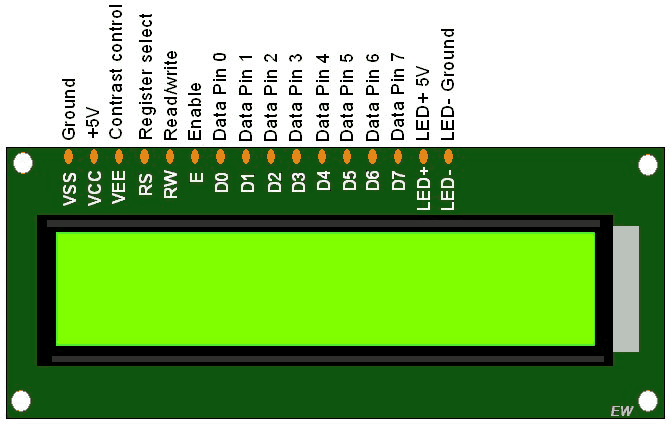
**LCD 16x2**

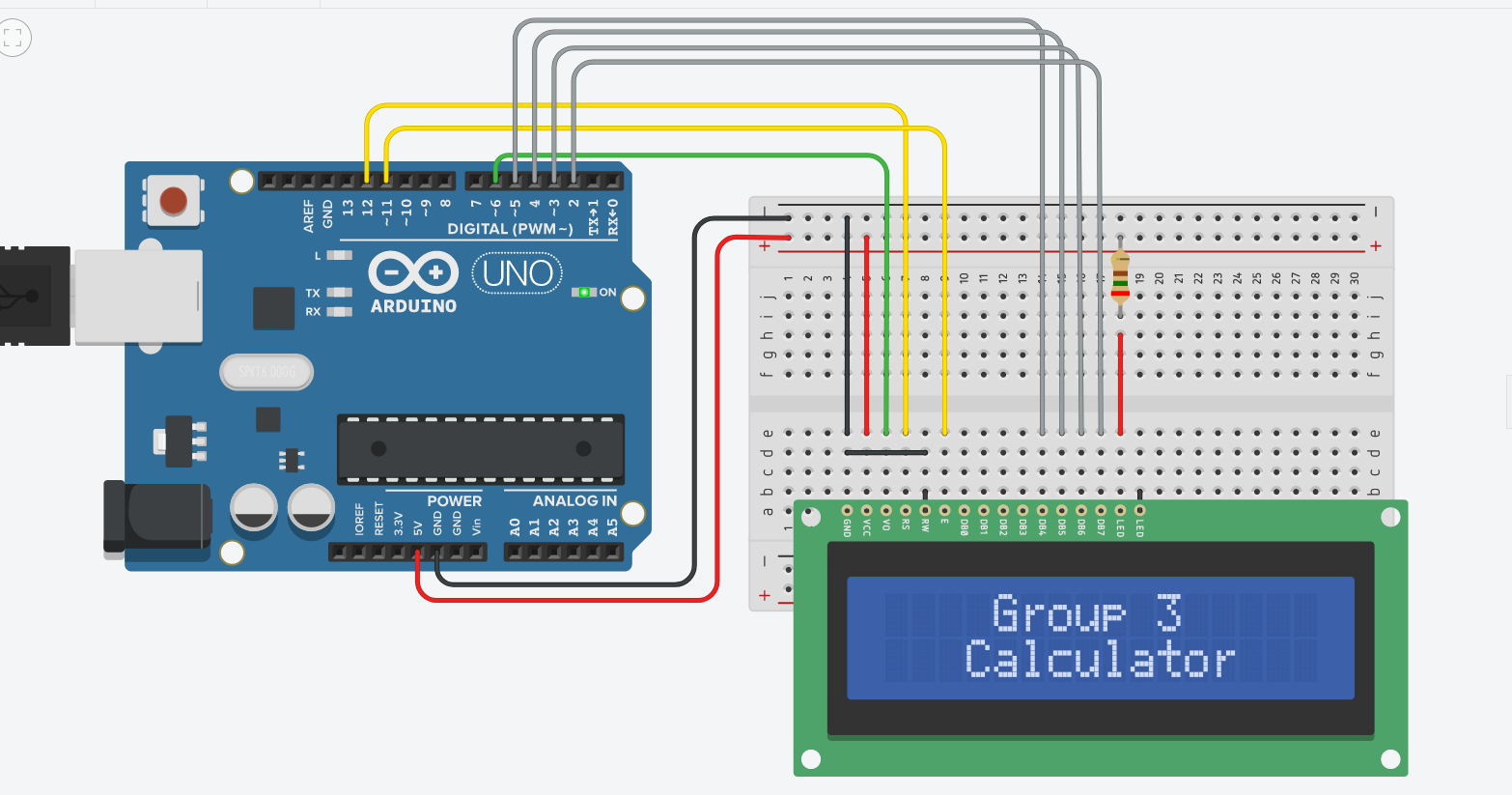


**+Set up:**  
  
 1. connect 5v with VCC, ( LED+, or A )  
 2. connect gnd with VSS, RW, ( LED**-** , K )

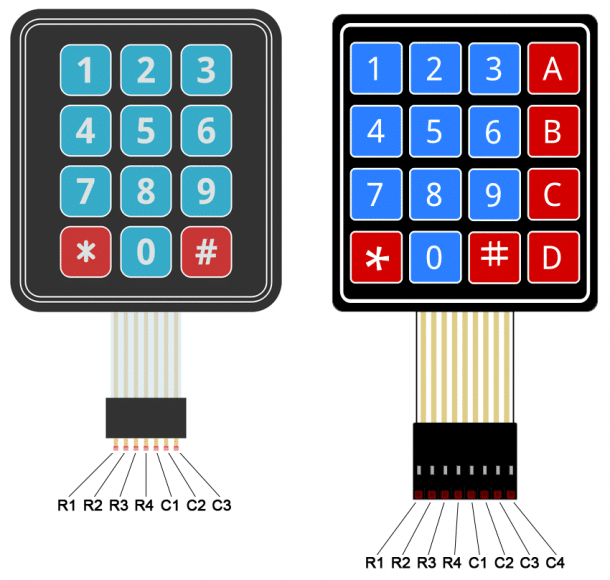
3. connect PIN 6 with (VEE, Or Vo)  
 4. connect PIN 12 with RS  
 5. connect PIN 11 with E

**Digital PIN for data**  
 6. connect D5(Arduino) with D4(LCD)  
 7. connect D4(Arduino) with D3(LCD)  
 8. connect D3(Arduino) with D2(LCD)  
 9. connect D2(Arduino) with D1(LCD)

10. add 250Ω between 5v and (LED+ , A)



**Keypad**



Keypad has 2 type 4x4 (4Colum, 4Row) and 4x3(4Column, 3Row).

**+ Set up:**

1. connect R1 with D10

2. connect R2 with D9  
 3. connect R3 with D8  
 4. connect R4 with D7  
 **Use Analog PIN**  
 5. connect C1 with A0  
 6. connect C2 with A1  
 7. connect C3 with A2  
 8. connect C4 with A3