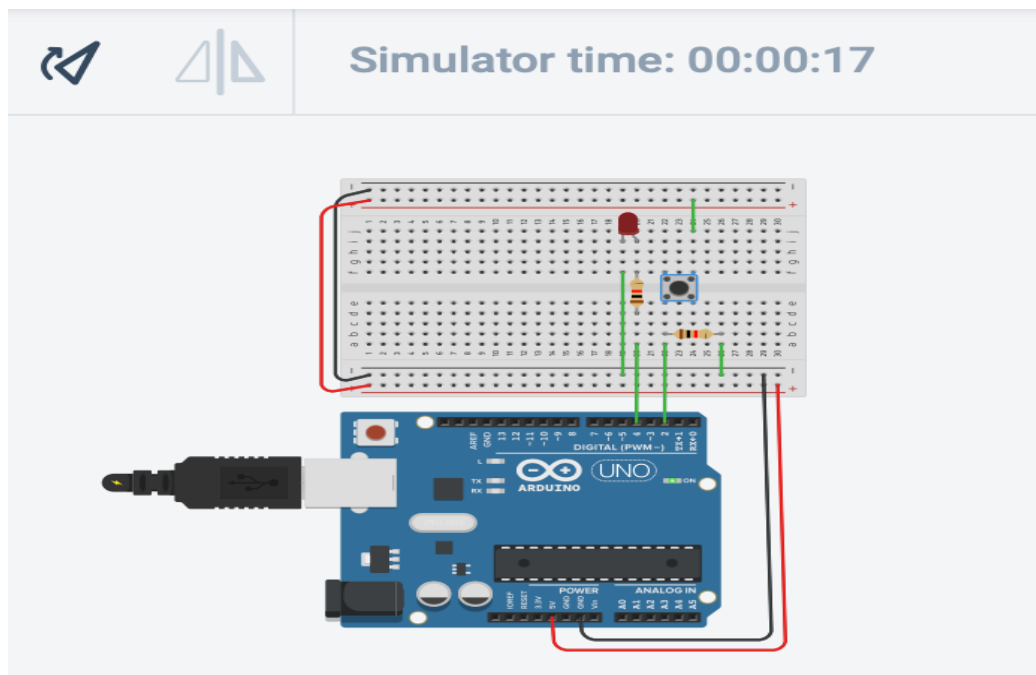
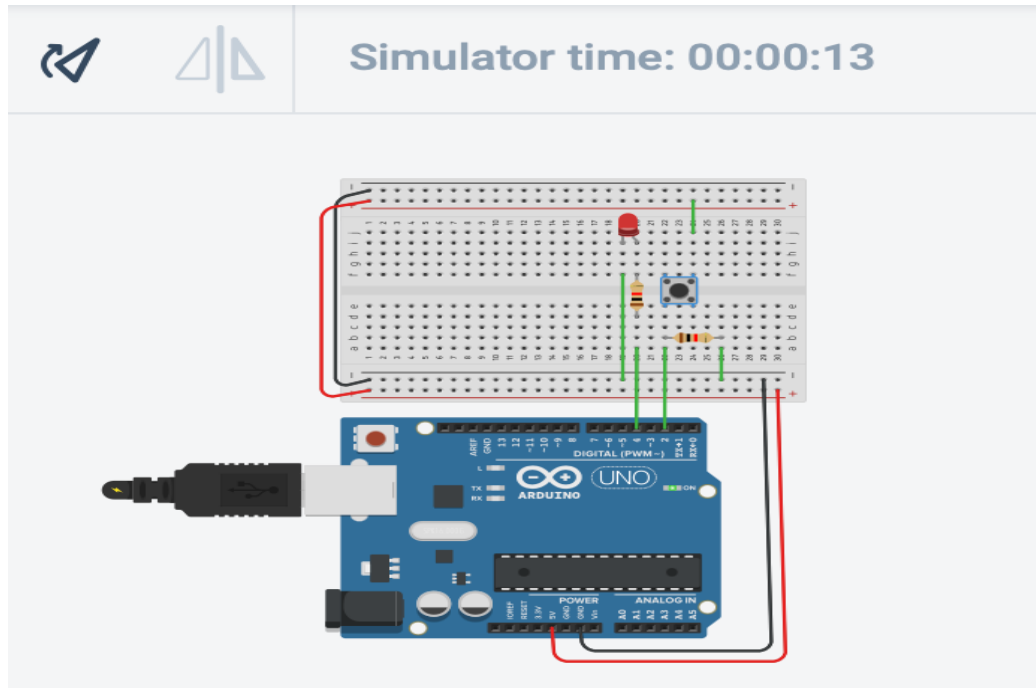


Week 3 (ELECTRONICS):

Two tasks for this week:

1-Design an On/Off circuit using a pushbutton with its code



```

1
2  const byte ledpin=4;
3  const byte pushbuttonpin=2;
4  int ledstate=LOW;
5
6  int debouncedelay=50;
7  int lastbuttonstate=LOW;|
8  int buttonstate=LOW;
9
10 unsigned long lastdebouncetime=0;
11
12 void setup()
13 {
14     pinMode(ledpin,OUTPUT);
15     pinMode(pushbuttonpin,INPUT);
16 }
17
18 void loop()
19 {
20     //ButtonWithoutDebounce();
21     ButtonDebounce();
22 }
23 void ButtonDebounce()
24 {
25     int readbutton=digitalRead(pushbuttonpin);
26     if(lastbuttonstate!=readbutton)
27     {
28
29         lastdebouncetime=millis();
30     }
31     if(millis() - lastdebouncetime > debouncedelay
32
33         if (buttonstate!=readbutton)
34         {
35             buttonstate=readbutton;
36             if(buttonstate==HIGH)
37

```

```

38         ledstate=!ledstate;
39     }
40
41     }
42     digitalWrite(ledpin,ledstate);
43     lastbuttonstate = readbutton;
44 }
45
46 void ButtonWithoutDebounce()
47 {
48     int readbutton=digitalRead(pushbuttonpin);
49     if(readbutton==HIGH)
50     {
51         ledstate=!ledstate;
52     }
53     digitalWrite(ledpin,ledstate);
54 }

```