INVENTION REPORT

WATERING ROBERT

GROUP MEMBERS :

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REGISTRATION NO : COL/EE/2025/F/023

SUPERVISED BY : Eng.H.D.A.GUNASEKARA

AIM

To design and implement an automatic garden watering robot that detects dry and wet areas using soil moisture sensors and supplies water only to dry regions, thereby reducing water wastage and ensuring efficient water management.

OBJECT.

- To monitor soil moisture levels using soil moisture sensors and automatically identify wet and dry areas in the garden.
- To supply water only to dry areas where it is required, thereby reducing water wastage and promoting effective water conservation.
- To ensure uniform and healthy plant growth.

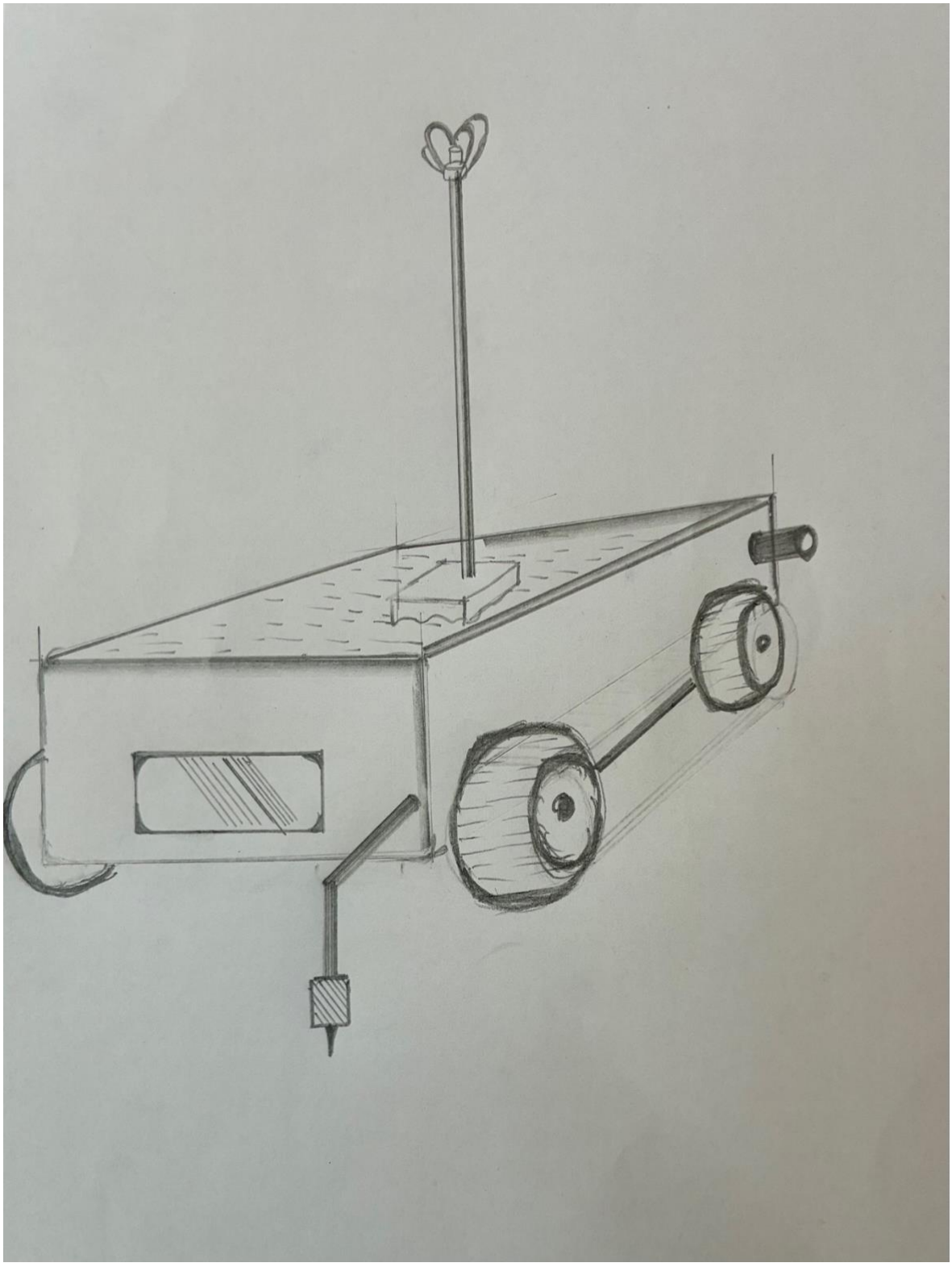
INTRODUCTION

- Efficient water management is an important requirement in modern gardening, especially in situations where water resources are limited. Traditional watering methods often result in over-watering of wet areas and under-watering of dry areas, leading to water wastage and uneven plant growth. To overcome this problem, an innovative solution has been introduced using an automatic robot to separate wet and dry areas in a garden.
- In this innovation, soil moisture sensors are used to continuously identify dry and wet regions of the garden. The automatic robot is programmed to detect these dry areas accurately and supply water only where it is required. As a result, unnecessary watering is avoided, and water is conserved effectively.

ADVANTAGES

- The system conserves water by supplying it only to dry areas, thereby reducing wastage and improving efficient water management.
- By maintaining proper soil moisture levels, the system ensures plants receive adequate water for healthy and uniform growth.
- Automation reduces the need for frequent manual watering, saving physical effort.
- The robot operates automatically, reducing the time needed for garden irrigation.
- Soil moisture sensors detect wet and dry areas accurately, ensuring precise watering.
- The system offers a sustainable and advanced irrigation solution, ideal for modern gardens and water-scarce areas.

DIAGRAM



BUDGET REPORT

NO	DISCRIPTIN	NET PRICE (RS)	QTY	TOTAL PRTICE (RS)
01	TT MOTORS	350	04	1400.00
02	ARDUINO BOARD	2100	01	2100.00
03	BLUETOOTH MODULE	700	01	700.00
04	MOTOR CONTROLE	450	02	900..00
05	WATER FLOWER	860	01	860.00
06	18650 LIFE BATTERY	1680	01	1680.00
07	3S BMS	350	01	350.00
08	WHEEIS	100	10	1000.00
09	WATER SENSE	60	01	60.00
10	DC MOTOR	900	01	900.00
11				
		TOTAL		9950.00

Supervised by :-

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Date Signature