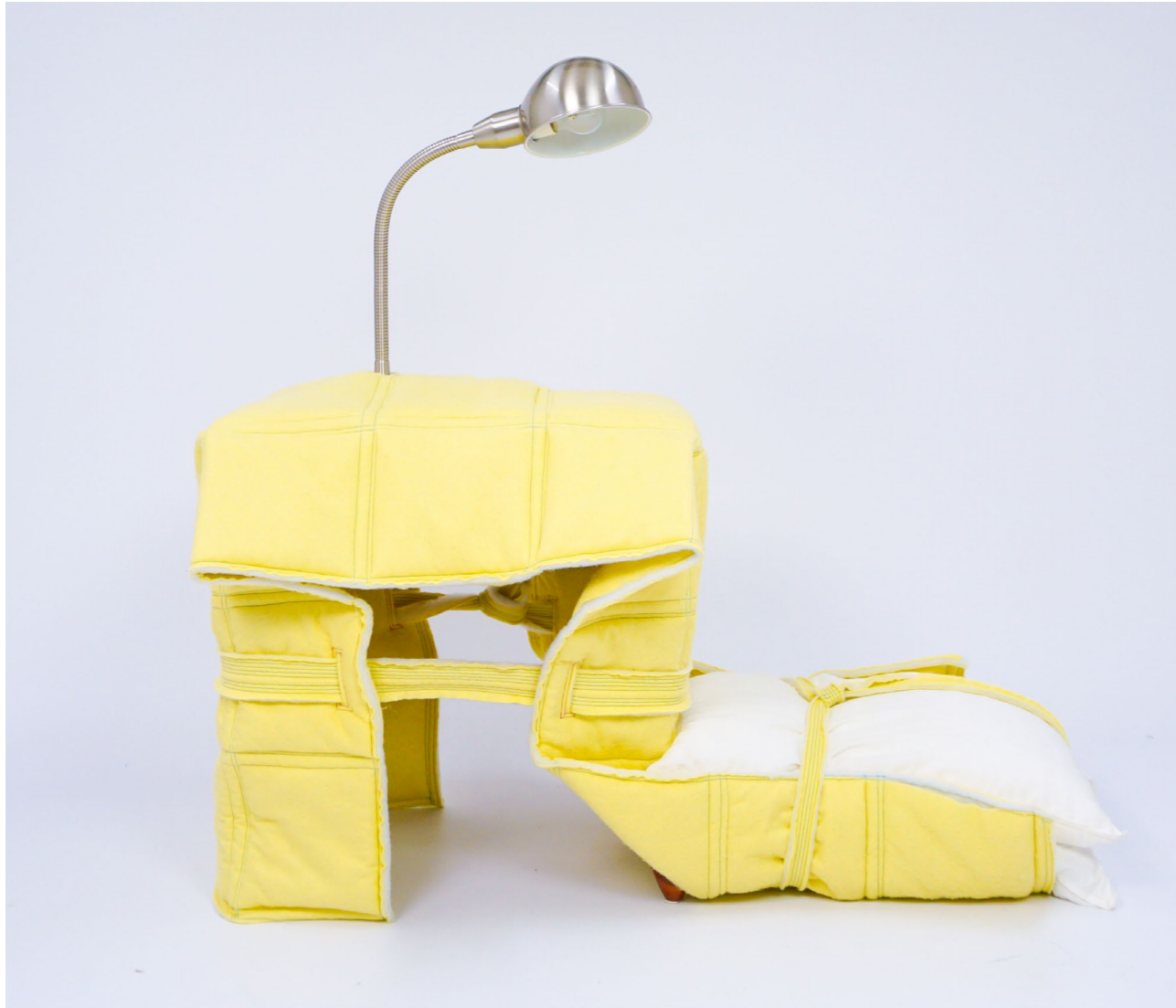


## The "Furnitures"



A floor lamp?

The "Furnitures"



A cushion-lamp-table?



Or a million of different things.

## The Future



The result is playful and fun and certainly have its very potential towards the future market.

The final product would be yardage fabric, and theoretically, with the help of the long arm quilting machine that includes a computer, the stitch lines can be programmed and then stitched by the machine automatically, which will be much faster than the making process of both prototypes.

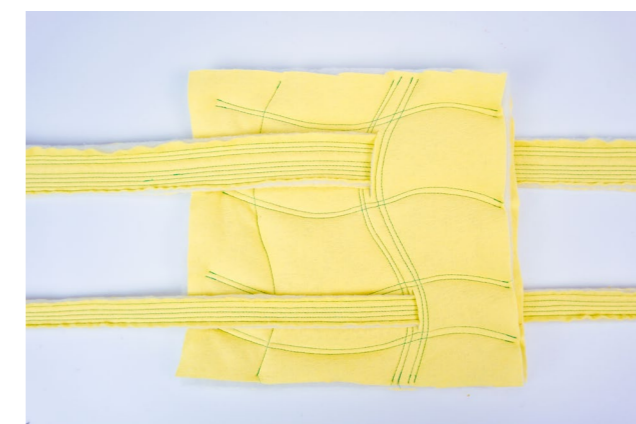
People can access the fabric in two ways in order to achieve a lovely merging object at home.

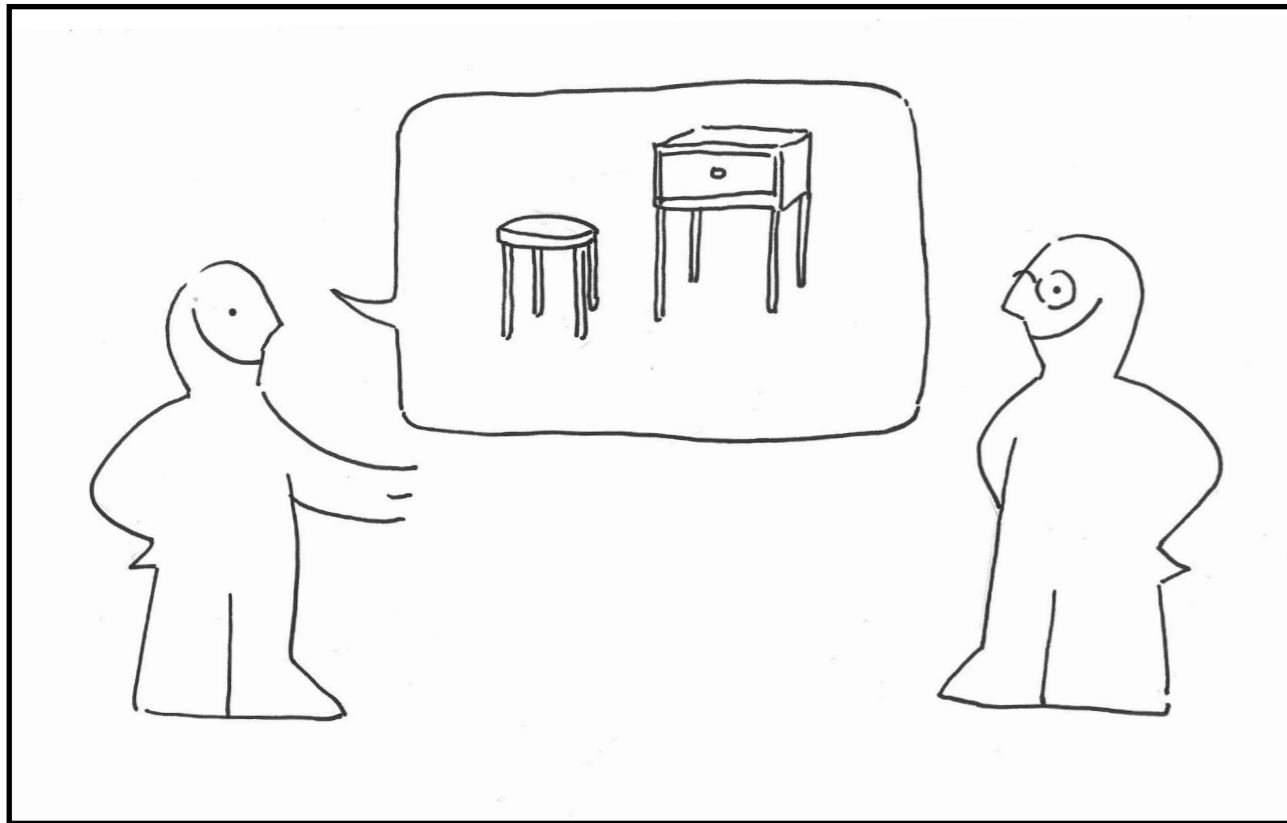
### 1.0 Let designers design

Designers have exclusive access to the fabric. Individuals bring their objects to designers, who then determine the arrangement and method of wrapping. The fabric is tailored precisely to suit each unique design.

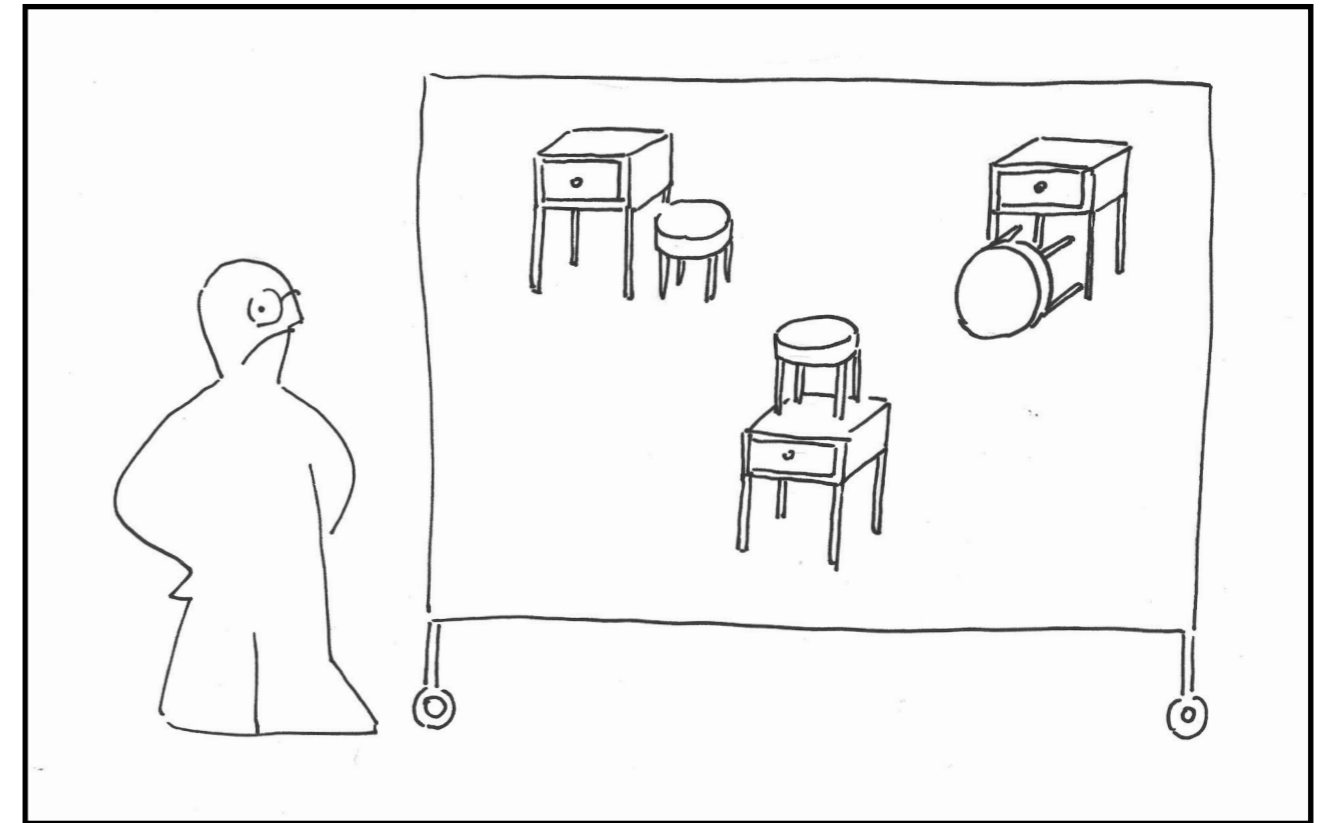
### 2.0 Let people design

People can visit fabric retailers or stores to obtain the desired length of fabric. They are then free to unleash their creativity by cutting and wrapping the fabric according to their personal preferences.

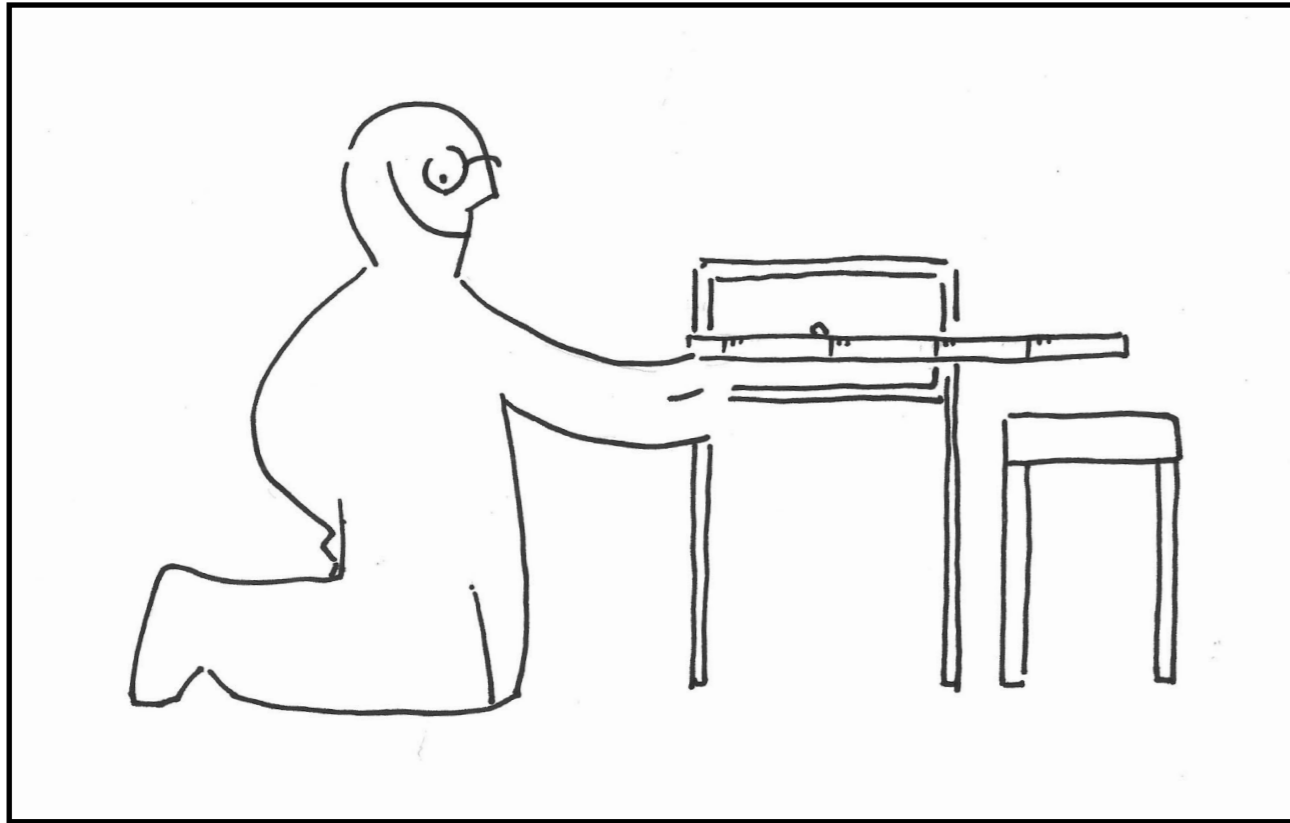




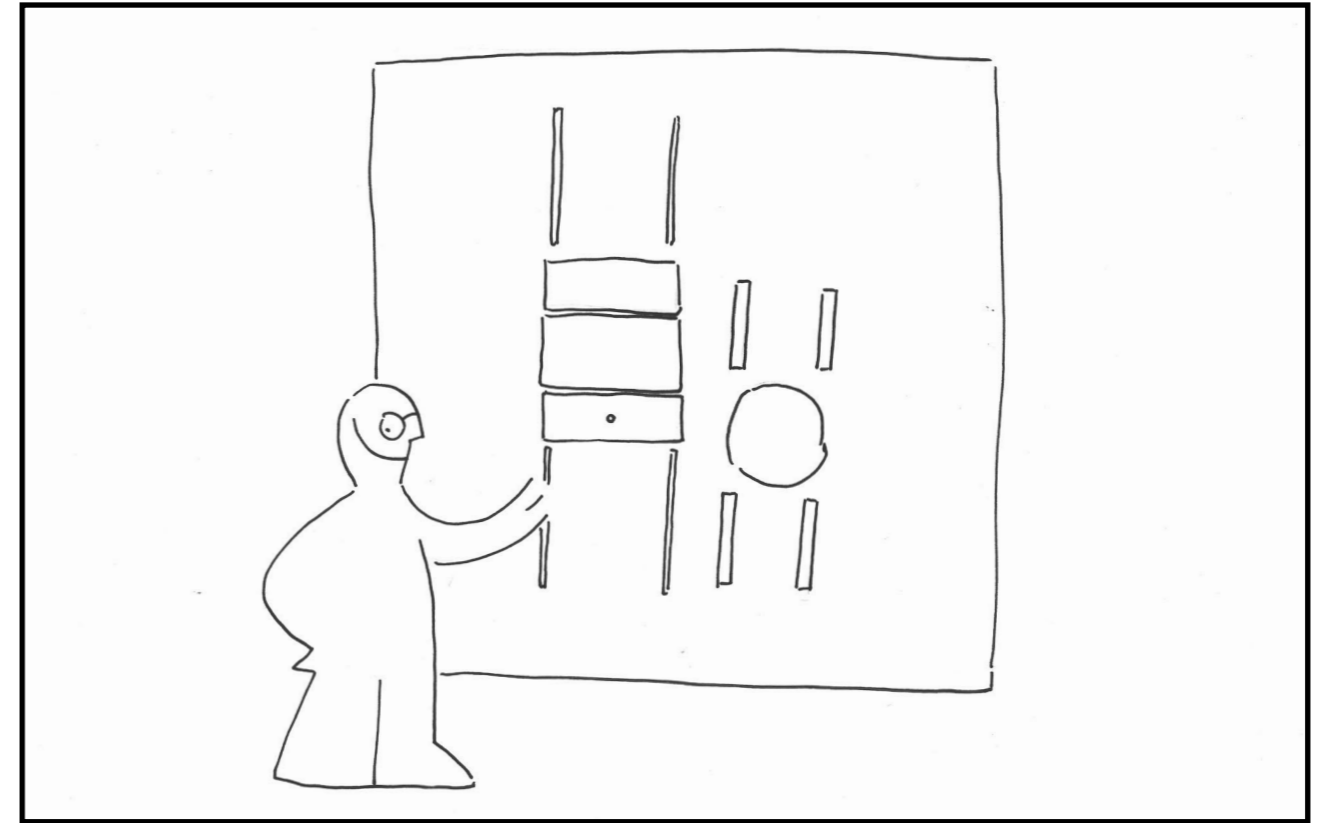
Customers choose the objects and communicate with the designer.



Designer curates the arrangement of the objects.

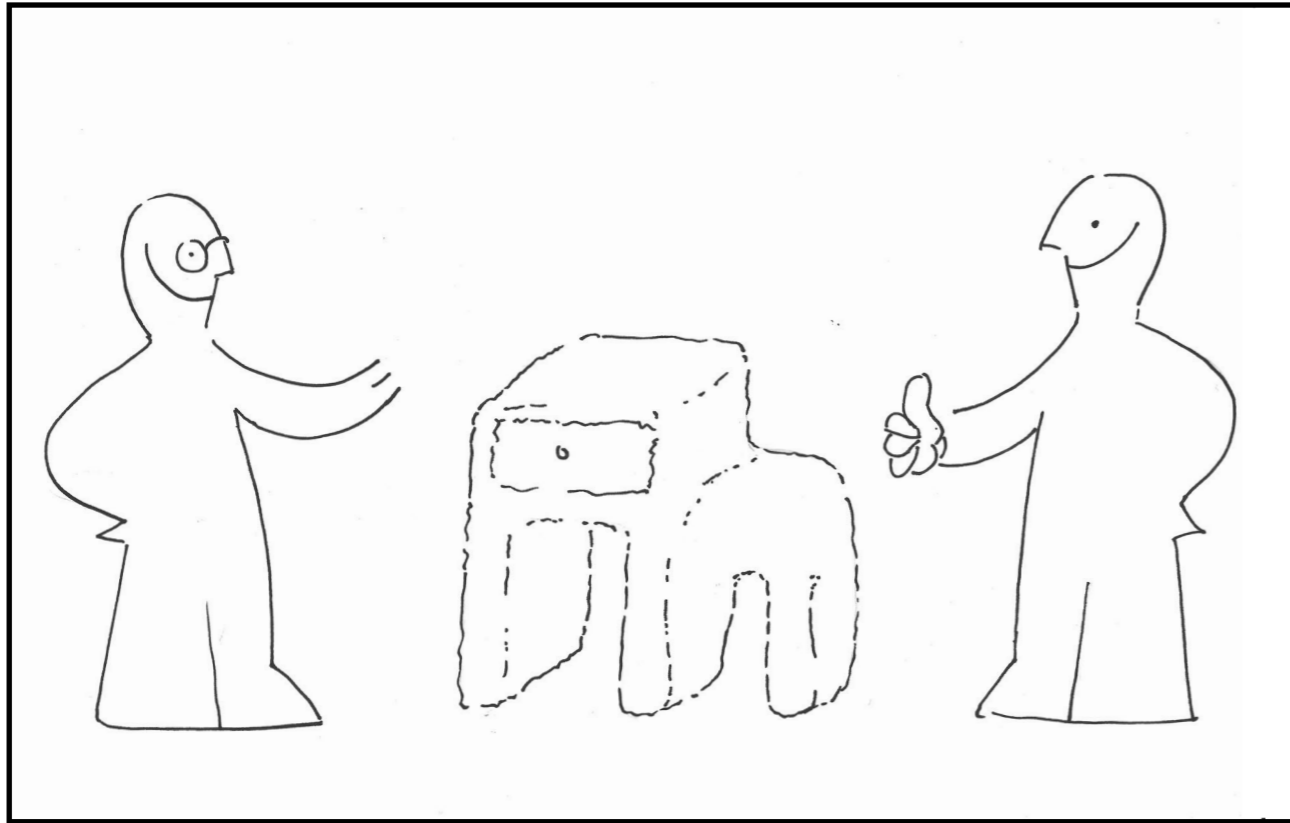


Designer takes measurements from the objects.

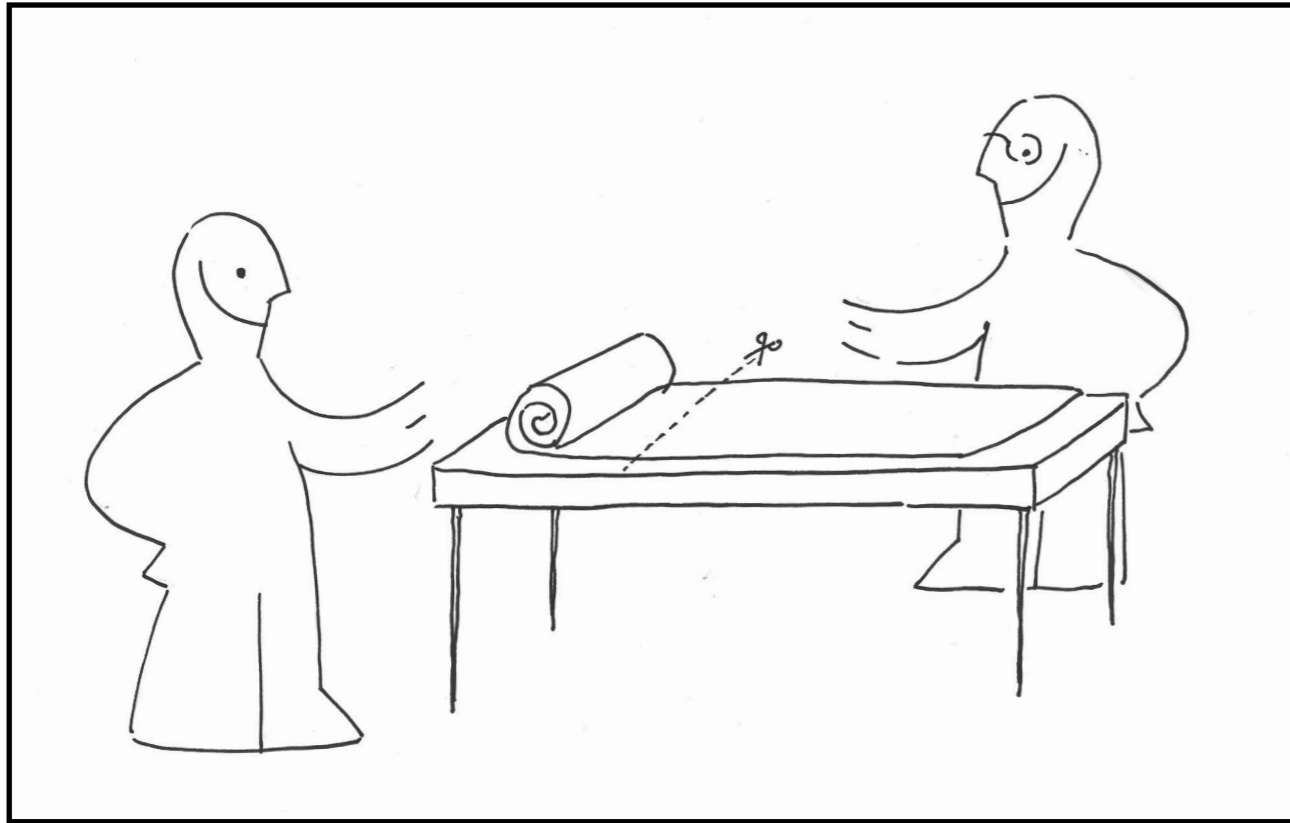


Designer applies the measurements to the fabric for the cuts.

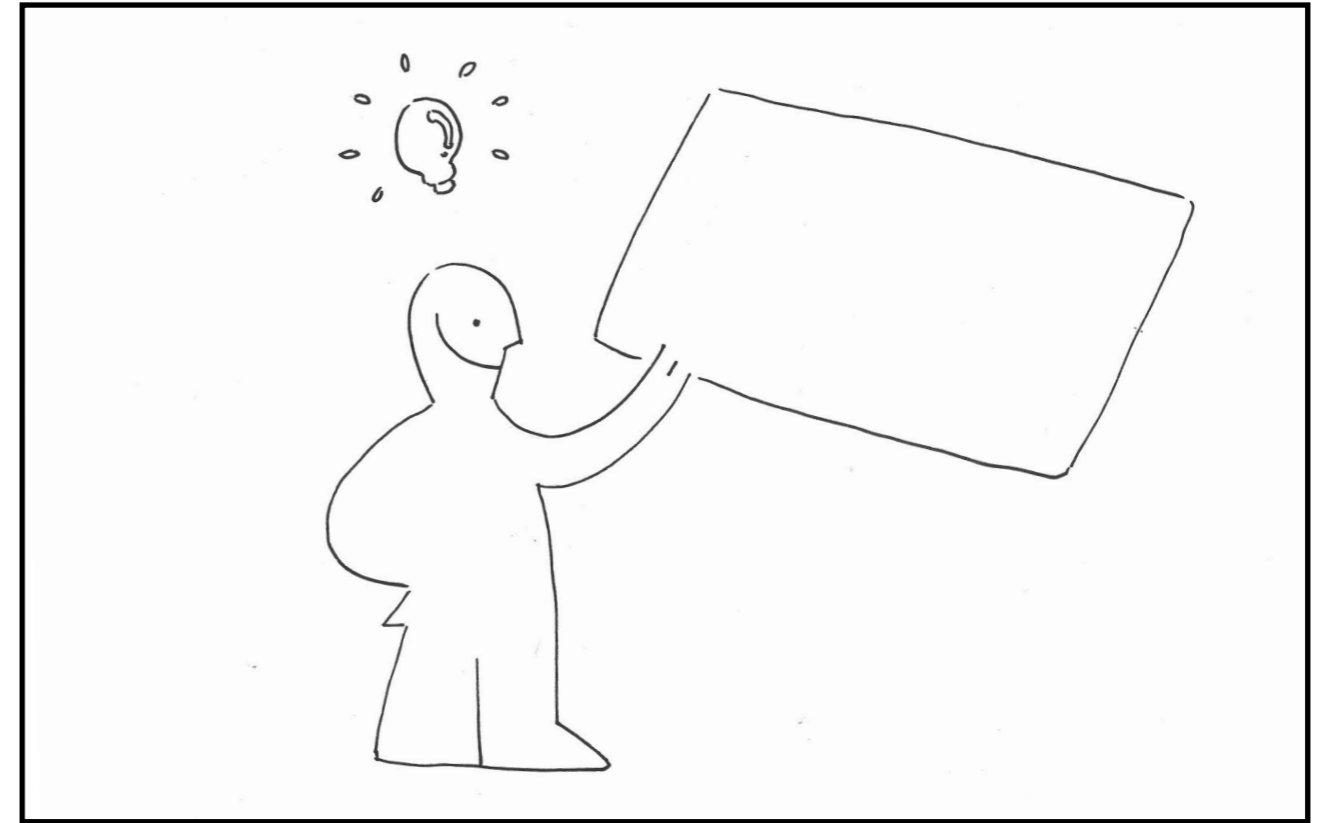
Potential 1.0



Done!

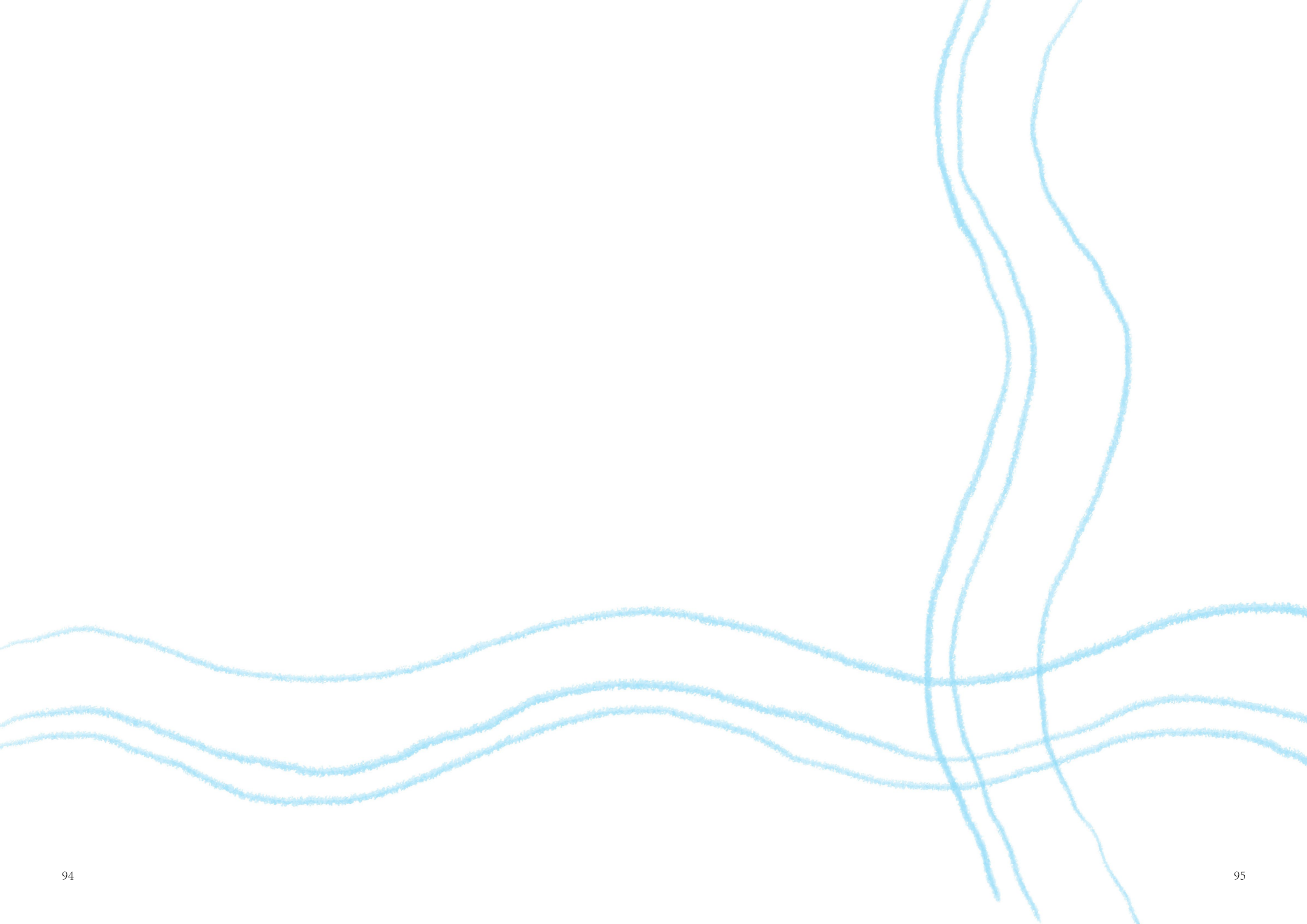


Customers purchases fabric with desired length.



Have fun!







## What's Now and What's Next

It's been a long journey. I hesitated. I questioned myself. And I was not even sure where the idea will lead me to. Luckily, at the end of this semester, I can say that I had some good times.

The project gave me a chance to be myself, to find out who I am as a designer, and as a human being. I kept questioning my way of thinking and my working progress since they seemed to be different from others. However after looking back and digging into all the design mess that exploded from my mind, I could be able to see my own methodology of thinking and creating things.

There are definitely tons of thing I did not manage to explore or improve during my design and making process.

I thought I was familiar with textile material, but during the process, I found a whole new world of quilting that I never know before. I'd love to work more with it and see how it can be applied to this project.

I only manage to have two sample piece done. Neither of them exceed the length of 3 meters, and the 0.8 meter width limits many potentials. I'd like to test combining more or bigger objects with larger fabric samples and see what interesting outcome there will be.

I can clearly see the potential of this project, and what has been presented here is only halfway. I am determined to continue working on this project, pushing boundaries, and transforming all the "potential" into "reality".

## Thank you

Thank you, Claus, for your belief in what I was doing, for inspiring me, and for providing valuable feedback.

Thank you, Anna, for encouraging me to embrace my true self, for empowering me to be confident, and for your unwavering support.

Thank you, Diane, for inviting me to your incredible quilting studio and sharing your wealth of knowledge and techniques with me.

Thank you, all my classmates and friends, who have patiently listened to my moments of confusion and offered valuable advice and support.

Thank you for reading my documentation, and hope you can enjoy it as much as I do.





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Christo in his seventh floor studio at 14, rue de Saint-Sénoch. (n.d.). Available at: <https://christojeanneclaude.net/artworks/packages-and-wrapped-objects/>.

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The image features a white background with several vertical and horizontal yellow lines drawn in a hand-drawn, slightly irregular style. The vertical lines are located on the left side of the page, and the horizontal lines cross them, creating a grid-like pattern. The lines are thin and have a textured, chalk-like appearance.

Thank you.

