AUTOMATIC PLANT WATERING SYSTEM FOR PLANTS

In our campus, we have large grounds and large number of plantations alongside and around it. As some plants need water on regular basis, so a lot of manpower is required for watering plants. In this project, we have to make a plant watering system, which automatically provides water to plants as per the requirement of particular plant.

Materials	Cost	Item	Total Cost(rupees)
Arduino	**450**	**1**	**450**
Relay	**200**	**1**	**200**
Battery	**20**	**2**	**40**
Tyres	**15**	**4**	**60**
Glue	**20**	**1**	**20**
Jumper wires	**2**	**10**	**20**
water tank	**10**	**1**	**10**
Soil moisture sensor	**250**	**1**	**250**
Pump	**150**	**1**	**150**

GRAND TOTAL = RS 1200

OUR SOULTION:

Our product comprises of an Arduino based circuit. Which further comprises of a soil moisture sensor, a pump to supply water through one-way relay as a switch.

This whole setup is fitted into a small box which can be installed anywhere you want. The soil moisture sensor is inserted into the soil to check its moisture level. If it is below a certain threshold value, the pump will supply water to the plant and once it reaches its threshold, water supply is stopped.

PROJECT PLAN

1. February (week 1) Designing, planning and marketing of cost material sheet, project plan and geometry of project.
2. February (week 2) Organising, marketing and buying of material required in the project.
3. February (week 3) By examining the project geometry, planning the placing of materials.
4. February (week 4) Initiating the construction, mounting the motors and Arduino.
5. March (week 1) Further initiating the construction for water tank.
6. March (week 2) Further placing the water tank and connecting the wires with Arduino and relay
7. March (week 3) Programming and coding of Arduino for the project and finishing the project.

HOW IS OUR SOLUTION DIFFERENT FROM EXISTING ONE:

- Provides water strictly according to need of plant by checking its moisture level. So, an accurate water supply can be provided through this.

- Very Portable, can be installed anywhere and easy to use by anyone.

- Is very adaptable to changing weather conditions…..e.g in rainy days or cloudy weather when moisture content lost from soil is very less, the water supply would be given accurately due to use of soil moisture sensor.

- Environment friendlier as no wastage of water is done and no soil erosion due to water supply according to need.

BUDGETRY DETAILS:

Our project would cost around Rs1200.

We have also kept in mind the budgetary aspect of this product. We have kept it simple, low cost so that everyone can afford it.

REPORT COMPILED BY TEAM 12.