Github repo local setup

Create repository in github

Create a new repository and call it *gmit-course-inc*

On your PC navigate to a folder. (make sure it is writiable and not under administration rights).

git clone https://github.com/username/gmit-course-inc.git

1. move into the folder, use command *cd gmit-course-inc*
2. *make a new folder using* *mkdir lab-sensors*
3. *add your files for the lab here*

Step 5: Save to with your GitHub repo

1. Navigate into the folder using the terminal, using command *cd gmit-course-inc*
2. *use commad git status to show you the changes* *git status*
3. *use command add to add all the files changed* *git add --all*
4. *use command git commit to log your changes....................git commit -m "your message"*
5. *use command git push to push to cloud..............................git push*

Windows Command Prompt- Review

```
cd [/D] [drive:][path]          Change Directory - Select a Folder (and drive)
```

```
Note: first letter/letters of the directory, and then press Tab key multiple
times until the correct directory appears.
```

```
cd ..                    Move up a level
dir                      See Directory content
```

LAB Tasks
SENSORS =Distance sensor , potentiometer or LDR (USE ONE)

1. Create a program that uses a button to send the reading when pressed from an analog sensor and also trigger an LED.
2. Setup a new button with debounce logic to read the sensor (see Arduino examples)
3. Create an arduino function to read analog sensor values and smooth the readings, when the button is pressed.

   https://www.arduino.cc/en/Tutorial/BuiltInExamples/Smoothing
   https://www.tutorialspoint.com/arduino/arduino_functions.htm

4. Create functions to read smooth values at X miliseconds and prints values at Y miliseconds, . (check spec pdf read spec for sensor)

Hint ,

```
delay() //delay function works but comment on issue
```

or

```
long timeNow=0; // Hold the milliseond value for now
long timer=0;   //general purpuse timer
void loop() //Main Loop
{
timeNow = millis();
if((timeNow-timer)>=200)  // Observe and change as required
 {
        timer = timeNow;
        Serial.println(timeNow);
    //CALL your function etc
    }
}
```

NOTE: Submit by pushing your work via github

Make sure you have - https://git-scm.com/book/en/v2/Getting-Started-First-Time-Git-Setup