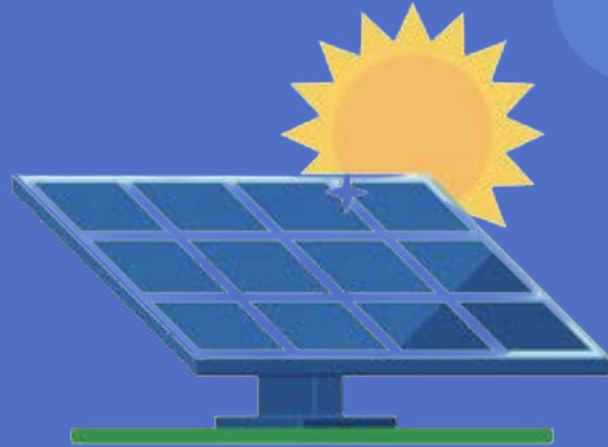


Sun Tracking Solar Panel

GROUP 4



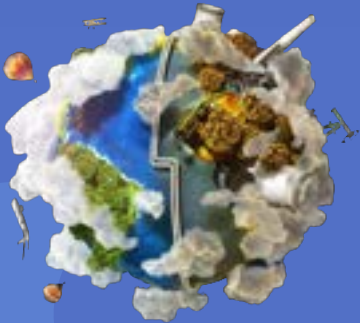


PROJECT AIM: In this project, we will make a sun tracking system which will help the solar panels to generate maximum power.

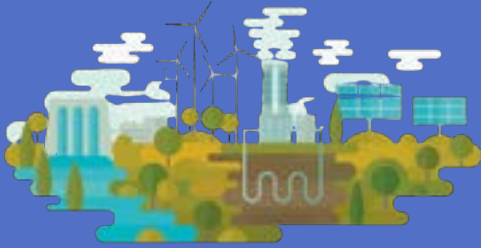
MOTIVATION



- ❑ Climate change is an issue that has engulfed the world in its dangerous consequences.



- ❑ We are currently undergoing a power crisis due to coal shortage, again a fossil fuel which will take up centuries to recharge.

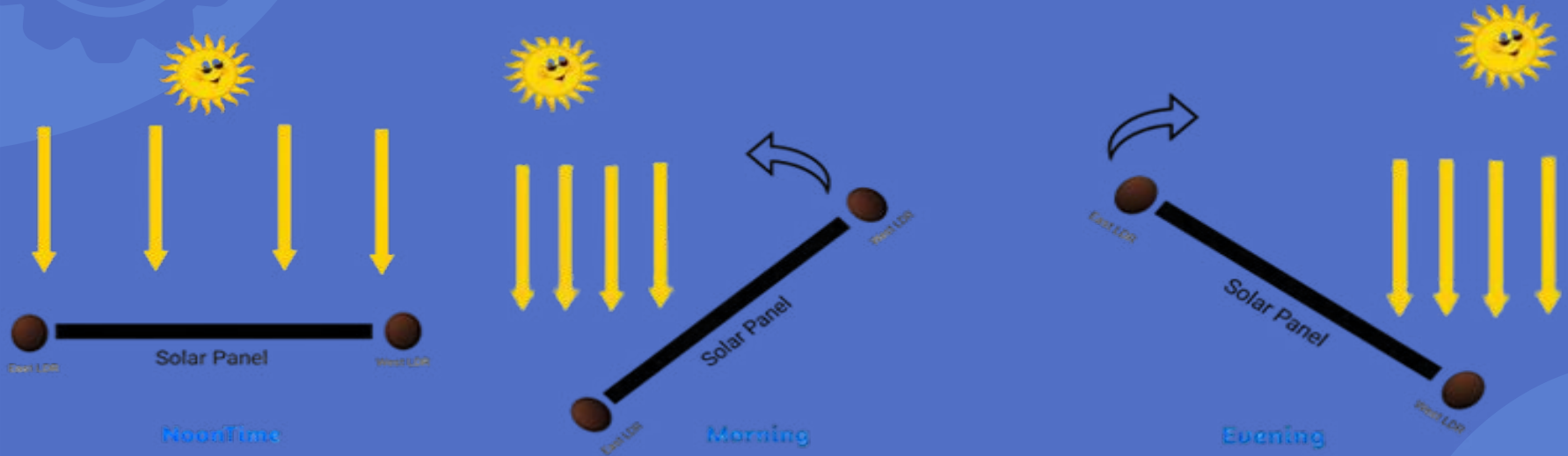


- ❑ Renewable energy is a type of energy that is harnessed from the nature without causing ill effects to the environment.



- ❑ One of the most prominent kind of renewable energy is solar energy. Solar radiation from the sun is collected by the solar panels and converted into electrical energy.

TECHNICAL ASPECTS



Ensuring maximum utilization of the rays from the sun.

PARTS REQUIRED

S.no	Part	Quantity	Description	Approx unit cost	Approx cost
1	Arduino UNO R3	1	Controls all the components	Rs. 862	Rs. 862
2	Servo motor	1	Used to rotate the solar panel	Rs. 190	Rs. 190
3	Solar Panel	1	Target	Rs. 132	Rs. 132
4	LDR	2	Detects light and adjusts resistance	Rs. 17	Rs. 34
5	10 k-ohm resistors	2	Resistance for the LDR	Rs. 20	Rs. 40
6	Jumper wires	-	Connectors	-	-

WEEK WISE PLAN



WEEK 1

Initial ideation and planning.



WEEK 2

Order the required parts and start work on the physical model.



WEEK 3

Work on the coding aspect and prepare the final working prototype.

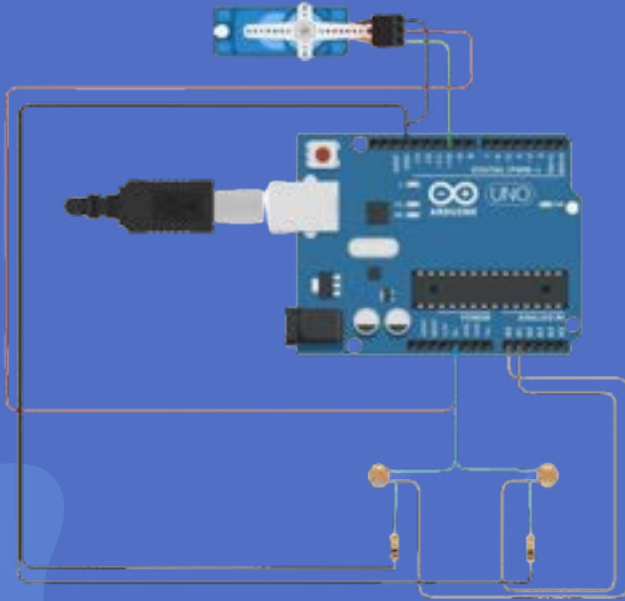


WEEK 4

Work on any final changes and prepare the final presentation.

Circuit component

Circuit Diagram

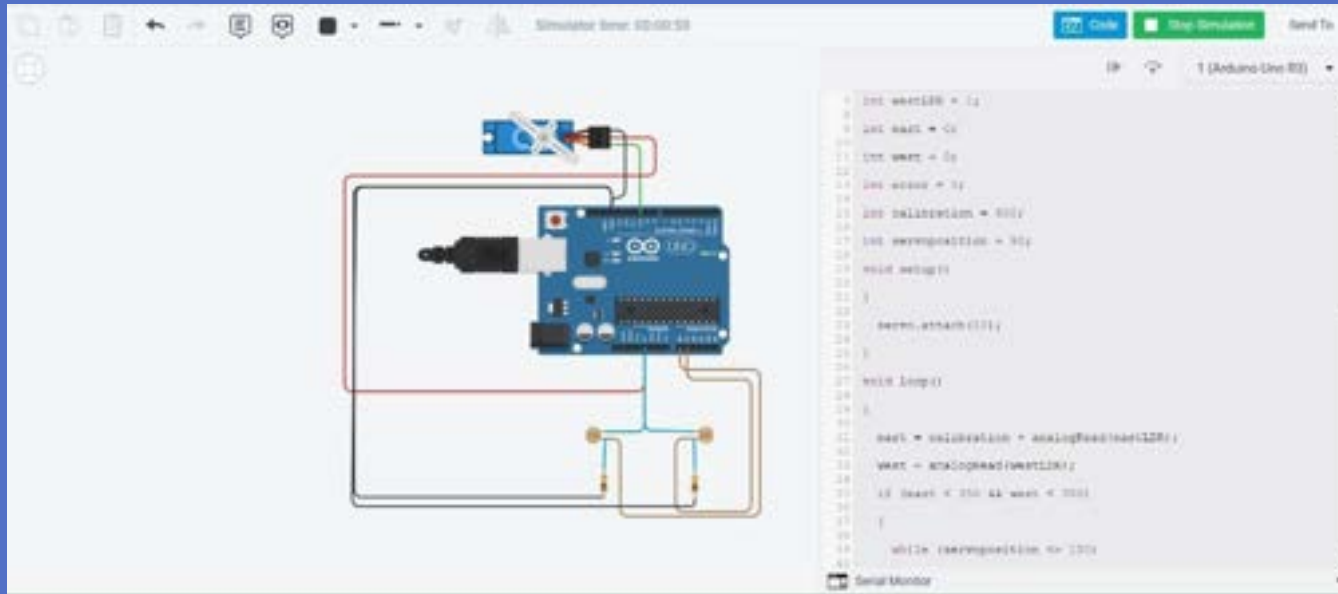


Circuit Components

- ❑ Arduino UNO
- ❑ Servo Motor
- ❑ LDRs
- ❑ 10k-ohm resistors
- ❑ Connecting wires

Code Component

Link to pseudo code : <https://app.code2flow.com/3eIVbgWIZOIIf>



Simulation in TinkerCad

TASK DISTRIBUTION



PRATIK PRANJAL

Assembling the final prototype of the project.



Sarnab Banerjee

Coding the software component and video editing.



AATIR ZAKI

Documentation and coding of the software.



Sara N

Circuit Design and documentation.



Challenges Faced



- ❑ Co-ordinating over online meets and phone calls.
- ❑ Acquiring the parts required.
- ❑ Learning the required skills to complete the project.
- ❑ Final testing of the Project.





Thank You!

Team members: Pratik Pranjali
Sara N
Sarnab Banerjee
Aatir Zaki