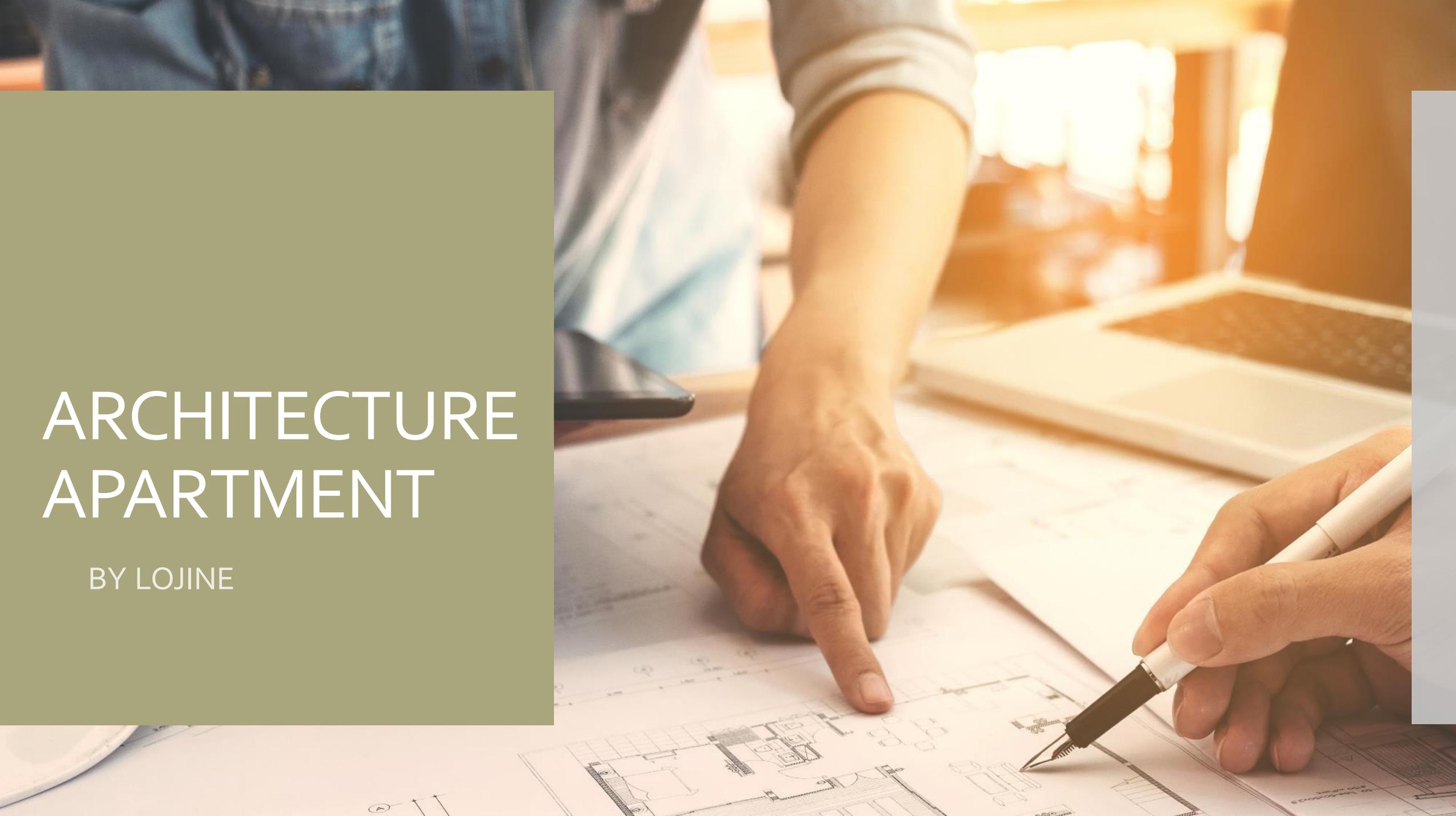


# ARCHITECTURE APARTMENT

BY LOJINE



# PLANNING THE PROCESS



**Dream**



**Design**



**Develop**



# MODEL PHOTOS



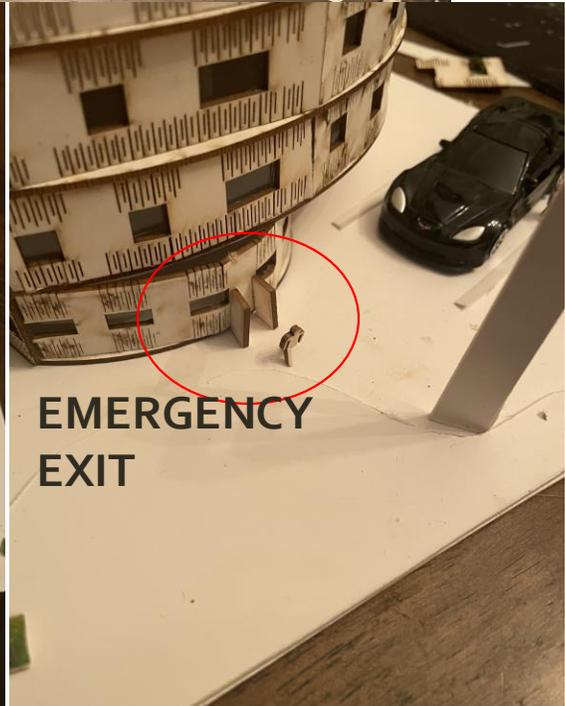
# MODEL PHOTOS

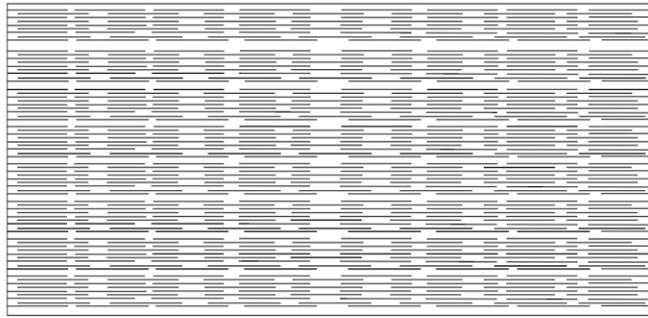
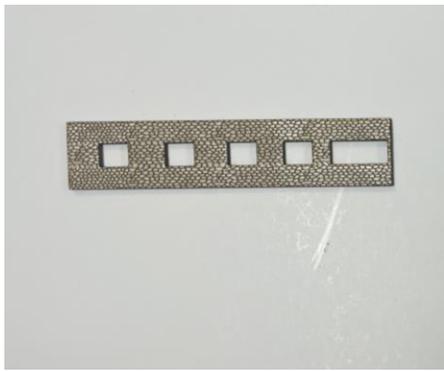


# MODEL PHOTOS

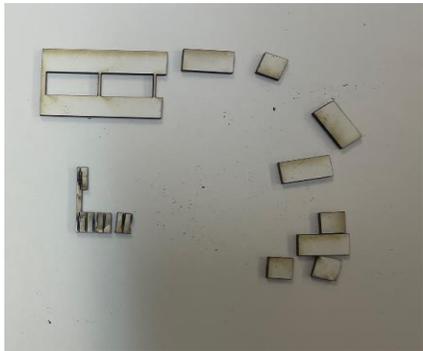


# MODEL PHOTOS





➤ This was my first test of laser cutting out curves and engraving a stone wall. The lines that I made for the wall were too close together as demonstrated in the illustrator photo. This resulted in the laser cutter to burn the cardboard.

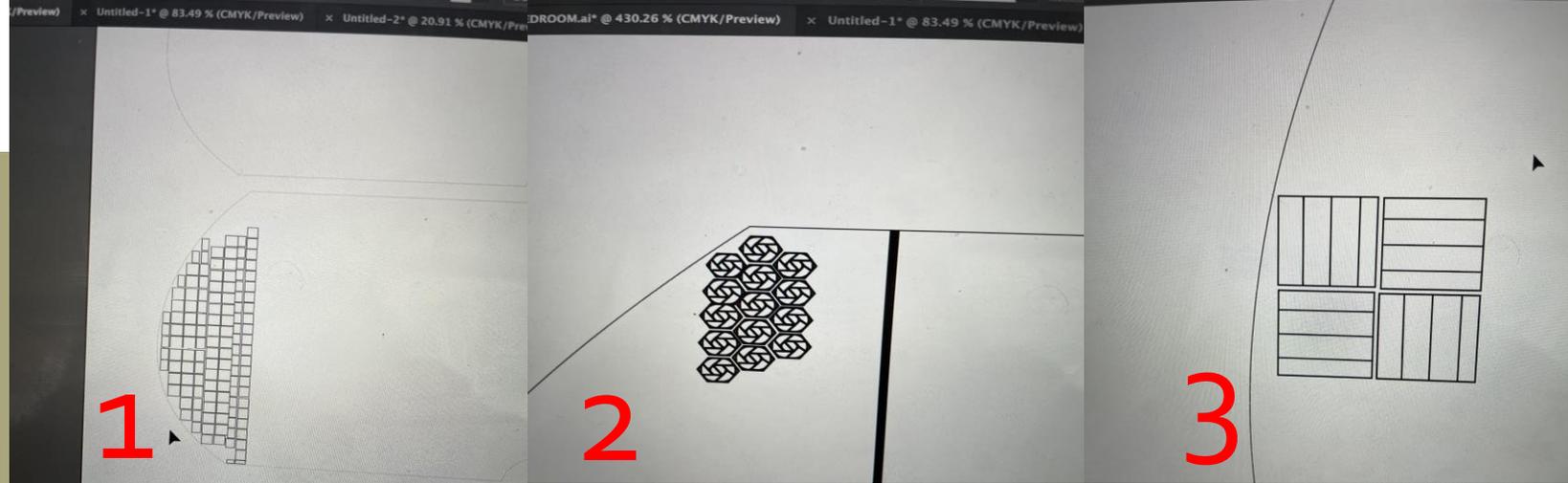


➤ I tested the curved wall by laser cutting it again, unfortunately the cardboard broke. So, for further direction, I will make sure that there is a big enough space in between each line, to ensure that the cardboard does not break and can curve.

➤ I tested sanding the burn marks off the cardboard by using a fine sander. As shown in the photo all the burn marks are off the cardboard.

## TESTING CURVE WALLS AND STONE WALL

# TESTING BALCONY TILES

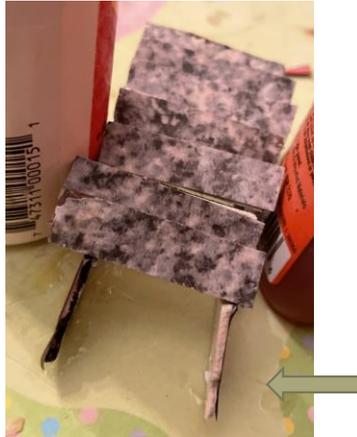


I tested the tiles for the balcony of the apartment, through feedback from students and family members. From the overwhelming feedback that I received, it was clear that 'tile 3' was the most favorite tile to suit an apartment. Thus, I chose tile 3.

NAMES:	TILE 1	TILE 2	TILE 3
LUKE		✓	
ALISON			✓
JOEL	✓		
HUGO			✓
MUM			✓
DANICA			✓
HAILEY			✓
DAD			✓
MARY		✓	

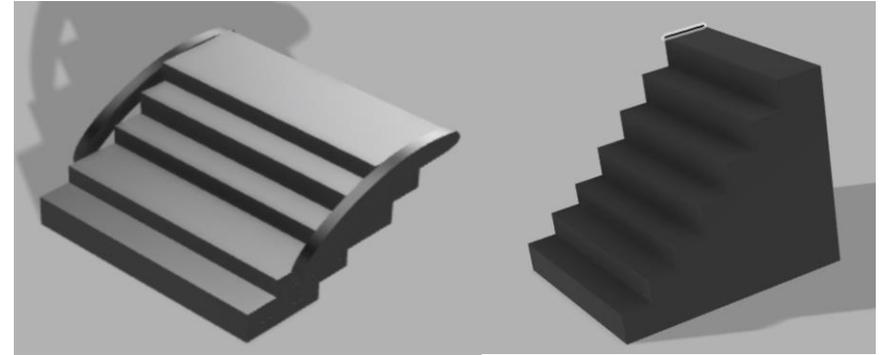
# TESTING STAIRS

1



I tested creating stairs, to get an idea of the structure. I used cardboard and a marble material to create my first prototype.

2



Stair with handrails

Stair without hand rails.

I used fusion360 to model 2 types of stairs

3

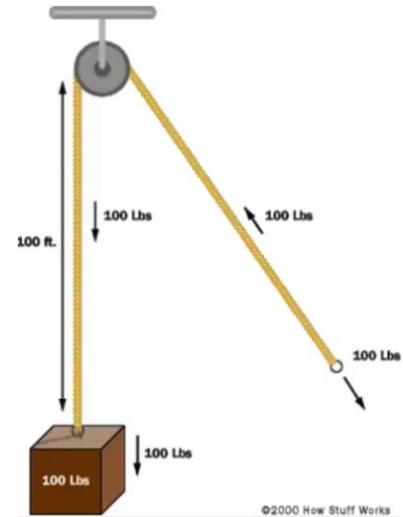


Final design of stairs: This was made from corrugated cardboard.

# TESTING ELEVATORS



I tested the elevators, through creating a simple pulley system, which demonstrates how the elevator will work in the apartment. The pulley system is created by wrapping the rope over a wheel. By looping the rope over the wheel, this "increases the upward force" (DK Find out, 2022)

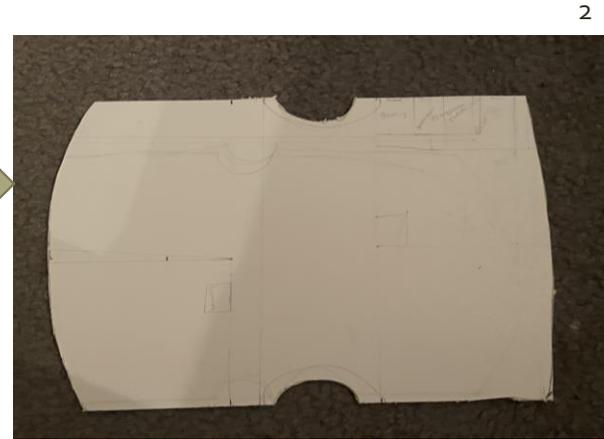


Pulley System image

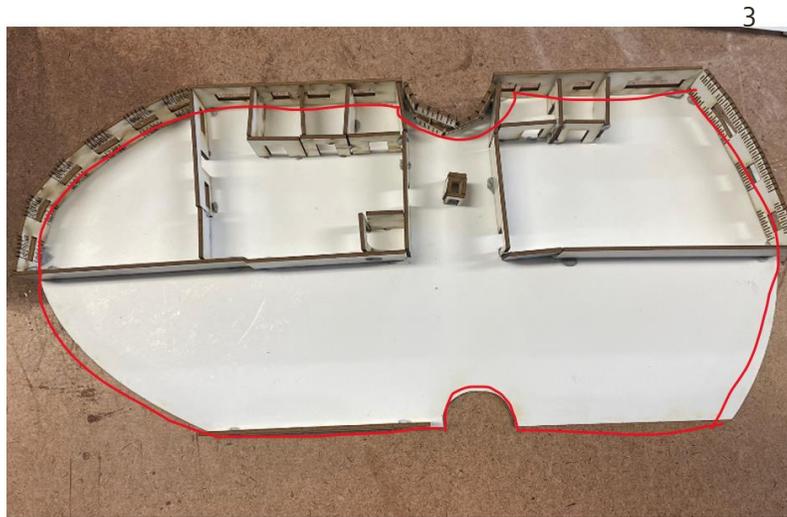
# EVOLUTION OF APARTMENT BASE



**Method:** Laser cut- the width was too short.



**Method:** Cutting Knife: Lots of Rough edges



**Method:** Laser cut- final design

# TESTING SOLAR FACADES



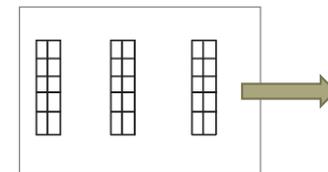
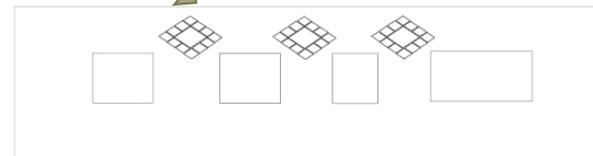
After my first attempt on cutting out the solar facades, I decided that since the shapes are so small, that it would be better to engrave the solar facades, rather than cutting them.



I also tested if I should stick reflective material in the small diamond shapes, however I was unsuccessful due to the shape being very small. I tested using a silver gel pen on a scrap of cardboard to demonstrate the reflective material. However, I decided to not colour the solar facades in with the silver pen, as this could look overpowering.



When making my first wall with solar facades I wanted to cut them out to insert a material that was reflective. However, due to the sizing of the solar façade being small, the laser cut out a big diamond shape rather than small singular diamond shapes.



This was my first original design of solar facades. I was hesitant of this style because I thought that it would be too much to look at. Thus, I reached out for feedback from my classmates, and they all agreed that it would be too overpowering, which is why I decided to change the design and do more of a simpler design.

# TESTING ACCURACY OF MEASUREMENTS



I tested the measurements of the apartment, by blue tacking each wall on to the base. This was due to the first base that I created being too small on the width. By blue tacking each wall this allowed me to accurately place each wall onto the base and get an idea of which walls that needed to be cut down. This also allowed me to see if each wall was aligned with the corresponding window.



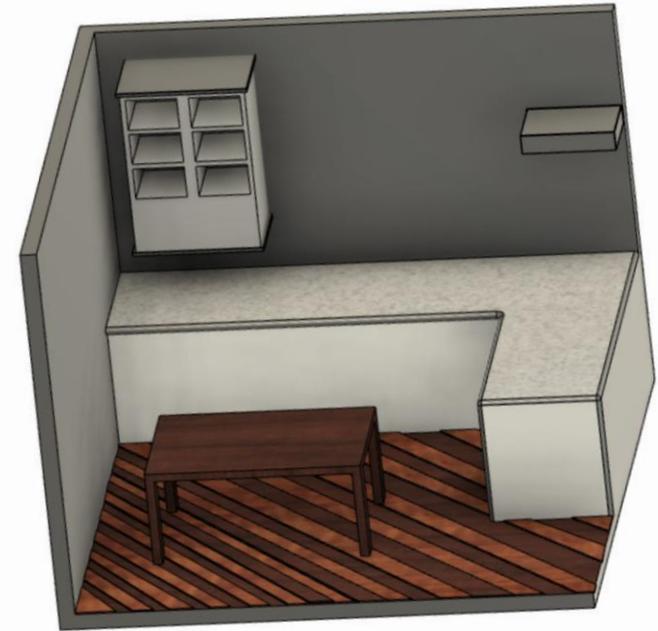
Example of inaccurate measurements. One wall had a window that was too long, meaning all the interior walls weren't aligning.



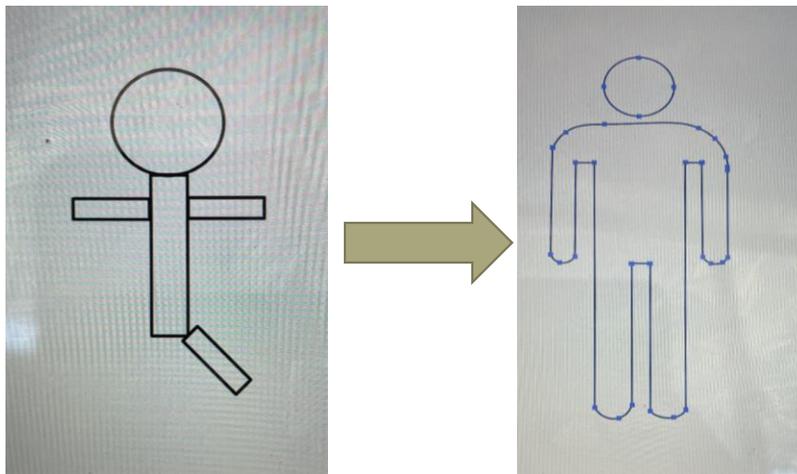
# TESTING THE KITCHEN LAYOUT ON FUSION 360



I tested the kitchen layout in fusion 360, to get an idea of the layout and how big the kitchen should be.



# EVOLUTION OF PEOPLE MODELS



In my first attempt of creating people the heads cut off, due to the body not being one complete body. In my second attempt I rectified this mistake and created my people.

# TESTING LIGHT



Light was added to the model to demonstrate further detail.



# REFERENCE LIST

- DK Findout. (2022). *Pulleys*. <https://www.dkfindout.com/uk/science/simple-machines/pulleys/>
- Brain, M. (2021). A simple pulley system. [image]. <https://science.howstuffworks.com/transport/engines-equipment/pulley.htm>