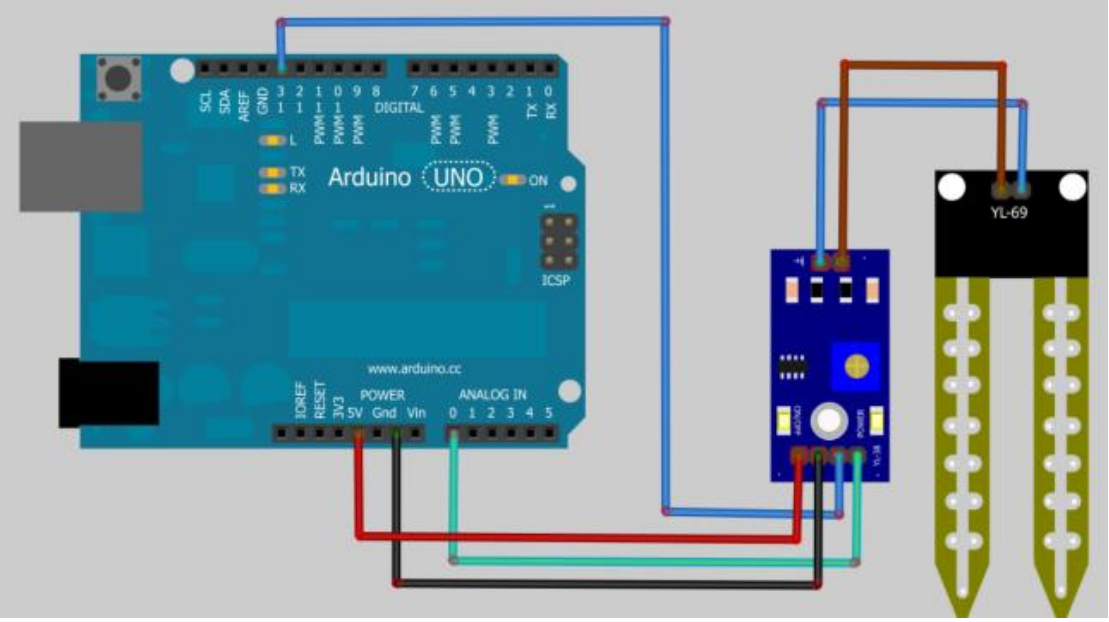
Application 1: Getting Started With Arduino Adjustable Soil Moisture Sensor

1. Pin Connection :



Then insert the example code into the Arduino.ide. Output is shown below

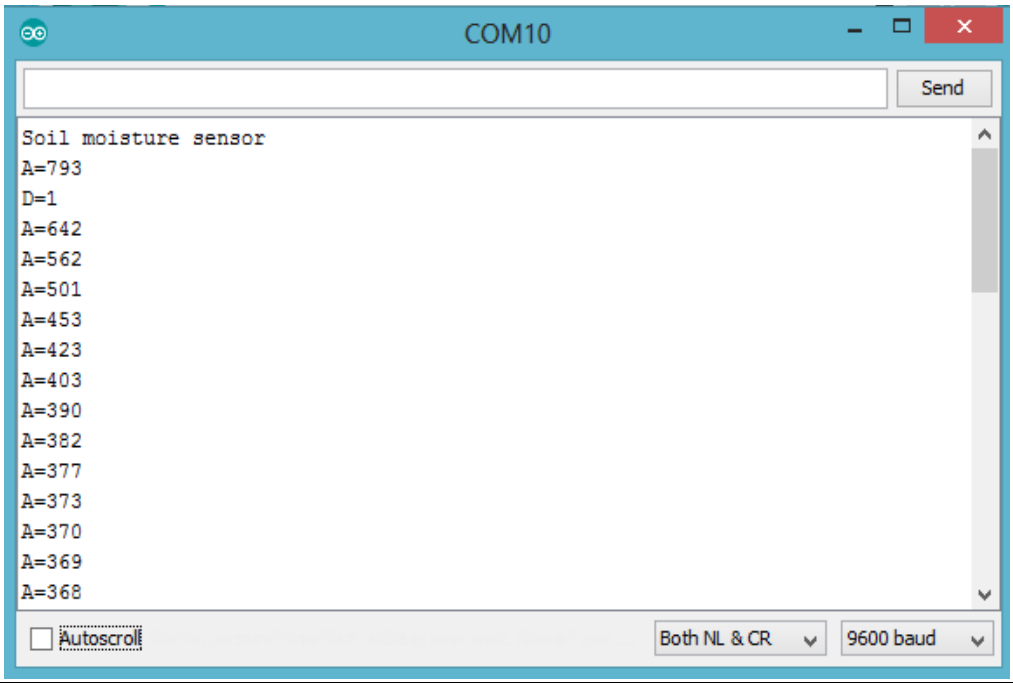
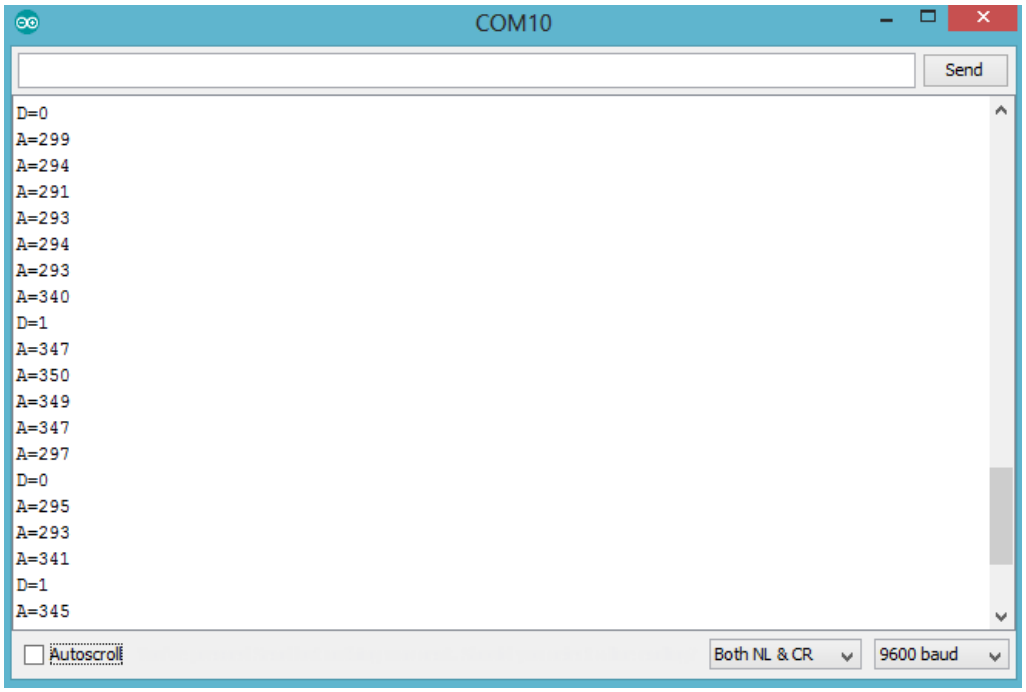


Figure 1

When D = 1, it shows that no moisture is detected and values of A is high (Figure 1).

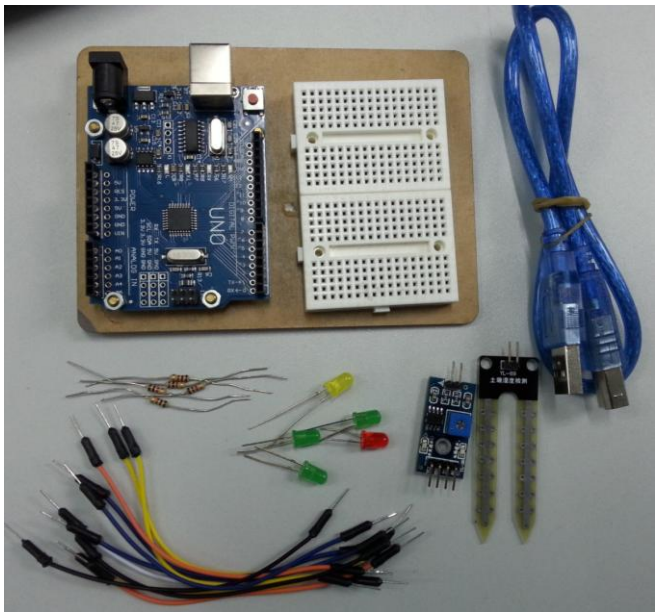
In figure 2 (below), when the moisture is detected, D will become zero and values of A are become low.



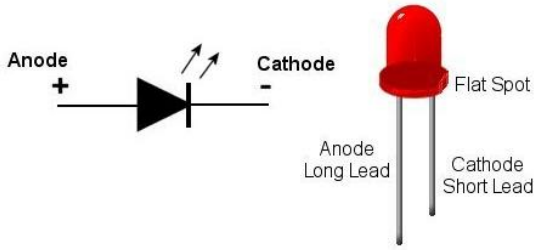
Application 2: Arduino Soil Moisture Sensor, output will be displayed with Leds.

Things needed for this project:

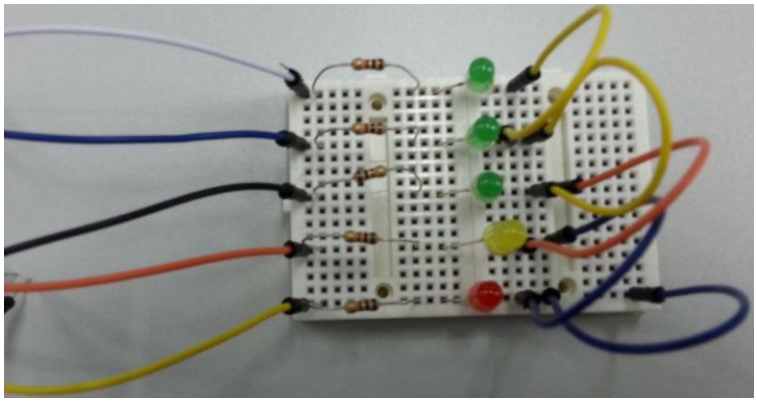
- Soil moisture sensor
- Arduino Uno
- 1K Resistors x 5
- 5 x Led
- Jumper wires



Connecting the LEDs



Anode is connected to the resistor and all cathodes are grounded.



**make sure to connect resistor of 1K to each Led.

Connection:

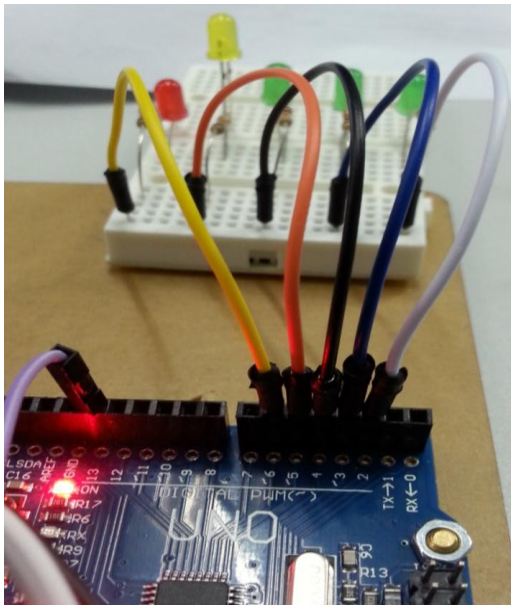
Digital Pin 2: Green.

Digital Pin 3: Green.

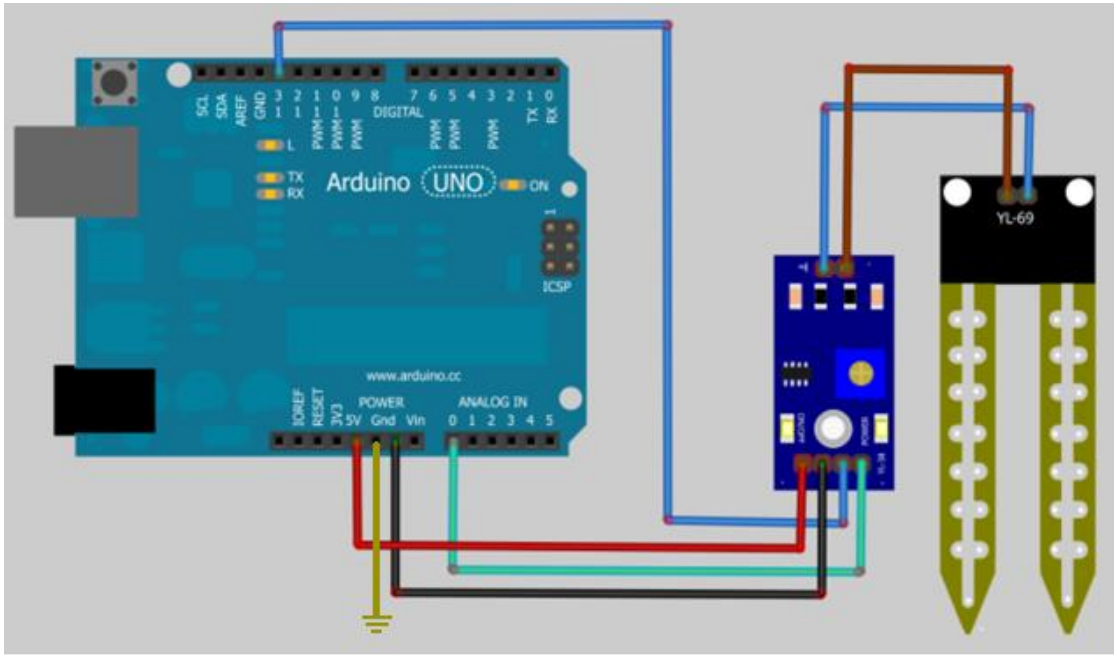
Digital Pin 4: Green.

Digital Pin 5: Yellow.

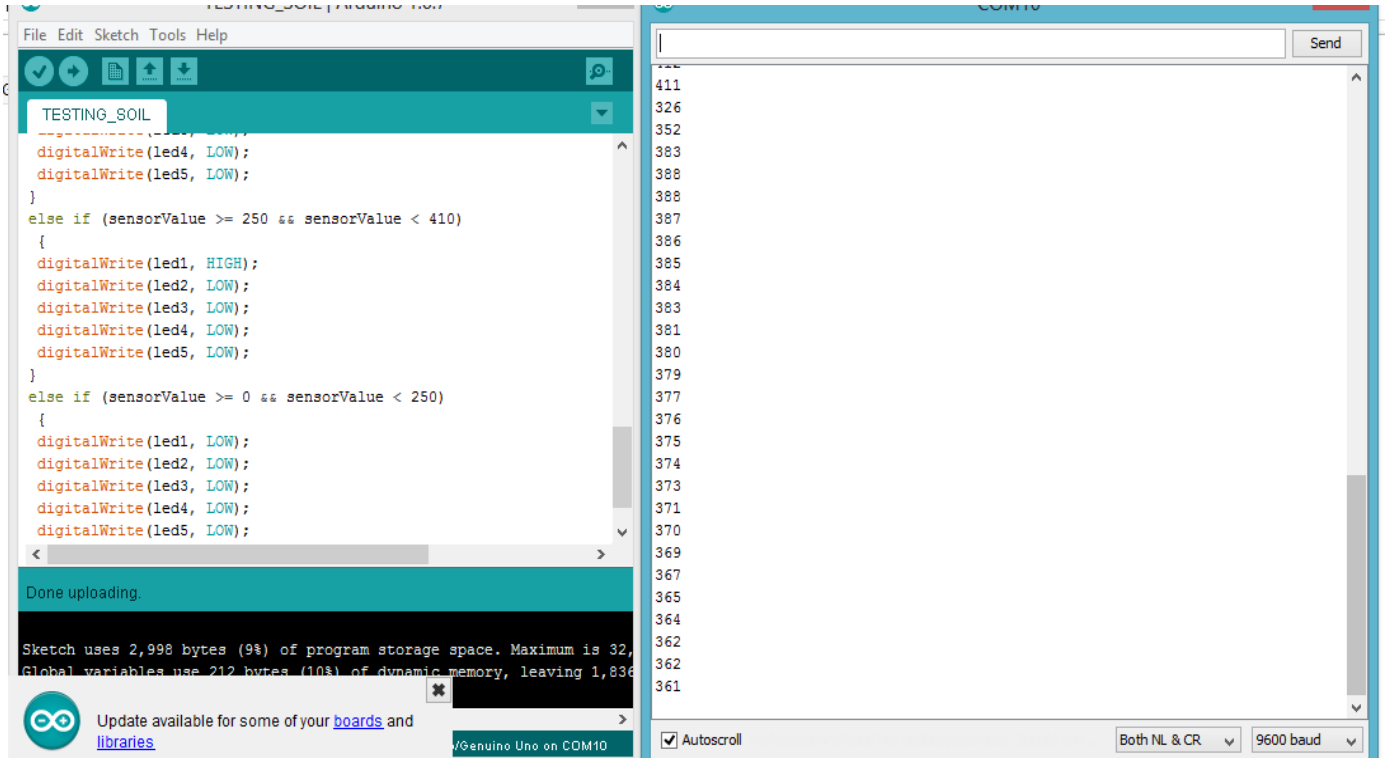
Digital Pin 6: Red.



Connect the soil moisture



Then, upload the code into arduino.ide. The output shows if the reading is ≥ 250 and < 410, led no 1 will lights up.


File Edit Sketch Tools Help
TESTING_SOIL
digitalWrite(led4, LOW);
digitalWrite(led5, LOW);
}
else if (sensorValue >= 250 && sensorValue < 410)
{
digitalWrite(led1, HIGH);
digitalWrite(led2, LOW);
digitalWrite(led3, LOW);
digitalWrite(led4, LOW);
digitalWrite(led5, LOW);
}
else if (sensorValue >= 0 && sensorValue < 250)
{
digitalWrite(led1, LOW);
digitalWrite(led2, LOW);
digitalWrite(led3, LOW);
digitalWrite(led4, LOW);
digitalWrite(led5, LOW);
Done uploading.
Sketch uses 2,998 bytes (9%) of program storage space. Maximum is 32,
Update available for some of your boards and libraries
Send
411
326
352
383
388
388
387
386
385
384
383
381
380
379
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364
362
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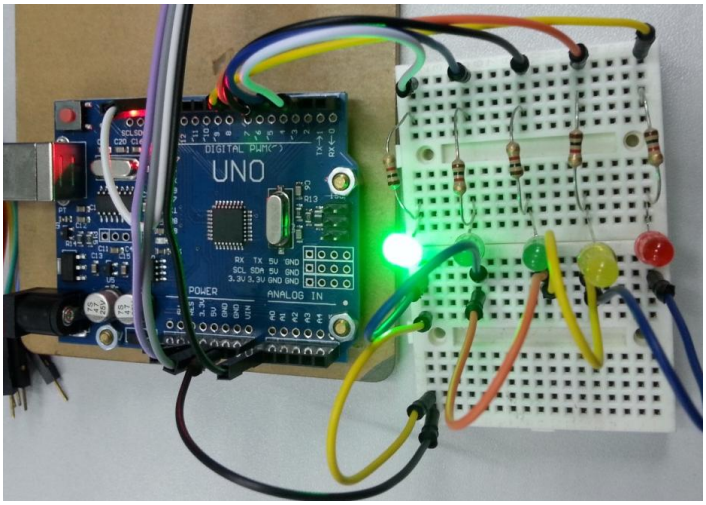
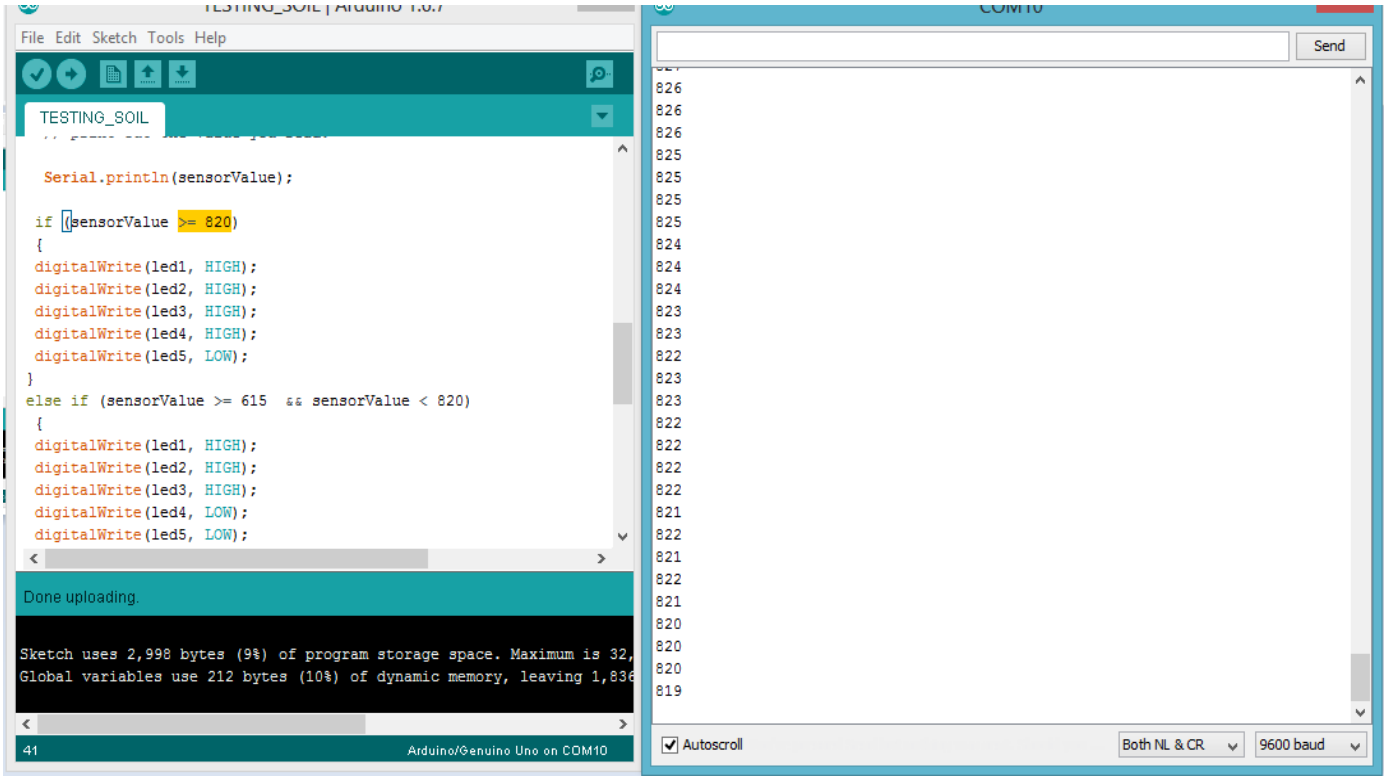
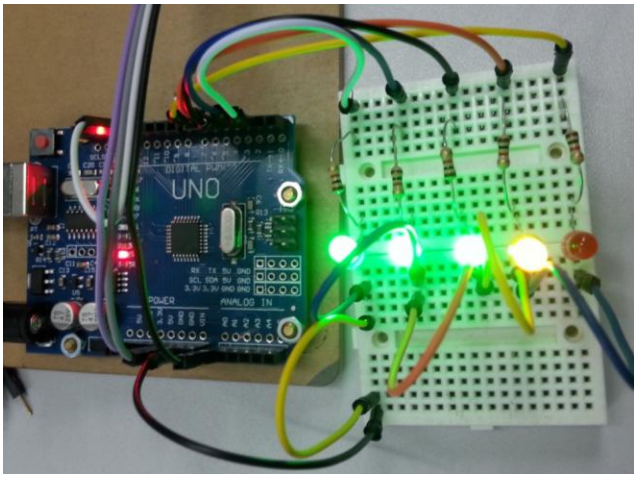
Autoscroll
Both NL & CR
9600 baud


UNO

If reading is ≥ 820, led 1,2,3 and 4 lights up.





A basic code is used in application 1 to show how the soil moisture sensor detects the moisture around its surrounding. The output of the moisture detected is displayed on serial monitor. Application 2 is to show when is the suitable time that we need to water the plant. When all led light up, it shows that the soil is dry and it is the time to plant the water.