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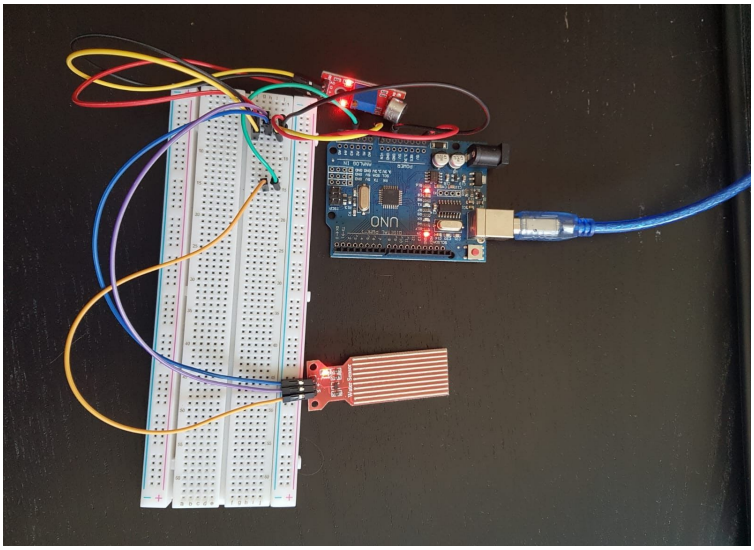
C programming exam assignment

I have chosen to create the Arduino data logger. I have worked on this assignment on my own.

I had planned to fulfill the requirements for this exercise. However, I managed to fulfill only 3 of them. Them being:

1.Start the logging process.
2.Stop the logging process.
3.Transmit all the logged data.
4.You can change between different sensors through a menu.

The sensors I am using in my project are sound and water sensors. I have them connected like this:



The program on the Arduino collects data from both sensors through analogRead and outputs it by using Serial.print.
Then on the other side, I have a small program that first asks the user which sensor's data they would like to see and then show the live data on a graph. It also saves the data in a csv file.
What I could not manage to achieve, is to stop the data stream and start it again without exiting the program.

I experienced a weird issue when I was trying to use Serial.write. I tried to make a simple program that receives data and then prints it out. That works on the arduino,

however I am not able to capture the Serial.print data with Python. For some reason, It worked only once and I have not been able to make it work since.
Here is my arduino program that I tried.

```
char serial;
int waterPin = A3;
void setup(){ //lcd.begin(16, 2);
  Serial.begin(9600); // open serial port,
}
void loop(){
     int value;

     if(Serial.available() > 0) {

     while(true){
       value = analogRead(waterPin);
       Serial.print("w: ");
       Serial.println(value);
       delay(400);
         }
     }
}
```

Here, whenever I have received a value, I start reading the data that the sensor sends. Here, I am only getting data from the water sensor. When I try to use both sensors, I am only able to receive data from one of them (the first one in the first if).

```
void loop(){
     int waterValue;
     int soundValue;

     while(Serial.available() > 0) {

         if(Serial.read() == 's') {

           soundValue = analogRead(soundPin);
           Serial.print("s: ");
           Serial.println(soundValue);
           delay(400);
     }
        else if(Serial.read() == 'w') {
           waterValue = analogRead(waterPin);
           Serial.print("w: ");
           Serial.println(waterValue);
           delay(400);
        }
     }
}
```

Even though I'm still figuring things out, I really enjoy working on this project and I hope you like it!