

**OMENOKU PERPETUAL
ISHIOMA
18/ENGO6/060
MECHANICAL ENGINEERING**

The software developed is been able to:

- I. Determine the moisture content of the soil by using a tensiometer, the most reliable instrument used to gauge or check the moisture content of the soil, can also be known on how acidic or alkaline the soil is.
- II. Read the temperature of the soil, in this point we make use of the earth thermometer
- III. The time interval is been programmed, due to lack of water on the soil which will be gauged by the EVAPOTRANSPIRATION (ET SCHELDULE), which also monitors the soil moisture.

IV. This system is been developed in the sense that if the soil isn't properly irrigated or watered or if its over flooded an alarm is been triggered to our notice.

V .The system is been secured by passwords and other essential securities if needed.

APPLICATION DEVELOPMENT: from the above requirements of this machine, it aids to promote more harvest, and contain dryness and unproductivity in the ABUAD farm, thereby bringing more gain and less stress to the farmers and agricultural personnel.

SOFTWARE FEAUTURES: this is been made in order to know the irrigation schedule for the soil and is been done by:

- 1. Smart scheduling: irrigation software creates and automates schedules from sensors that acquire data about the soil.**
- 2. Weather and soil monitoring: high tech sensors monitors the weather, soil humidity and cuts of water if rain is been sensed.**

HARDWARE FEATURURES

- 1. INJECTORS:** these are used to apply water soluble fertilizers to the soil
- 2. DISTRIBUTION LINES:** moves water from the source to the area of application.
- 3. COLOUR INDICATOR:** shows when the water level is low or normal.

ALGORITHM

FOR(I)

START

Get soil sample

Mix soil sample with water

Add red litmus paper to mixture

If it turns blue

Print alkaline

Else

Print acidic

END.

ALGORITHM FOR (II)

START

Get soil sample

Input in the earth thermometer

Read temperature of the soil

Print value

END.

ALGORITHM FOR(III)

START

READ TIME L

TIME=L LACK OF WATER

ACTIVATE TIME L

END

ALGORITHM FOR (IV)

START

READS MORE THAN BEEN PROGRAMMED

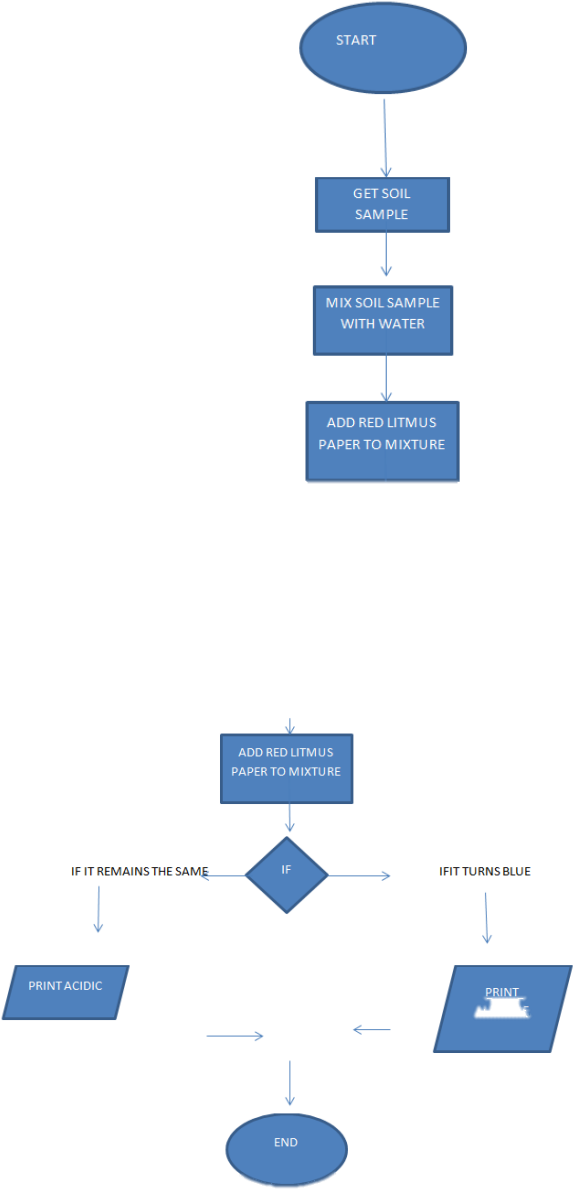
ALARM INDICATOR TURNS RED

READS LESS THAN PROGRAMMED

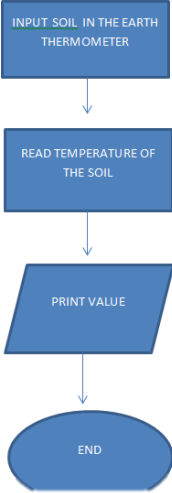
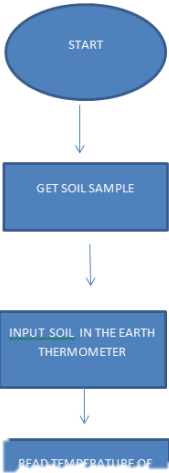
ALARM INDICATOR TURNS YELLOW

END

FLOW CHART FOR(I)



FLOW CHART FOR(II)



FLOWCHART FOR(III)

