

**ES-115**

Design, Innovation and Prototyping

# **FINAL DOCUMENT**

## **GROUP 29 WARDROBE WARRIORS**

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# NEED STATEMENT

To design a system that  
optimises the available  
wardrobe space for each  
individual in an efficient  
manner.



# DESIGN OPPORTUNITIES

- The system should give a general direction to the user on **categorizing certain items**.
- The system should be **customizable** as per user's convenience.
- The system should be **unrestricted** and **expandable**.



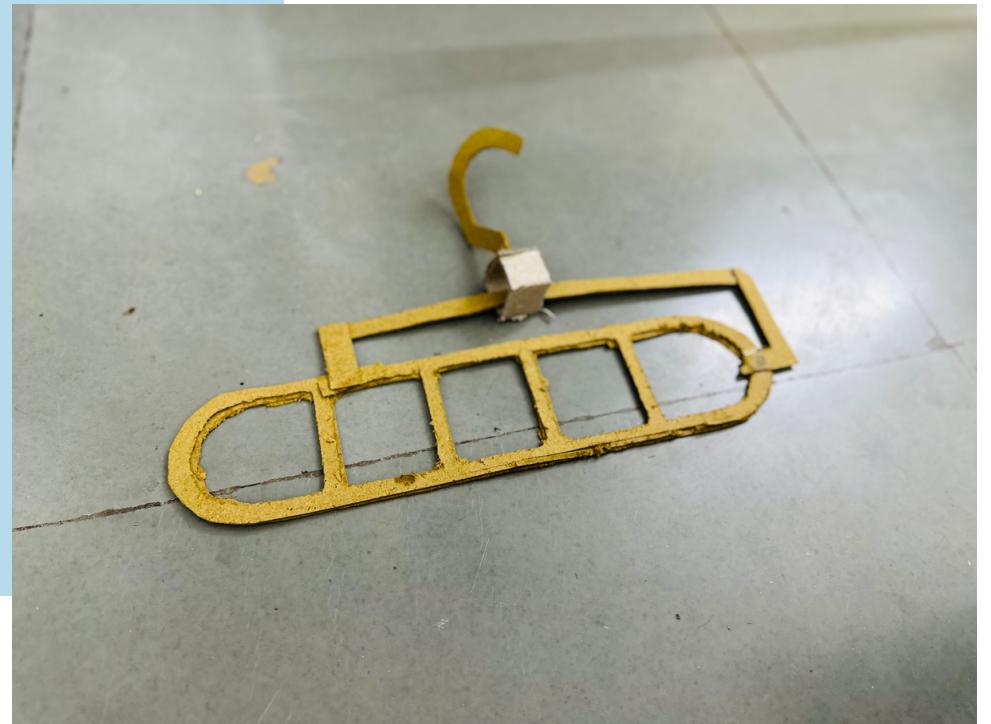
# LOW-FIDELITY MOCKUP 1



**Rather than shoes being spread out in a plane and occupying more area, this prototype allows for the stacking of up to 6 pairs of shoes in a much compact manner.**

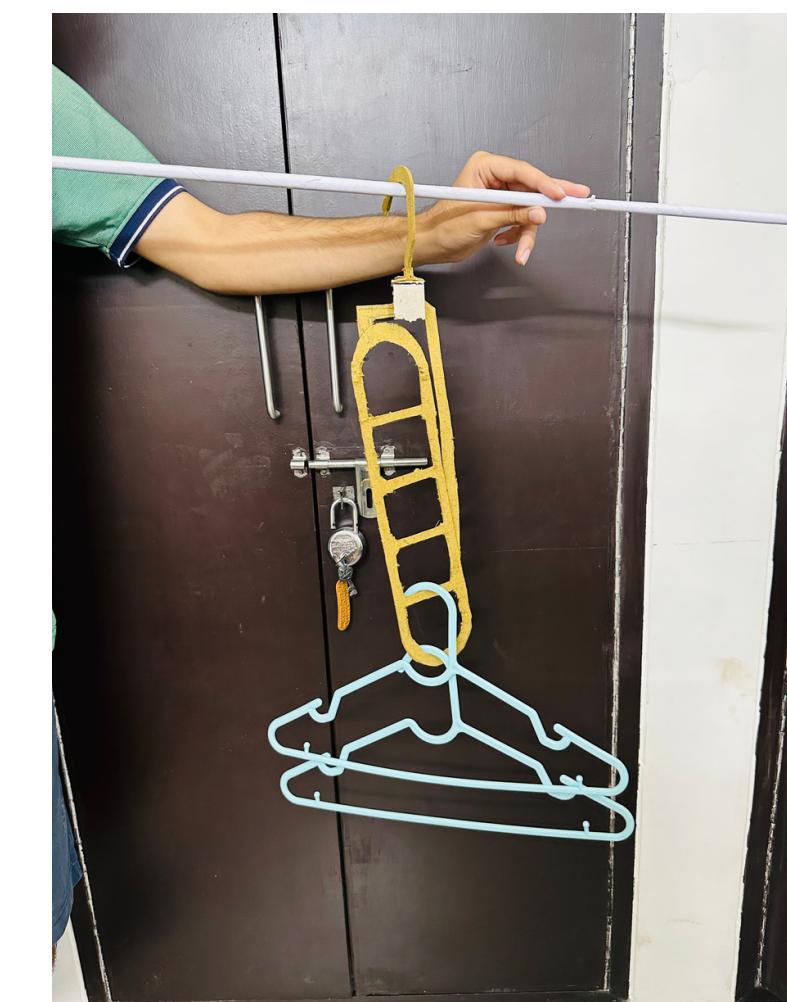
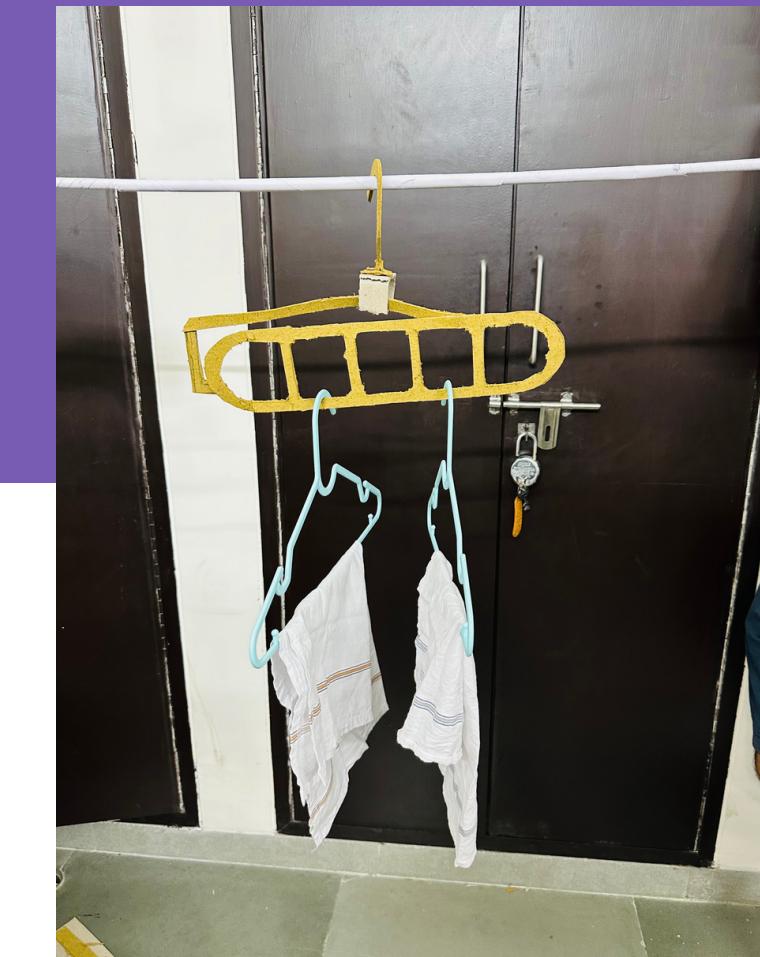
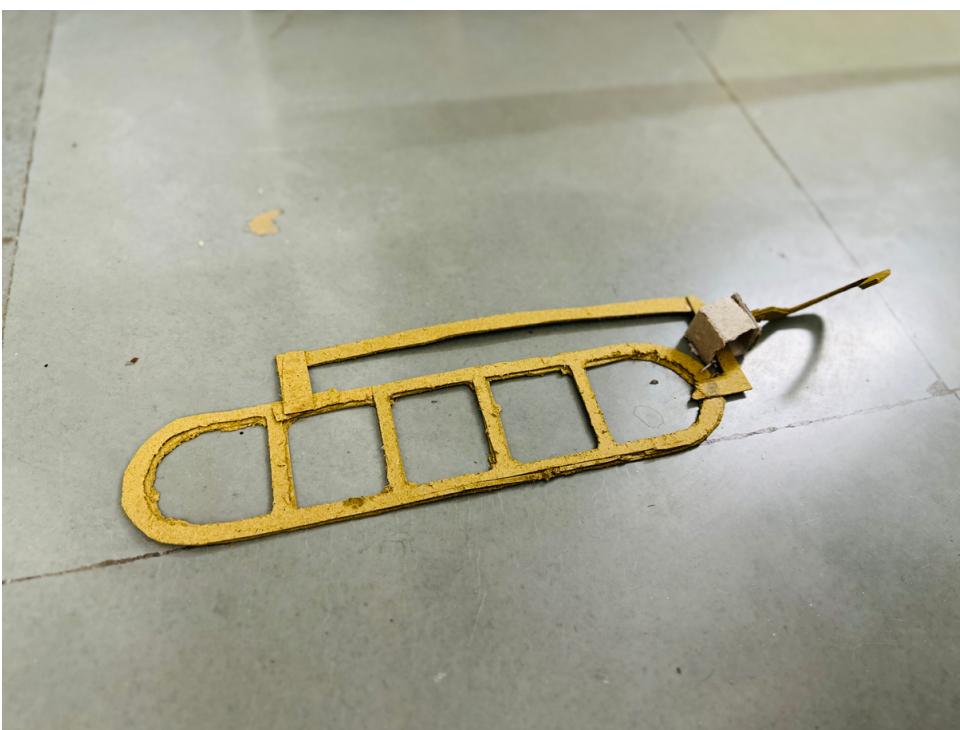


# LOW-FIDELITY MOCKUP 2



**Clothes stacked horizontally now occupy lesser space due to the vertical alignment.**

**Furthermore, a single prototype can hold at minimum 5 hangers!**



# LOW-FIDELITY MOCKUP 3



These compartments fit into any wardrobe.

The slidable vertical partition allows for the user to customize the space.

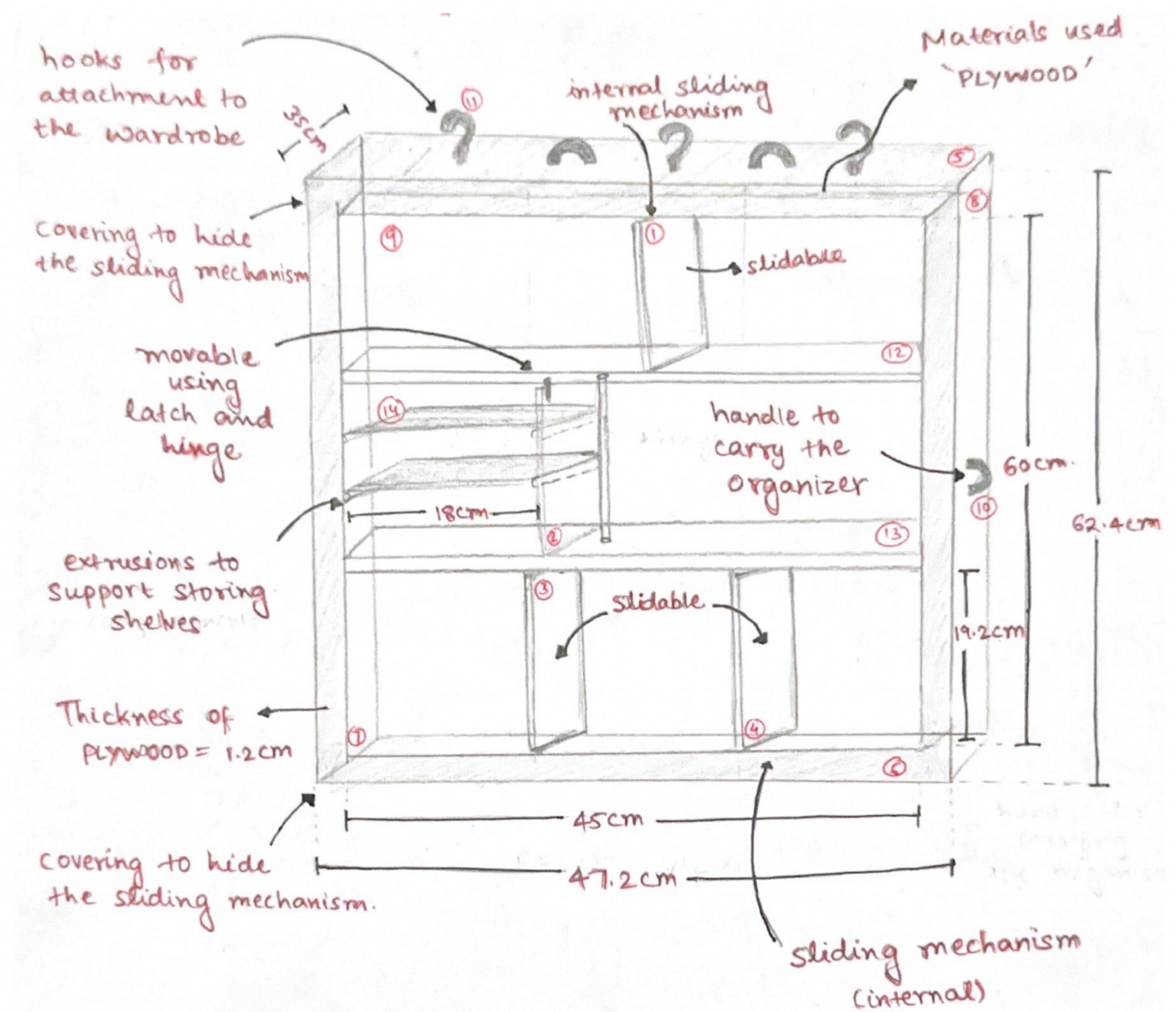
There also exists a horizontal partition that can be pulled out when needed.



# THE OVERALL SKETCH

# **CUSTOMISABLE AND WARDROBE COMPARTMENTALIZER (CAWC)**

**For easy and  
customisable access  
and storage of items.**



# FEATURES

- **Slidable partitions** by means of a **wheel mechanism** allow the user to modify the compartment length resulting in minimal friction.
- **Latches and hinges** are employed to accommodate rotational movement in the central partition.
- **Hooks** are used to secure the compartment to the wardrobe rods.
- **Handles** are supplied on the compartment's sides to allow the user to **effortlessly lift** the compartment.
- In terms of storage, the compartment is self-sufficient. It is designed to fit inside any closet and can also be customized to use as a bookshelf when not in use.

# FINAL PROTOTYPE



**Hooks for easy attachment to the wardrobe**



**Window to create a partition as well as remove it according the user's need**



**Movable partitions to make compartment length adjustable by the user**



**Handles for easy movability of the compartment**



# Different arrangements showcasing the customisability of the prototype



# LEARNINGS

- Throughout the design project, we acquired the **ability to collaborate effectively as a team**, delegate tasks based on individual strengths, and exercise proficient **team management**.
- Additionally, we gained knowledge on how to navigate challenges or obstacles that may arise during different stages of the project. We also learned strategies for **problem-solving** and how to **efficiently redesign** when necessary.
- Procuring parts of the suitable material and start **working well before the deadline**, and we developed a keen sense of discernment when it came to selecting and managing materials throughout the project.
- The design project provided us with practical knowledge and experience in various **trades** such as **carpentry, power tool usage, and joining processes**. We learned how to **effectively combine these skills** to create a cohesive final product.

# CONCLUSION

- By providing **adjustable shelving and hanging options**, the wardrobe can be tailored to **fit the specific needs** and preferences of the user.
- These features not only enhance the wardrobe's functionality but also maximize the usage of available storage space.
- The use of high-quality and durable materials ensures that the wardrobe is built to last, while also making it an attractive and stylish addition to any living space.
- Overall, creating a customizable, adjustable wardrobe is an excellent way to provide a practical and efficient storage solution that meets the needs of the user.

# FUTURE SCOPE

- As the demand for personalized and adaptable home solutions continues to grow, the customizable wardrobe is likely to become increasingly popular.
- With the advancements in technology, the integration of smart sensors and automated systems, could further enhance the functionality and convenience of the wardrobe.
- Incorporating sustainable and eco-friendly materials into the design could also make the wardrobe more environmentally friendly and appealing to consumers who prioritize sustainability.
- In future, the interior of the wardrobe may become modular to provide maximum flexibility and rearrange or add components to suit the user's specific storage needs.