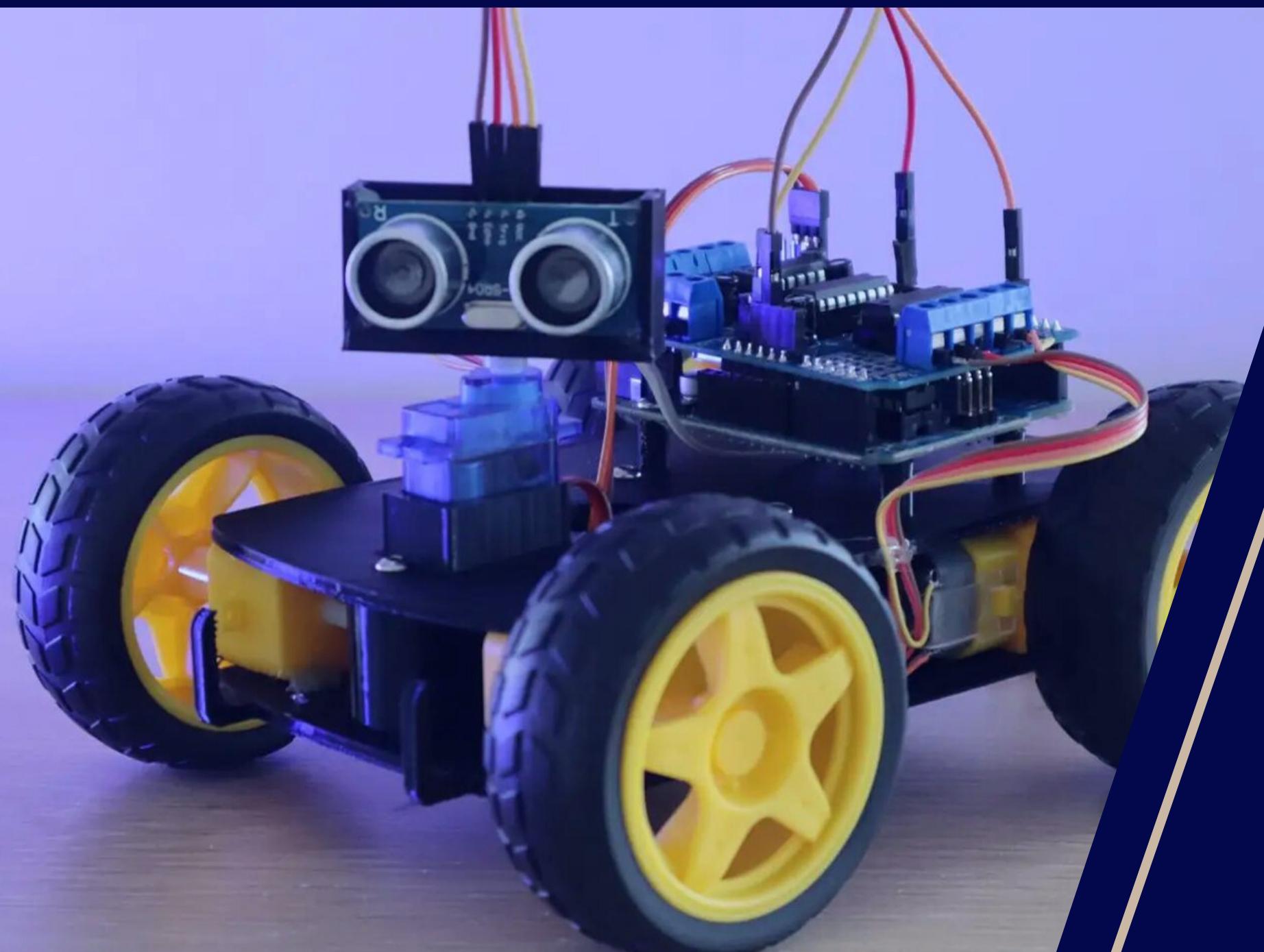


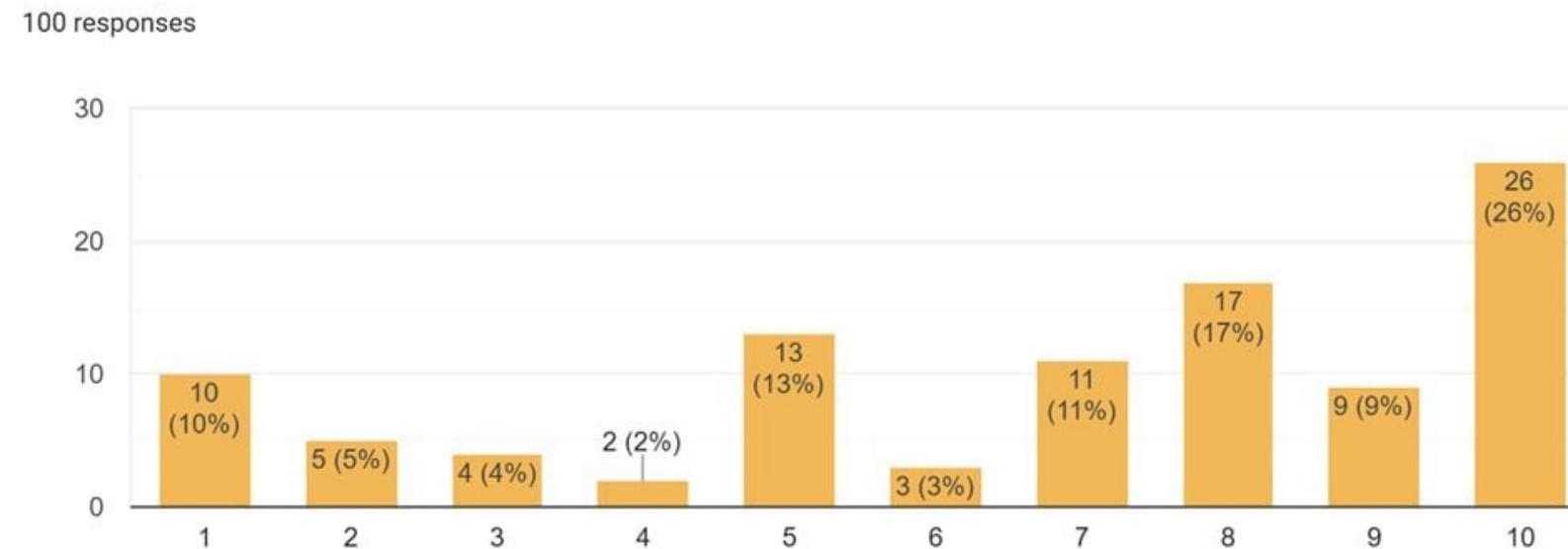
MINS

SUN SEEKING DRYER ROBOT



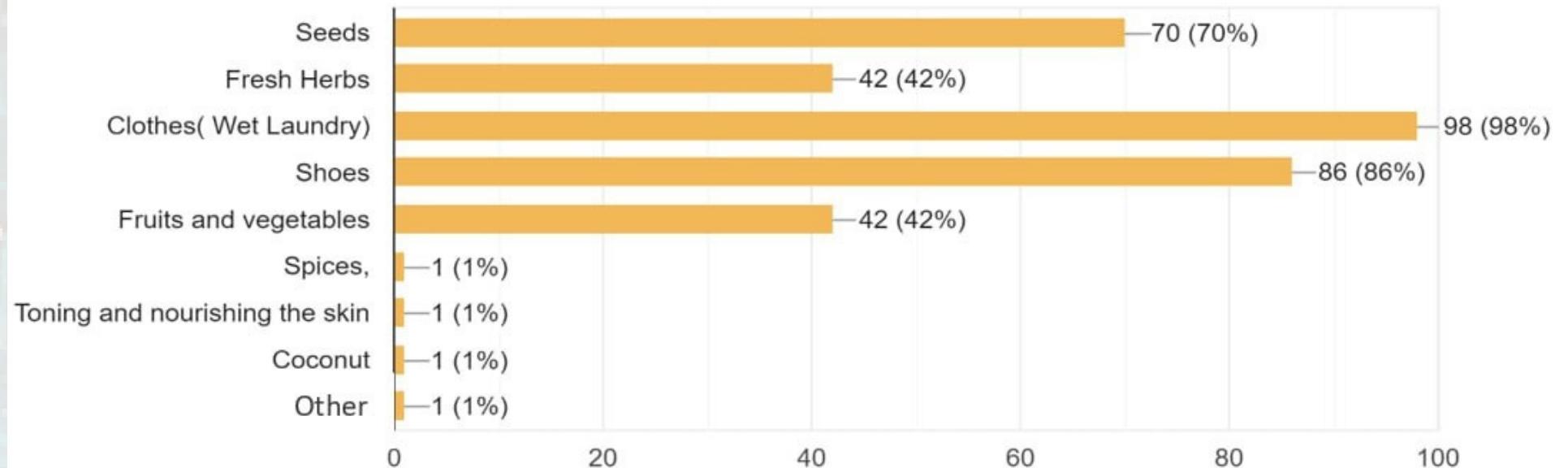
Problem Identification

How likely are you to consider an automatic system that could dry materials using sunlight more efficiently?



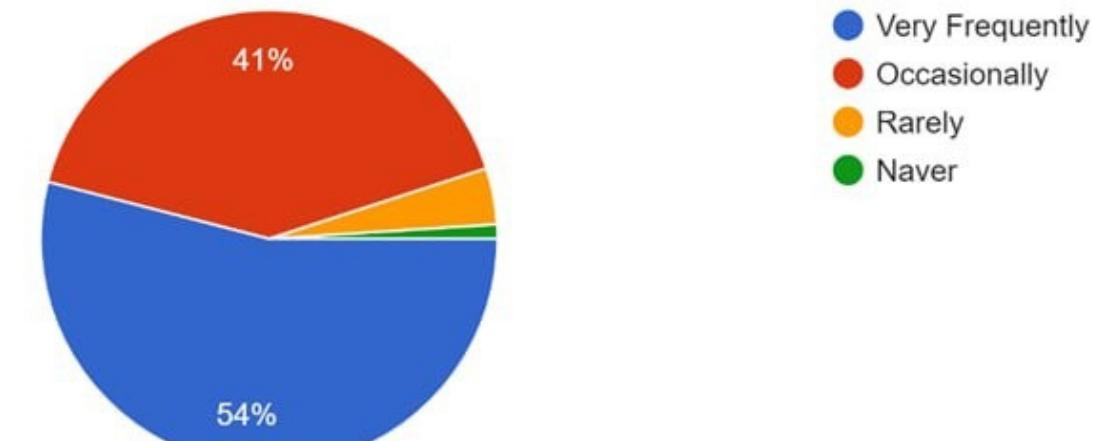
Mention few materials that you dry in your day to day life?

100 responses



How often do you need to dry materials for domestic purposes?

100 responses

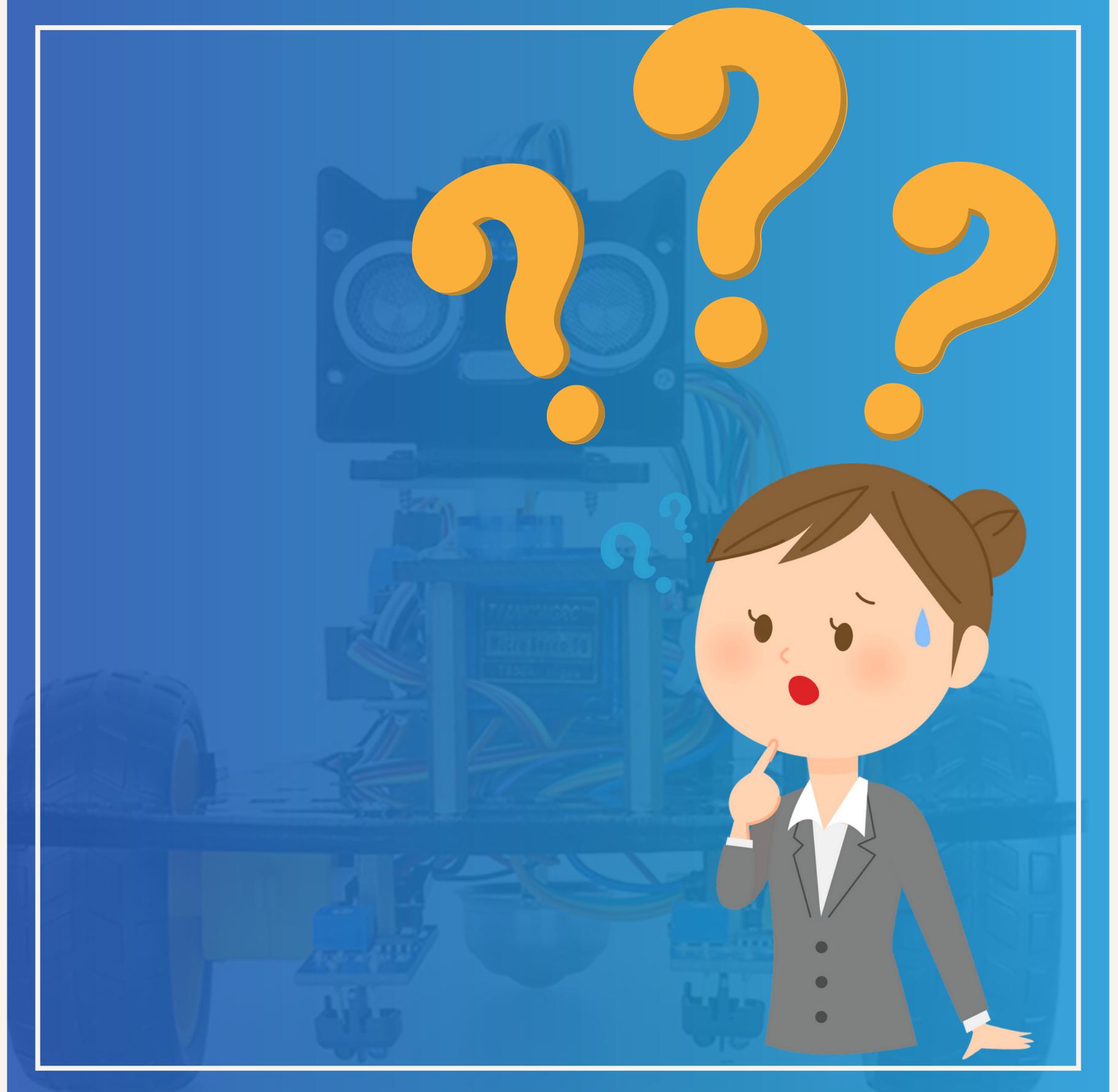


Available Solutions , ,

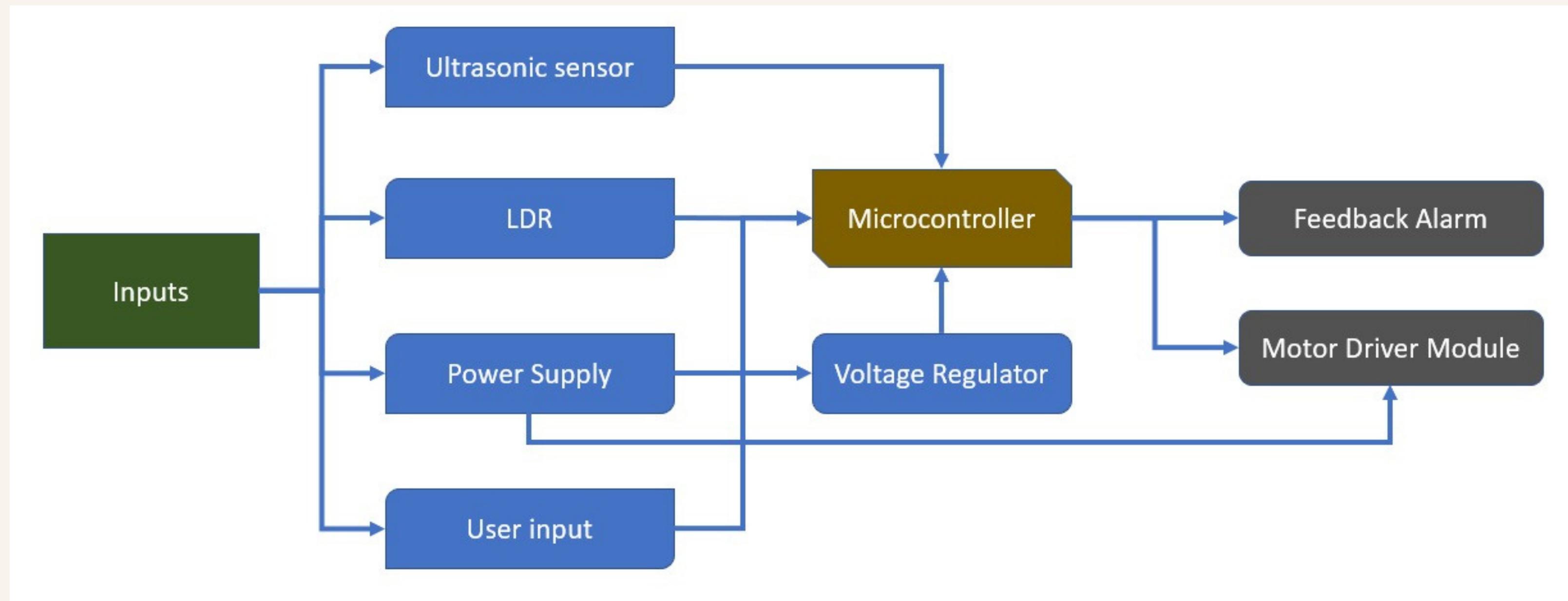


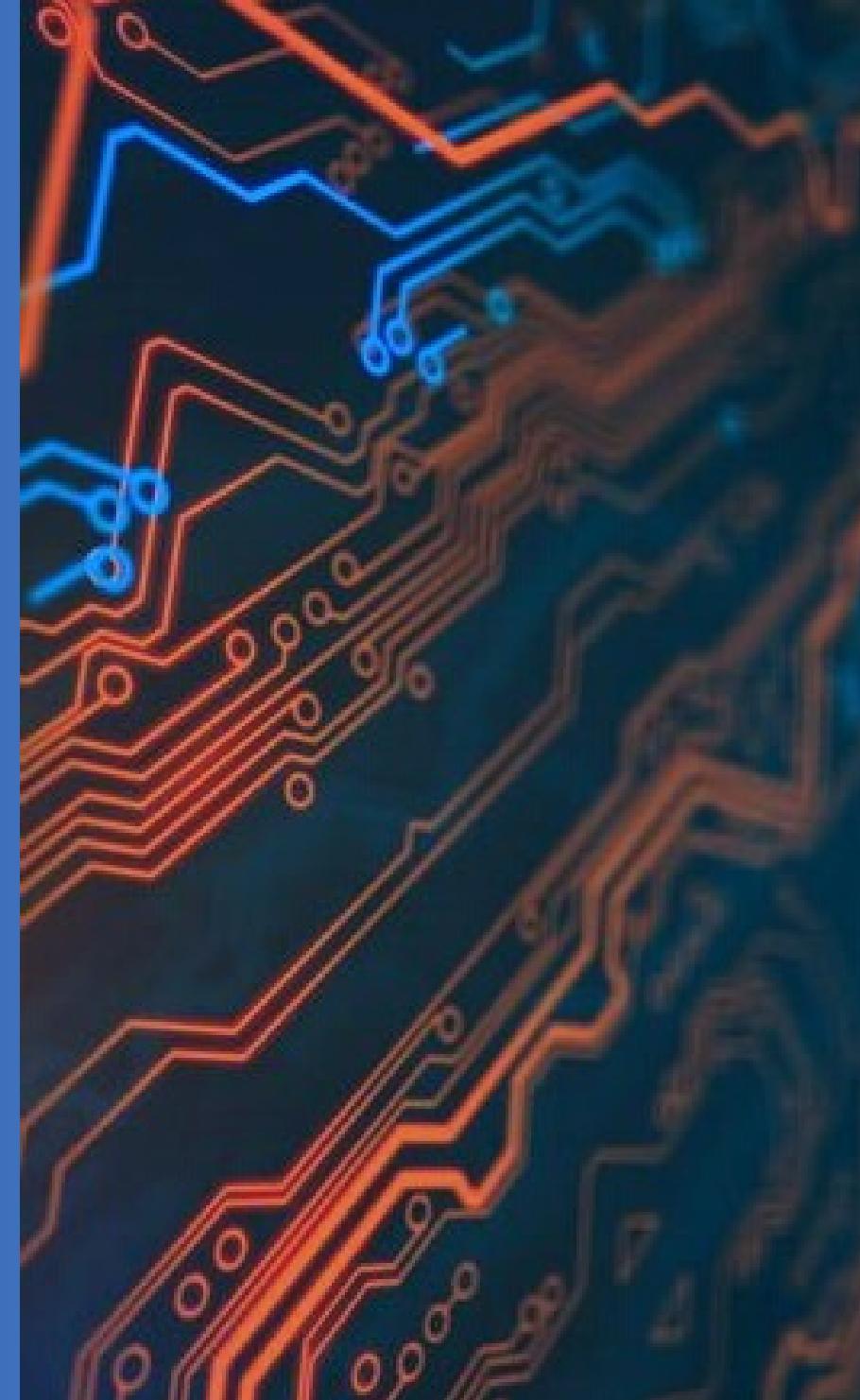
To ensure optimal drying conditions, it is necessary to adjust the location where objects are being dried as the position of the sun changes throughout the day. This is important because the angle and intensity of the sun's rays can affect the drying process, and placing objects in a location that is not receiving adequate sunlight can slow down or prevent proper drying. By regularly monitoring the position of the sun and adjusting the drying location accordingly, we can ensure that objects are drying efficiently and effectively.

**Are there
any viable
solutions to
the sunlight
intensity
changes
throughout
the day?**



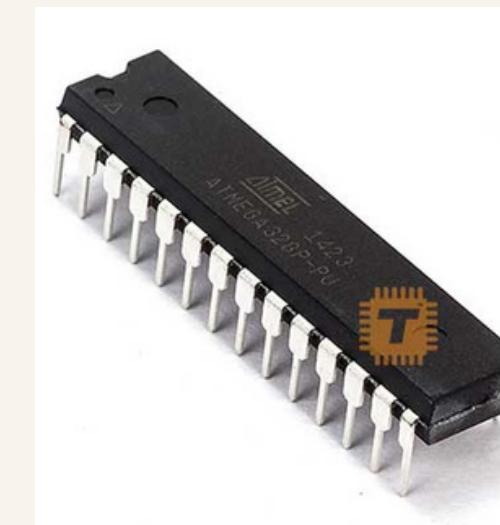
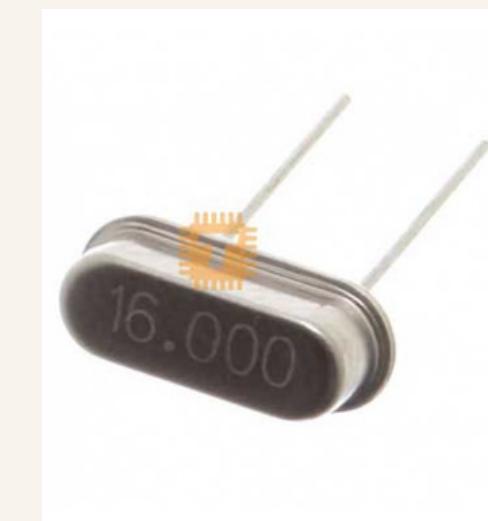
Project Architecture





Technical Feasibility

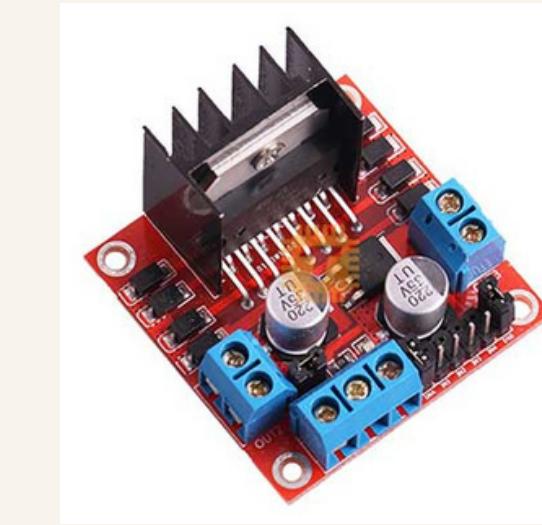
16MHz Crystal Oscillator



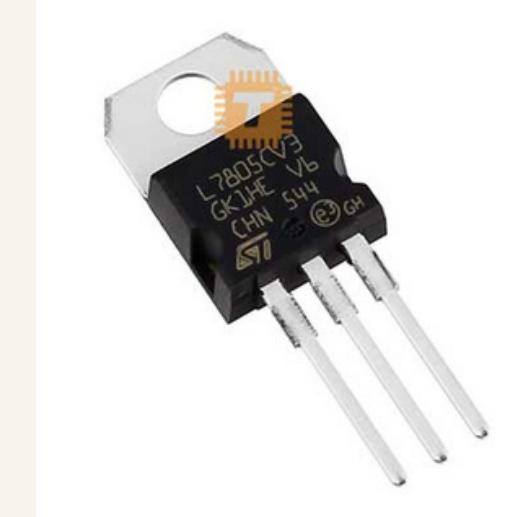
ATmega328



Ultrasonic Sensor



L298N Motor Driver



LM7805



Li-ion 3.7V Battery



Marketing and Sales



- Identify target audience
- Create a catchy brand name
- Establish a social media presence
- Offer product discounts
- Attend trade shows and exhibitions
- Provide excellent customer service



- 6 months warranty
- User manual
- Reliable customer support
- Readily available replacement parts
- Feedback mechanism



- Saves time and energy
- Improves drying process
- Convenient solution for busy individuals/families
- Innovative and eco-friendly features

Budget with BOQ

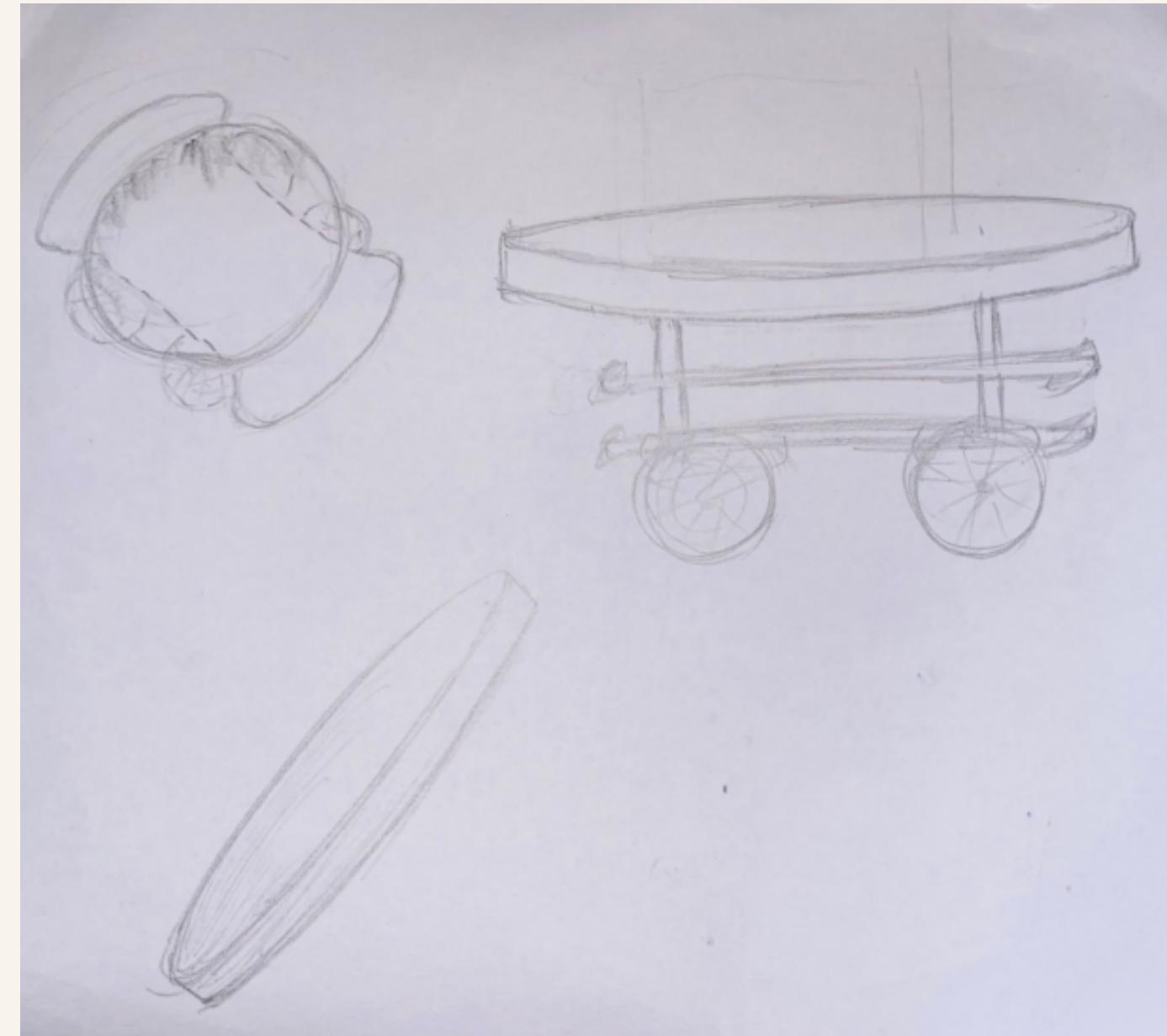
Cost of Modules and Components

Component	Unit Price (LKR)	Quantity	Amount(LKR)
Wheel with DC gear motor	280	4	1120
ATMEGA 328P microcontroller	1800	1	1800
Ultrasonic sensors	320	2	640
16 MHz oscillator	40	1	40
Motor driver	500	1	500
IC holder	8	1	8
3.7V DE 18650 battery	590	2	1180
Battery holder (2 cell)	120	1	120
220 Ω resistor	3	4	12
330 Ω resistor	3	4	12
1kΩ resistor	3	4	12
LDR	15	4	60
0.1 μF capacitor	2	1	2
22 pF capacitor	3	2	6
0.33 μF capacitor	3	1	3
2 Pole ON/OFF switch	50	1	50
7806 voltage regulator	60	1	60
Total			5625

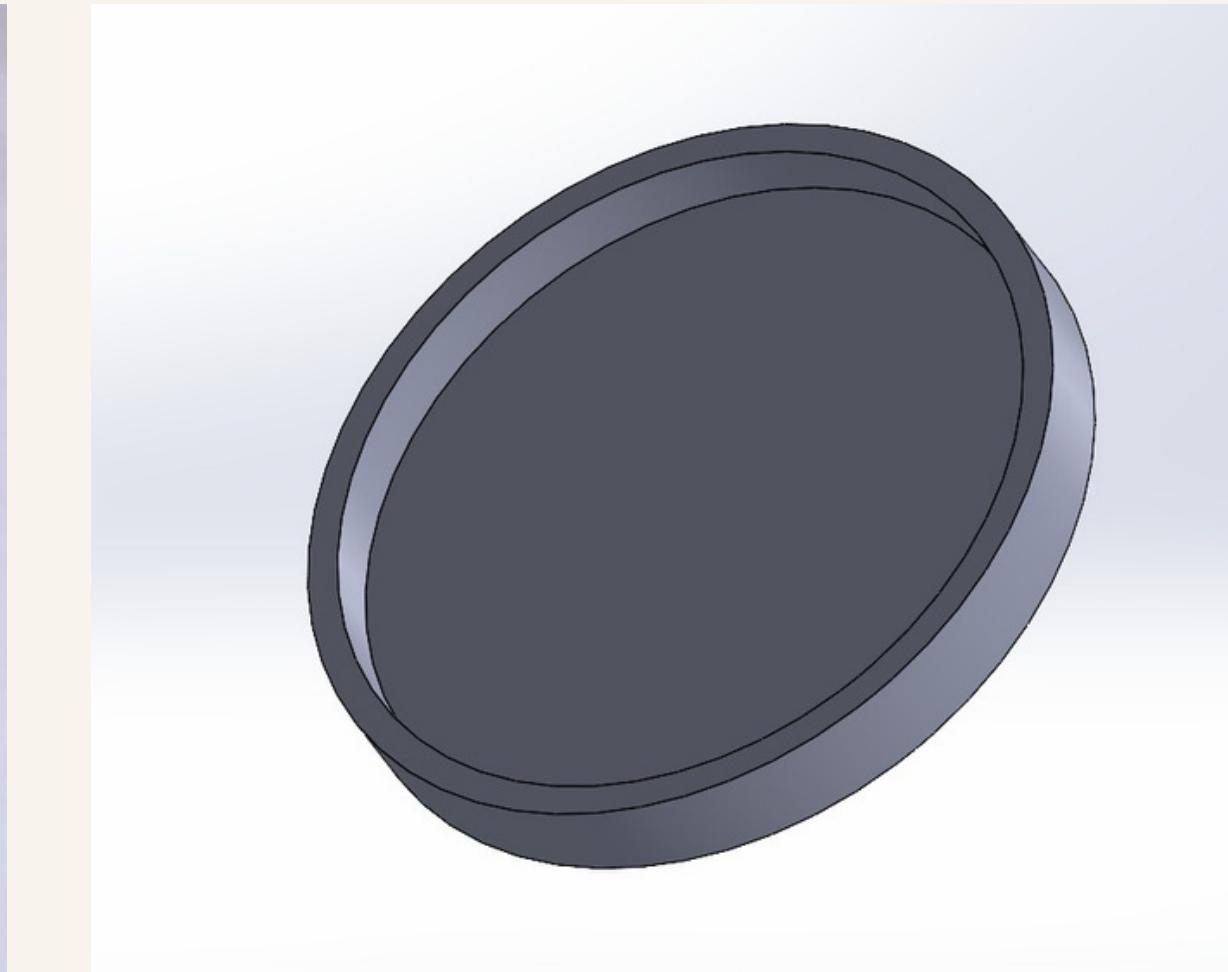
Product Price

Price of components	LKR 5625
PCB printing	LKR 1000
3D printing	LKR 1000
Other expenses	LKR 150
Profit	LKR 1000
Total Product Price	LKR 8775

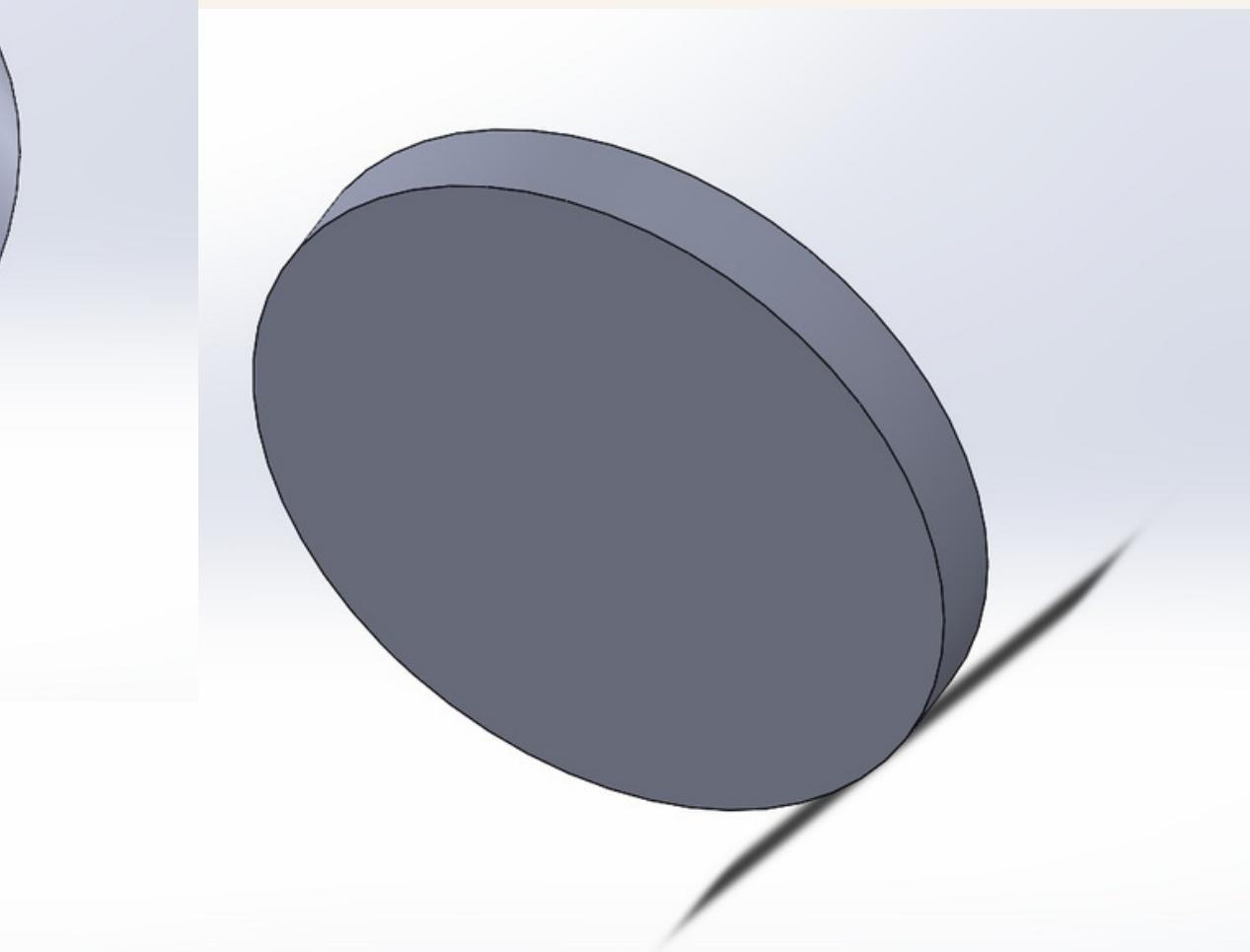
Initial and Final Sketches



Initial Sketch



Final Sketch



Progress Report

Altium Schematic Diagram:

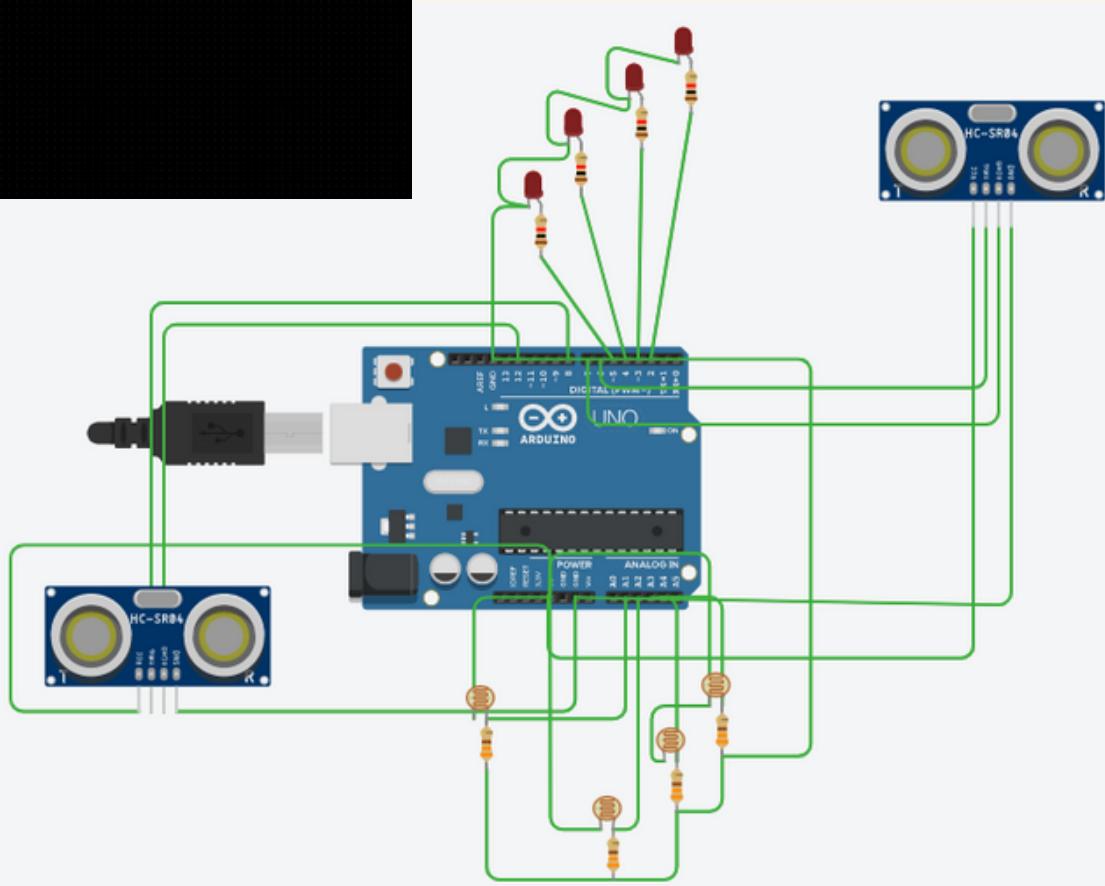
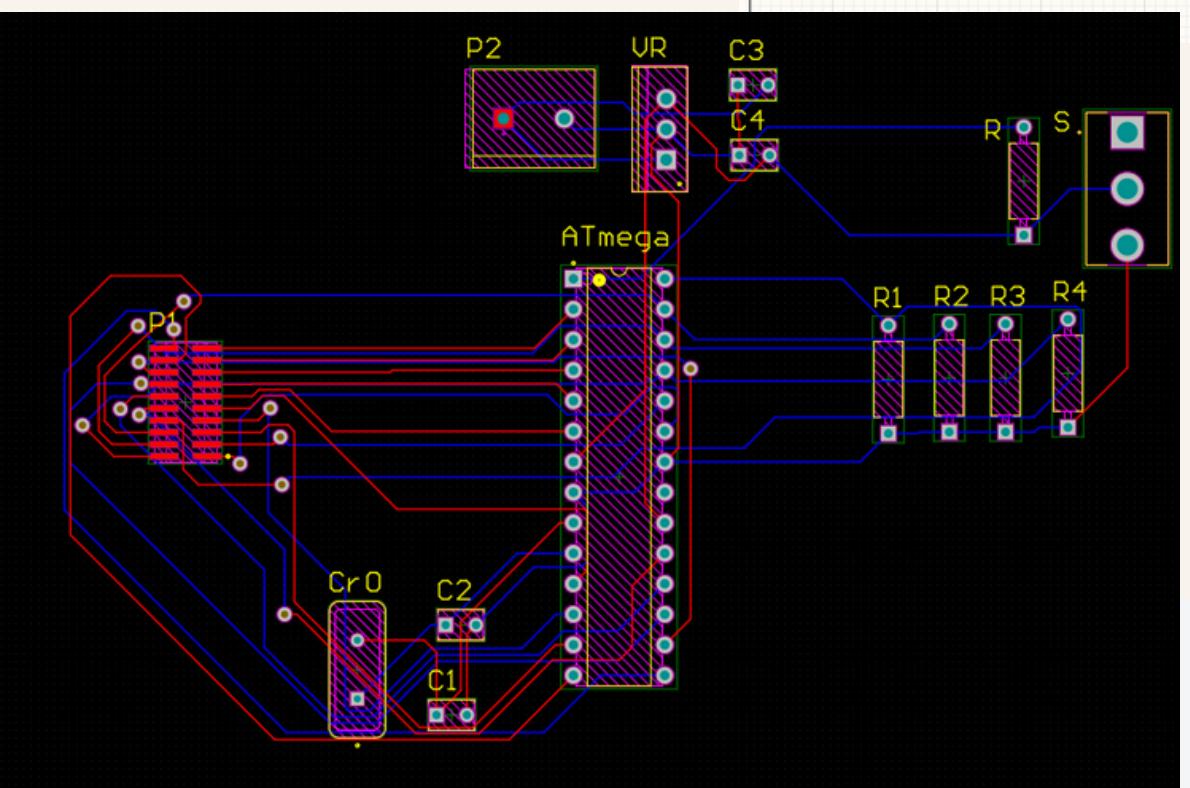
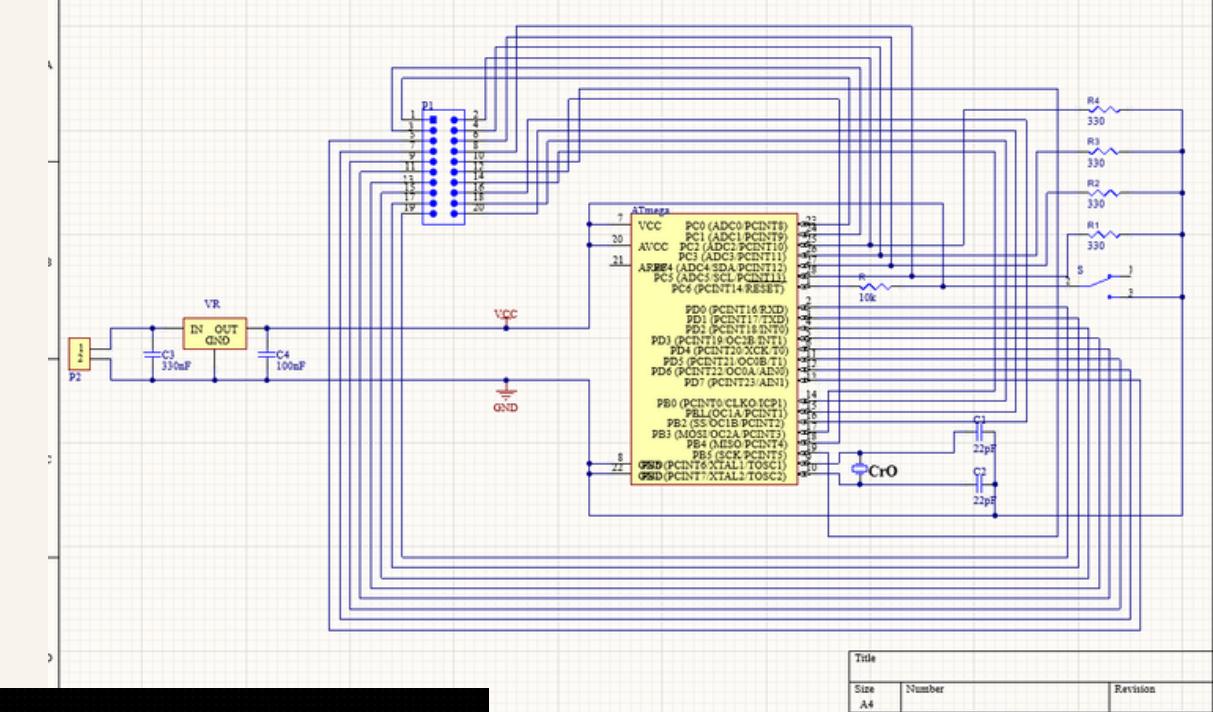
A schematic diagram and PCB layout has been created using Altium. But we have to develop it further to make it completed.

SolidWorks Tray Design:

The design of the tray to hold materials such as grains is designed by solidworks 3D software. The material is selected as steel so as to enhance the tendency for absorbing sunlight to make the drying process more rapid than the normal way.

ATmega Circuit Stimulation:

The ATmega circuit has been stimulated using virtual tools.



Group Members



**Induwara
Morawakgoda**



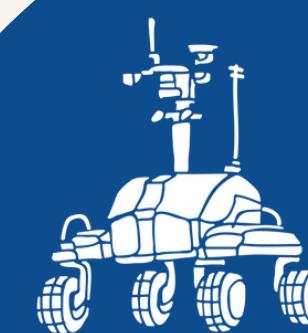
Niluplee Amaratunga



Samudra Uduwaka



Mihiraja Kuruppu



MINS



THANK YOU ...