# Arduino

# Topics learnt

1. Establishing serial communication and printing output.

2. Map function to normalize signal.

3. Used map function to turn on bar graph lights for (a) Voltage and (b) Photo-resistance.

4. Photoresistor signal is not that clean. Programmed an Ohmmeter to be mapped as light and bar graph gives signal of light indication in the room.

5. In this regard, calibrating a sensor should a task learnt well. It would not be easy to measure and detect things even with standard equipment as we found out in our tasks.

6. Sending an input manually to the computer for a desired output, e.g. turn on light if I press 0.

7. Storing data in arrays. Noise and how to smoothen data by the moving average method. It’s basically based on the C programming language, thus quite easy to catch up.

8. Returning multiple outputs from a function using a pointer.

9. Some devices require the shift register for increasing the number of i/o pins but better to avoid these devices which have too many i/o ports and create complicated wire clutter. The TM1637 4-digit o/p device is a great example, instead of the normal 4-digit o/p provided with Elegoo kit which require many connections the TM1637 only uses 2 Arduino pins. All of this can be easily avoided by using the standard LCD output.