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# **ENGG1050 - Engineering Design**

Group A11 - WEEK 7 Presentation

# 1. Introduction

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- Vision: To deliver a functioning RGM and showcase our collaborative and creative capabilities
- AGILE Project management; effective leadership and product design (positive values, curiosity, communication, decision making, experimentation and purpose)
- 'A11 Attitude!' Never Give Up, be responsible for all members, always give everyone a go  
(Perseverance, Responsibility and Trust)
- Result: SYNERGY!

## 2. Our Client and Timeline

THEME > Problem definition > Client:

Working University Student, struggling with finances. Not enough time to make affordable and nutritious meals. Can't hire a cook and doesn't have the space. Loses unnecessary funds on food outside.

SOLUTION: RGM designed for making food (in this case it's BREAKFAST)

Snapshot of our Timeline



TIMELINE: Linear, following the AGILE principle of prioritizing tasks and working on one at a time.

Easy to read and follow

Efforts were better focused on one task at a time

		Week 1-6							
Start	Finish	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	
Feb 26th		Initiative Project time line chart Decide on machine theme		Perform measurements for constructions	Prepare presentation detailing preliminary design	Complete SparkPlus assessment Finish the presentation	Present the preliminary design Complete the peer- and self-assessment		m dc pr Se ta

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### **3. Designing Process**

Tahsin Bin Sohail

# 3.1 Brainstorming

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## Hot Wheels Tracks

We can use these tracks to move small objects around with very easy setup

## Marbles

can be used as a trigger for an event, or as a cumulative item for a greater process

## Levers

Can be used to initiate and conclude actions

## Springs

can be used as timed triggers and as force dampeners and taking loads uniform direction

## Fan

Turned on, turns around blows something forward

## Pulleys

If we want to incorporate and change in height

## Heat

can burn things to trigger events, and induce chemical reactions

## Gears

Can operate complex motions in 3D space and can control timing

## Scissors

Cut a string tied to something

## Counterweights

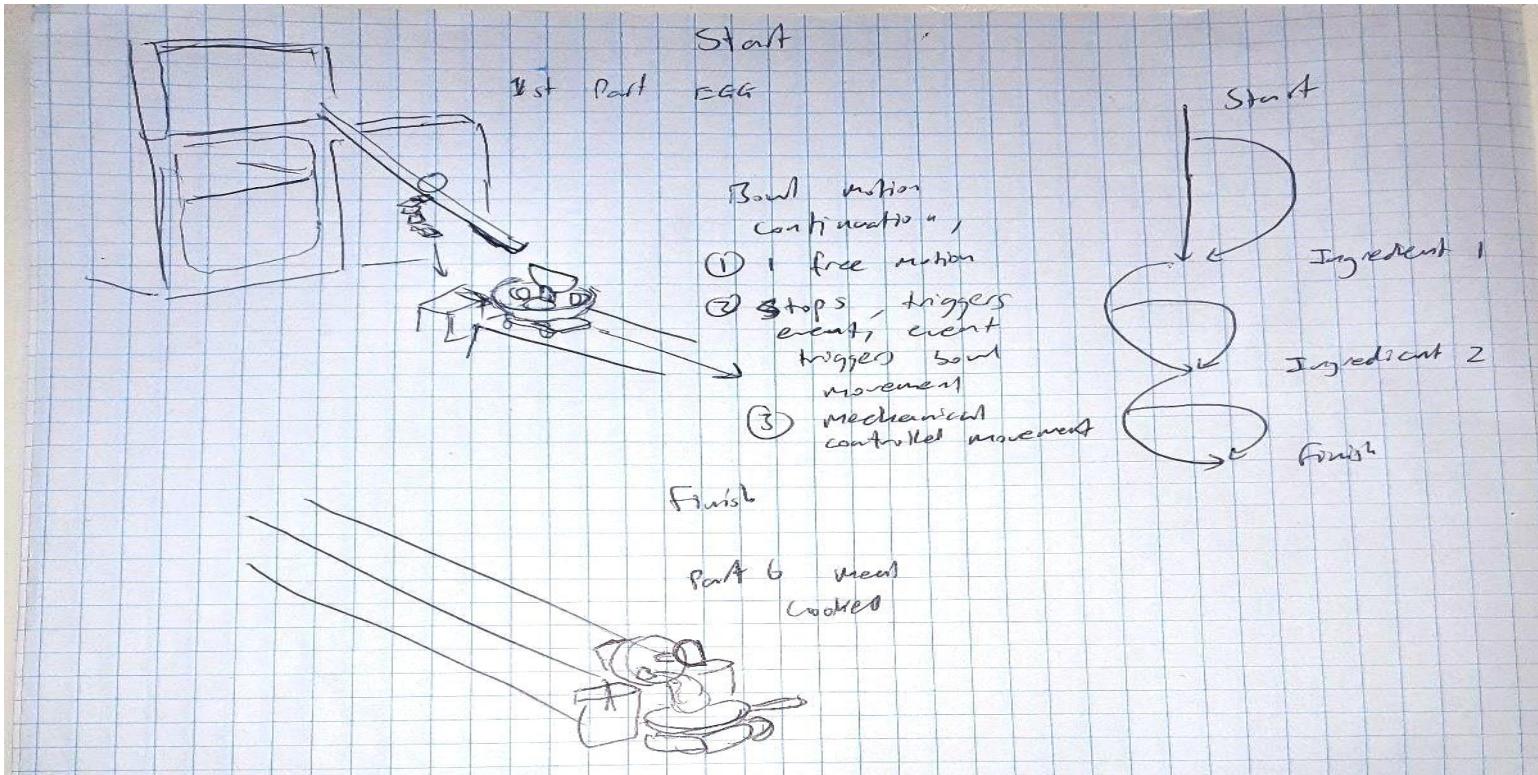
Good for operating levers, triggering events, balancing objects and timing

## Pressure (Hydraulics, Numatics)

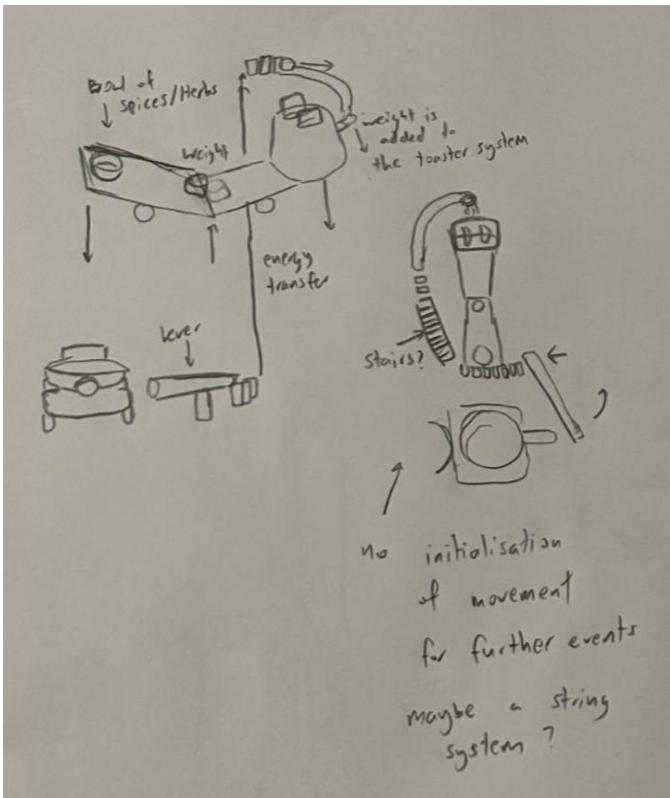
good for dampening forces, taking loads, exploding Omnidirectional

## 3.2 Conceptual Design

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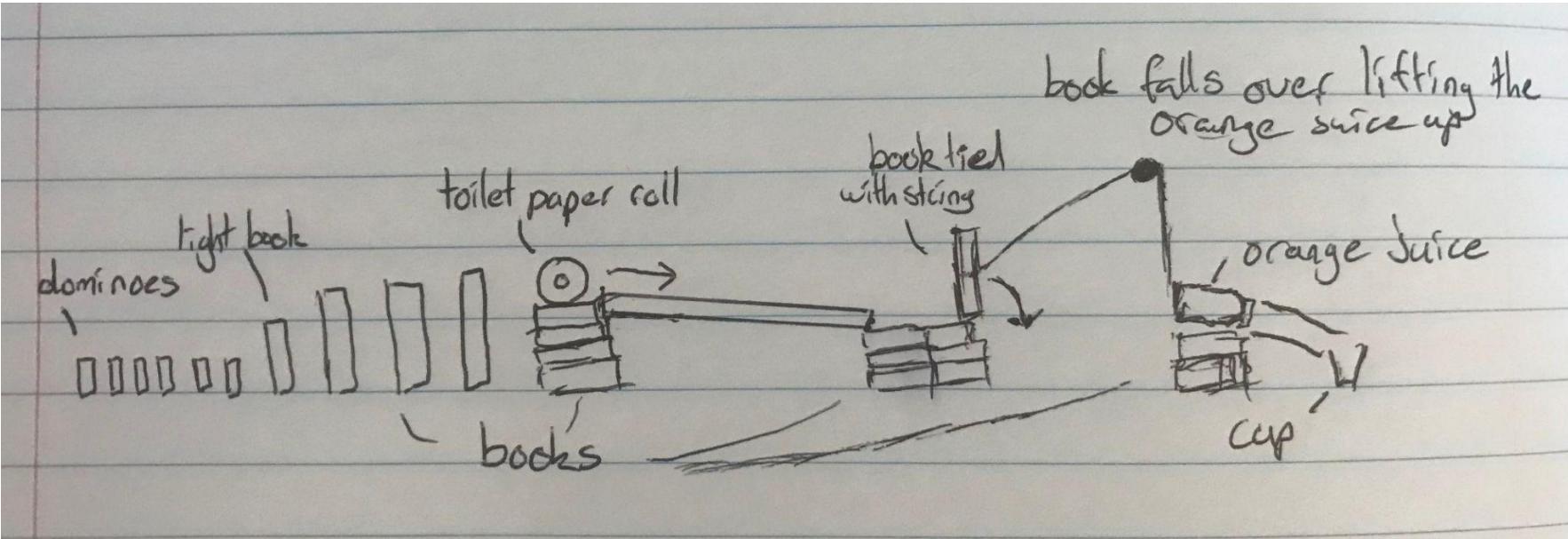


# Preliminary Design

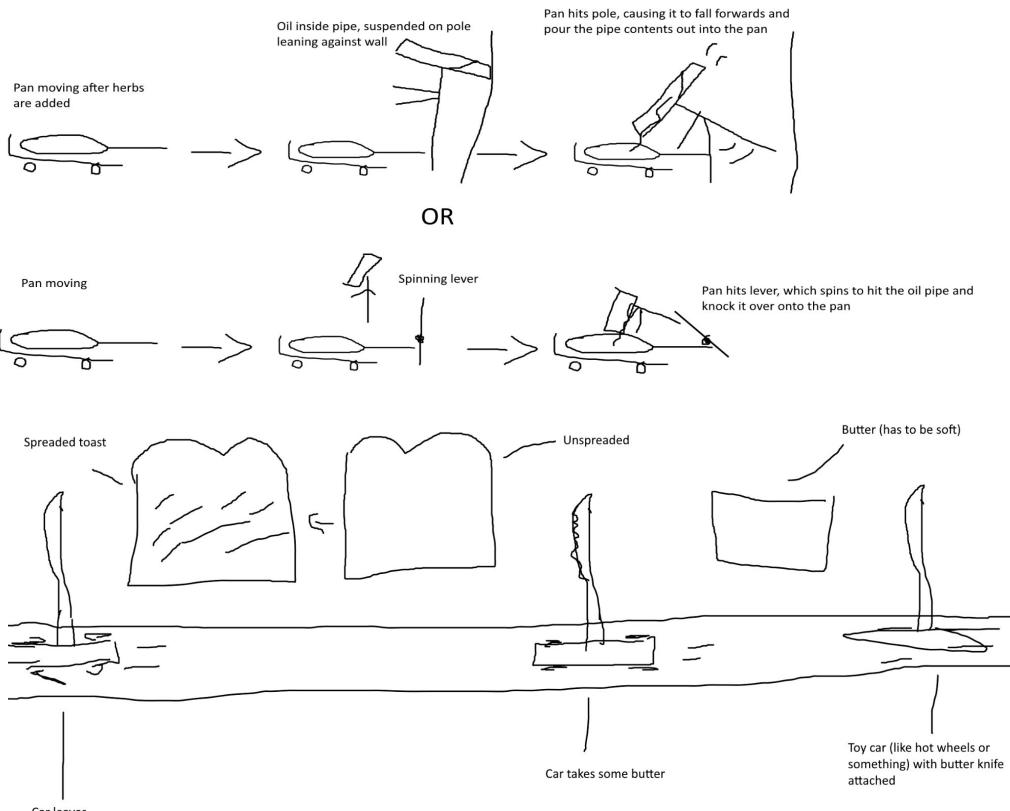


# Preliminary Design

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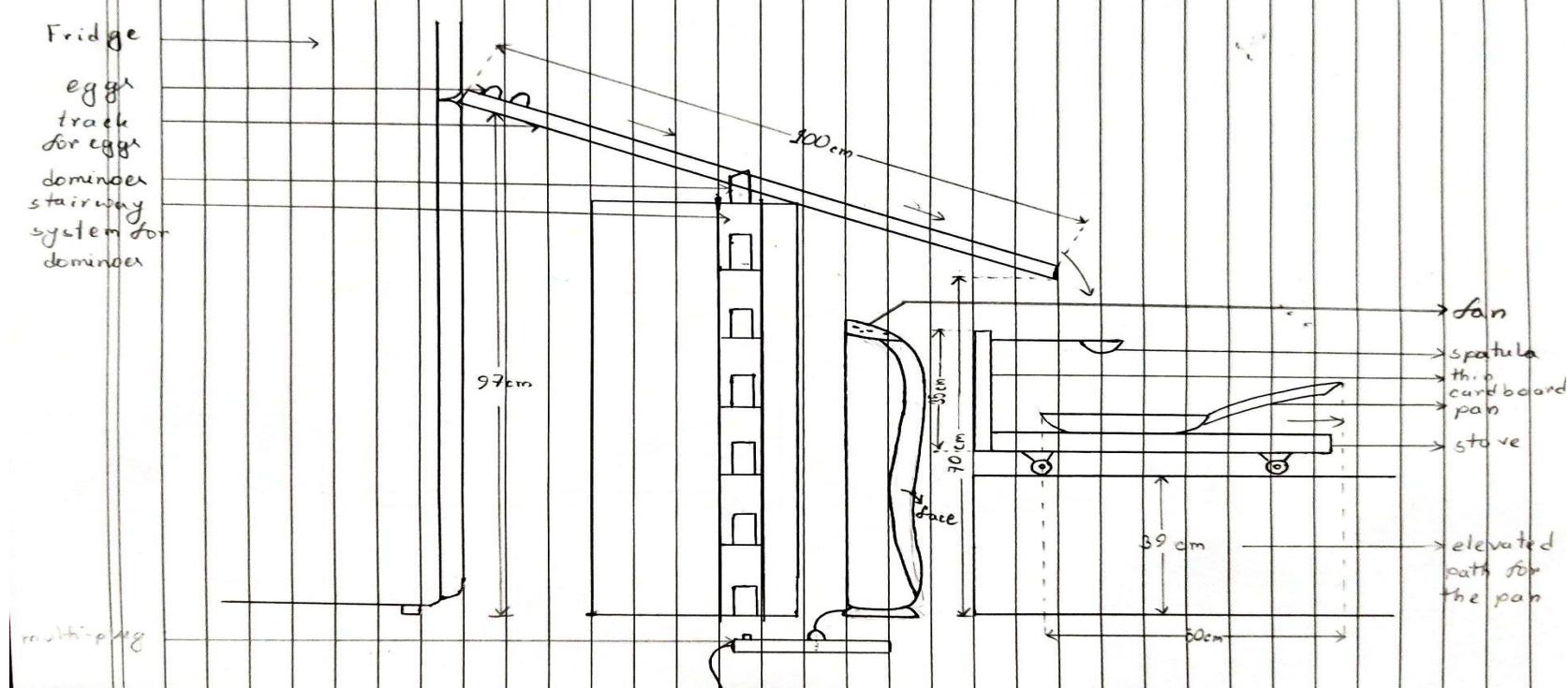


# Preliminary Design

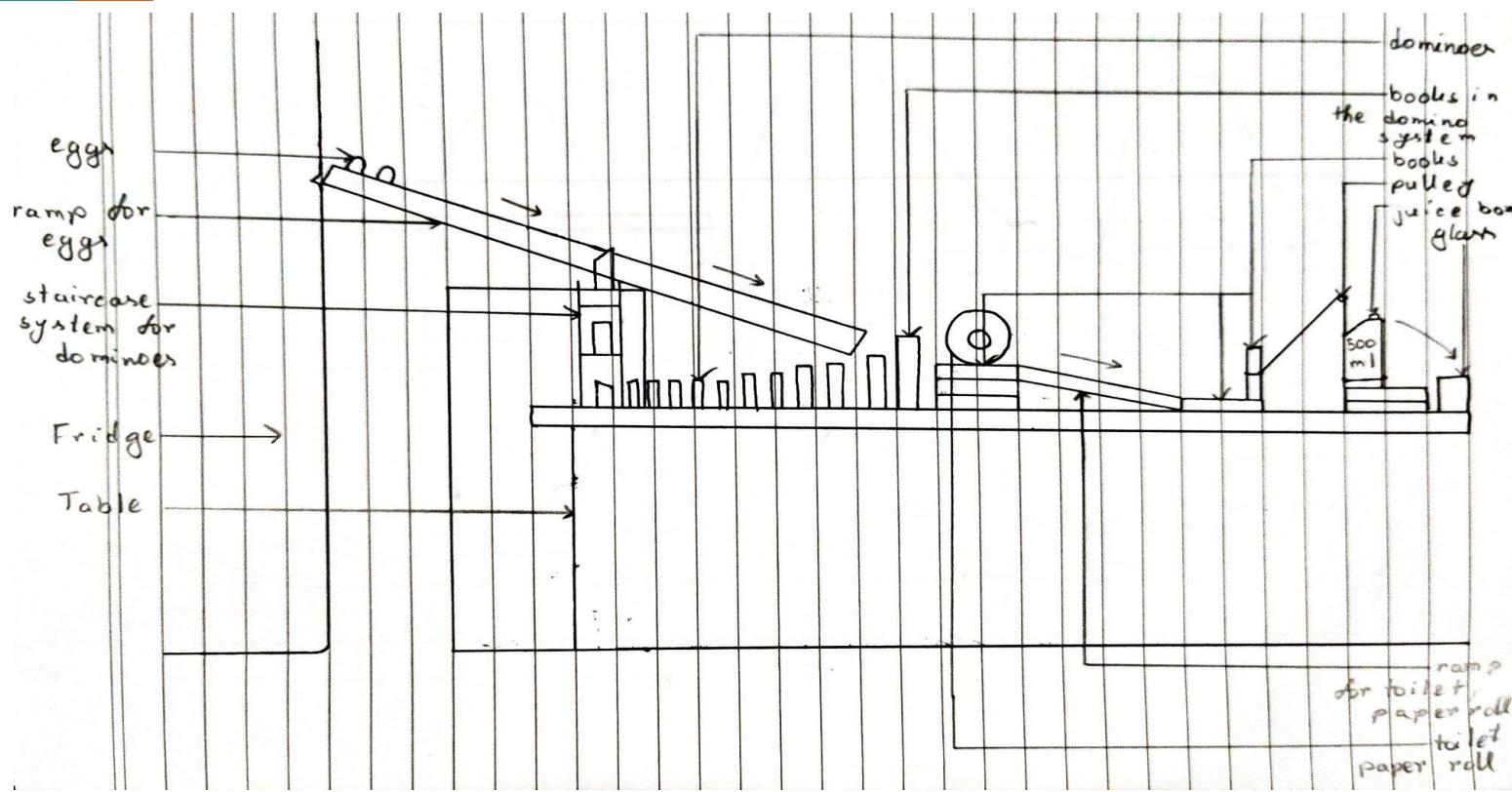


Depends on how the toast is gonna be moved once done...

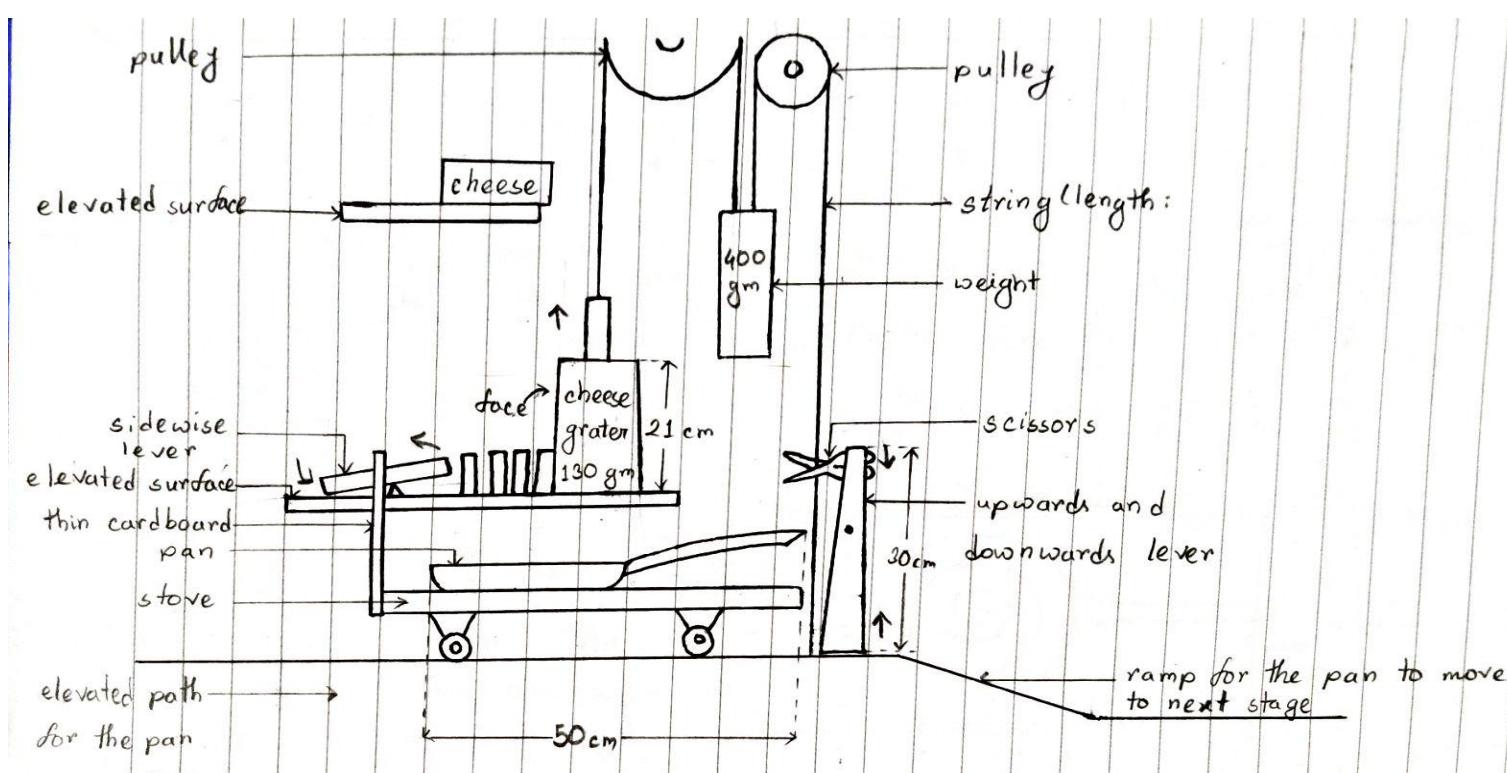
# Detailed Design (Events 1-2)



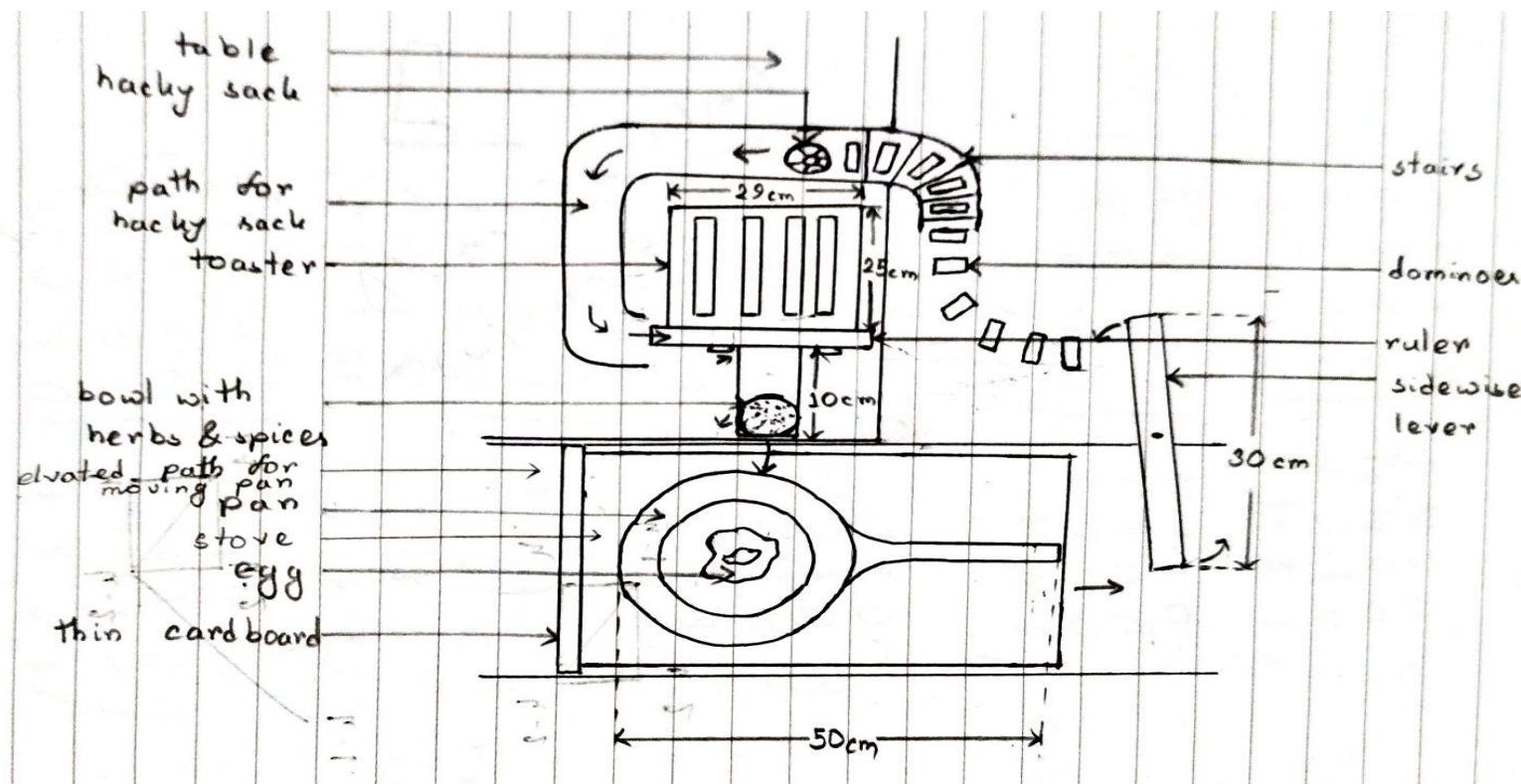
# Detailed Design (Events 3-4)



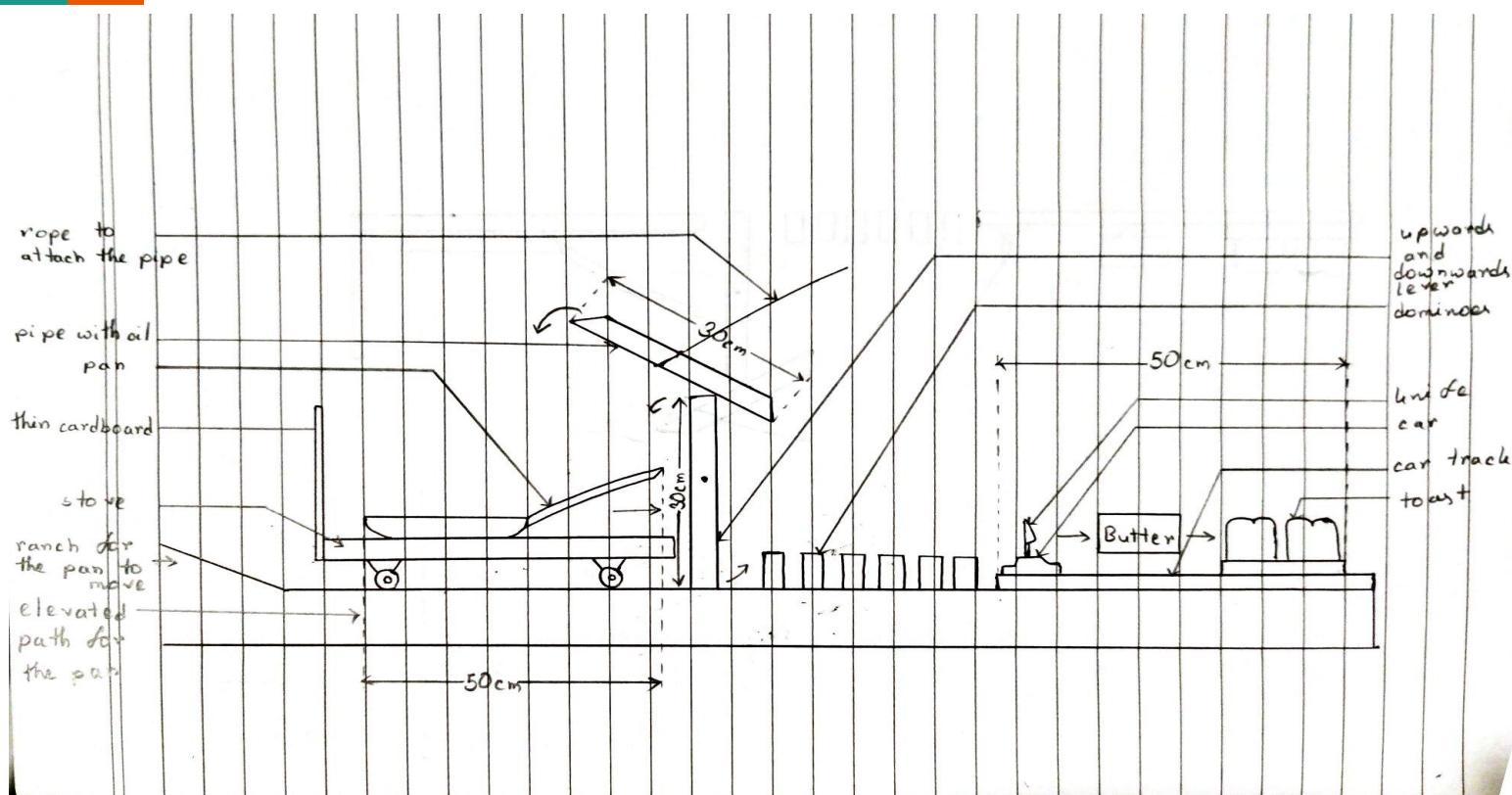
# Detailed Design (Events 5-6)



# Detailed Design (Events 7-8)



# Detailed Design (Events 9-10)



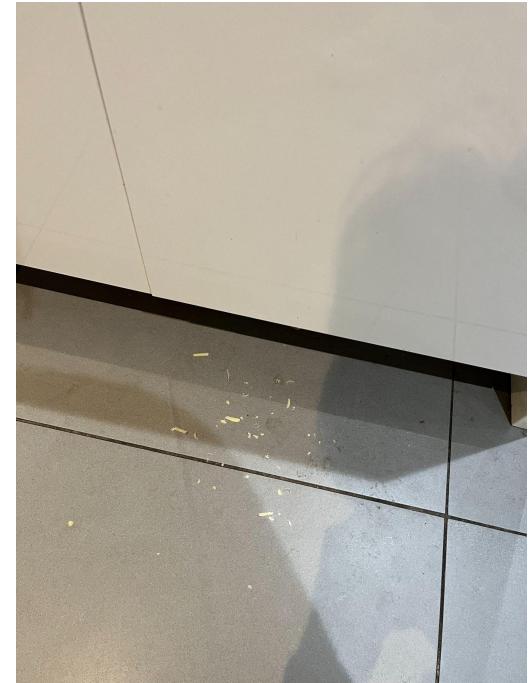
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# **Test, risk and Reflection**

Lewis Reeves

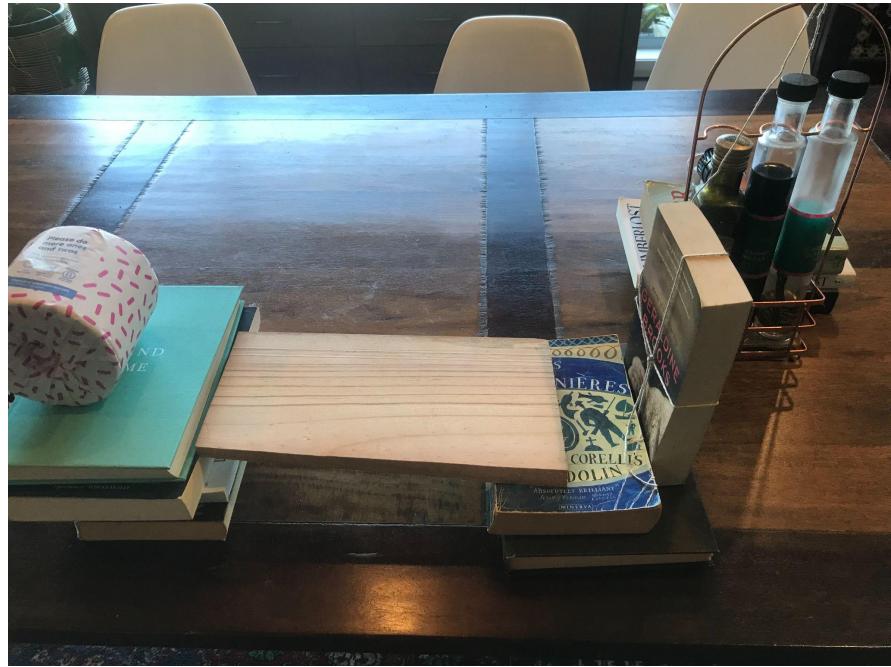
# Testing - Peter

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# Testing - Anthony

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**Thank you for  
Listening**