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18/ENG06/052

Mechanical Engineering

This software being built is intended to communicate with the machine which will help to:

- 1) Determine the moisture content of the soil
- 2) Trigger an alarm if there is not sufficient water in the tank for irrigation
- 3) Enable the password for the system
- 4) Read the temperature of the soil
- 5) Determine the moisture content of the soil.

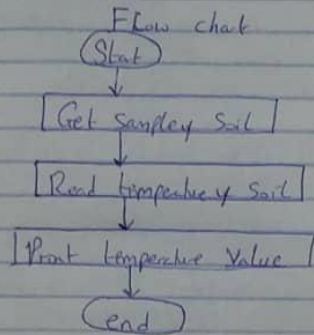
This software is to be used to make farming on the dry season which leads to unproductivity or low productivity to be productive by the listed functions above.

Hard and Soft Ware Features

- 1) Thermometer - This is for determining the atmospheric temperature and that of the soil.
- 2) Alarm - This will alert the people managing the machine that the water level is either too high or too low. This will efficiently help regulate the water efficiently.
- 3) Trowel / Shovel / Spoon - This is for collecting soil samples from the soil at different sections of the farm.
- 4) Level gauge - To be installed on the water tank to trigger the light indicator which will trigger the alarms when the water level is unusual.
- 5) Indicator - This will be used to display the water levels
- 6) Led Display - This will display the output values the devices will give eg temperature value, water level value.

Determine the Temperature of the Soil

START
GET SAMPLE OF SOIL
READ TEMPERATURE OF SOIL
PRINT TEMPERATURE VALUE
END



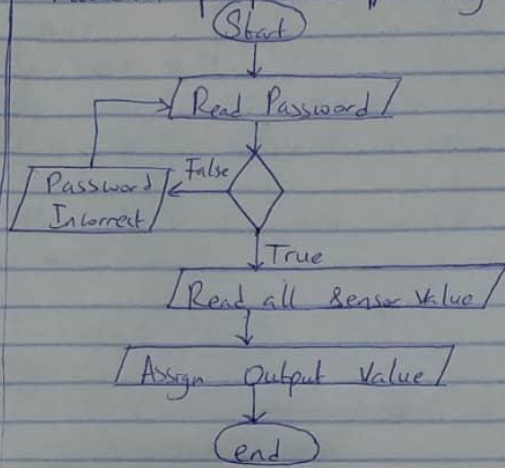
Determine moisture Content of the Soil

START
GET SAMPLE OF SOIL
ADD WATER TO SOIL
ADD RED LITMUS PAPER TO MIXTURE
IF RED LITMUS PAPER TURNS BLUE
PRINT ALKALINE
IF IT DOES NOT CHANGE
PRINT ACIDIC
END

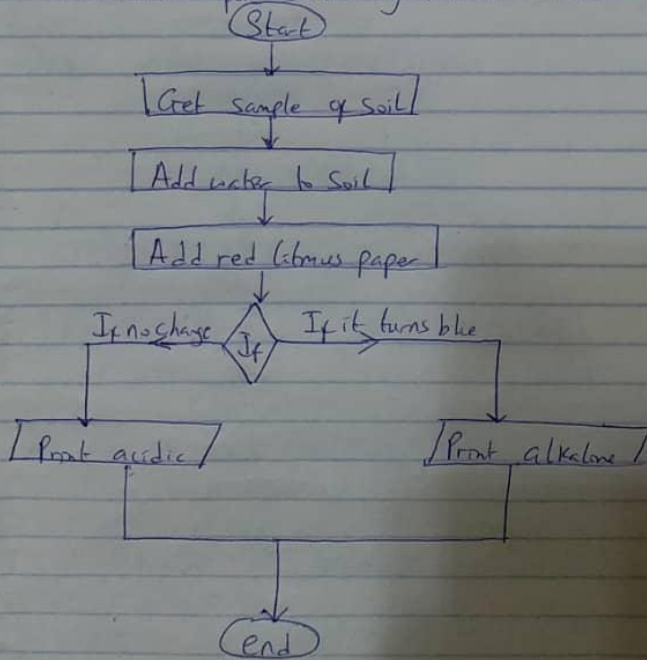
Determine password for the System

START
READ PASSWORD
IF INCORRECT
PRINT ACCESS DENIED
IF CORRECT
PRINT ACCESS GRANTED
READ ALL SENSOR VALUE
ASSIGN OUTPUT
END

Flowchart for password for the system



Flow chart for determining moisture Content



Determine Time Interval for The System

START

READ TIME X, Y

TIME = Y ACTIVATE SYSTEM

TIME = Y DE-ACTIVATE SYSTEM

END

Alarm for low water in soil

START

READ X LITRES

IF WATER IS ABOVE Y LITRES

INDICATOR TURNS GREEN

IF WATER IS BELOW X LITRES

INDICATOR TURNS RED

ALARM IS ACTIVATED

IF WATER IS ABOVE X LITRES

END

Date Flowchart of the System

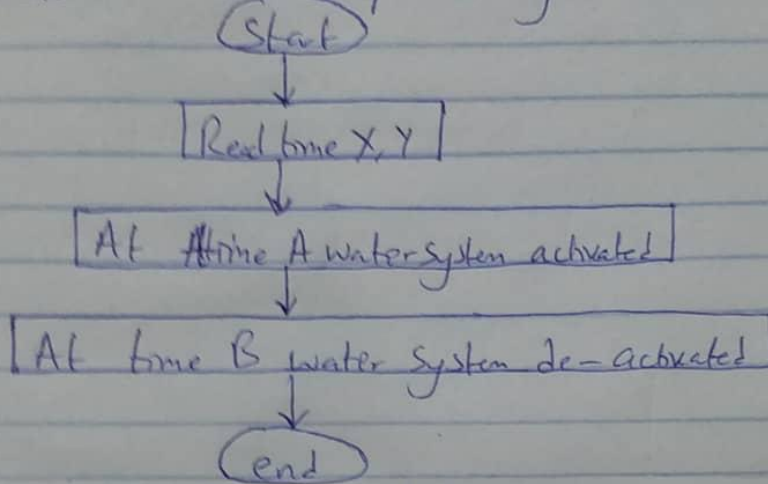
(Start)



END

Date

Flowchart of the System



Flowchart to trigger alarm

