BASİT BİR DC DEVRE YAPIMI

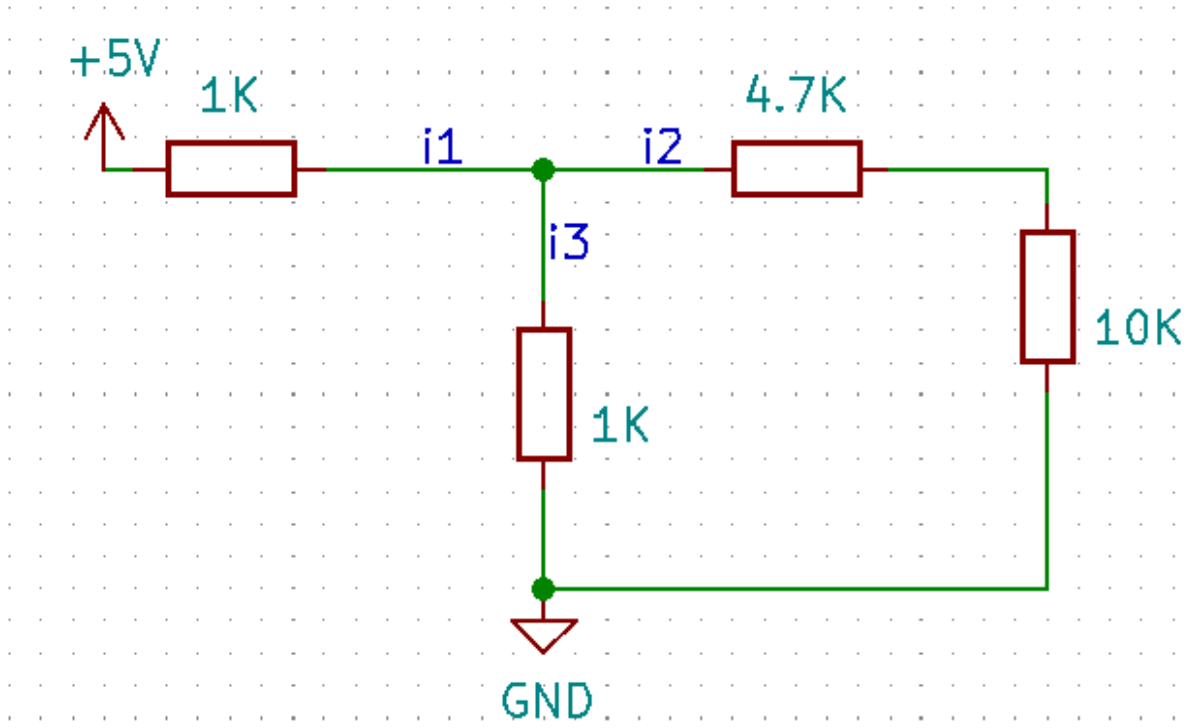
Bu projenin amacı bazı dirençler için basit bir devre oluşturmak ve devrenin aksesuarlarını detaylandırmaktır.

DEVREYİ OLUŞTURMAK İÇİN GEREKLİ MELZEMELER :

- POWER (+5V).
- GNR.
- TWO (1K) RAESİSTOR .
- ONE (4.7K) RESİSTOR .
- ONE (10K) RESİSTOR.
- AND SOME WİRE TO CONNECT THE RESİSTORS AND POWER TOGETHER.

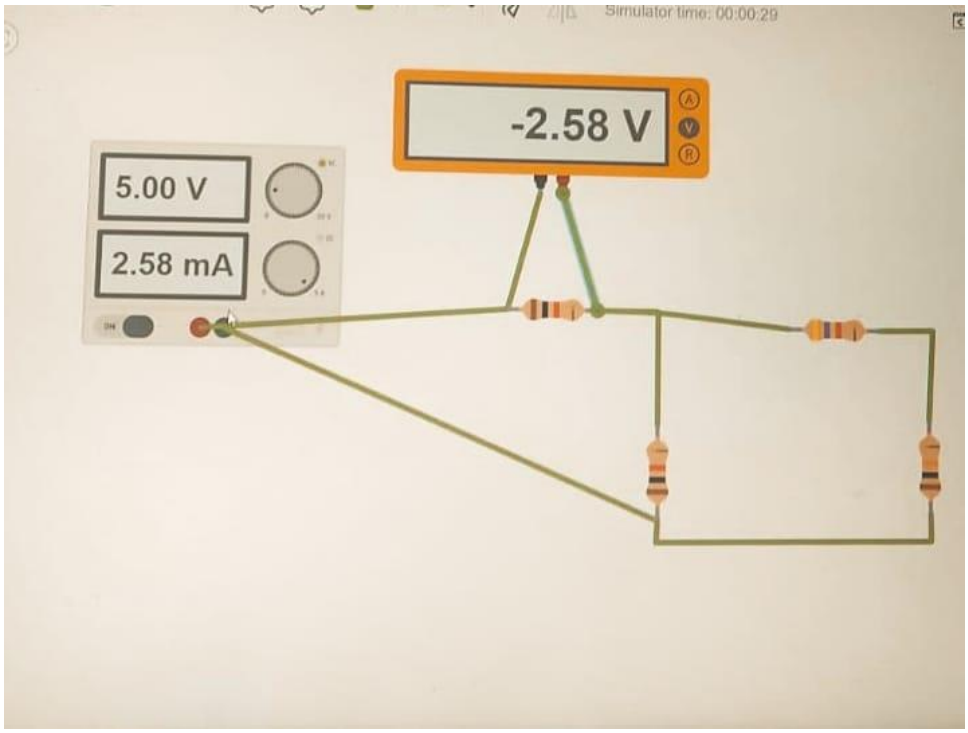
SOME İNFORMATİON ABOUT CİRCUİT FORM :

In this electrical circuit, there is a resistor connected to the power source directly, which is the 1k, and here the wire branches into two wires, and we connect one of the resistances with a strength of 1k, then with the other wire we connect the other two resistors of 4.7k

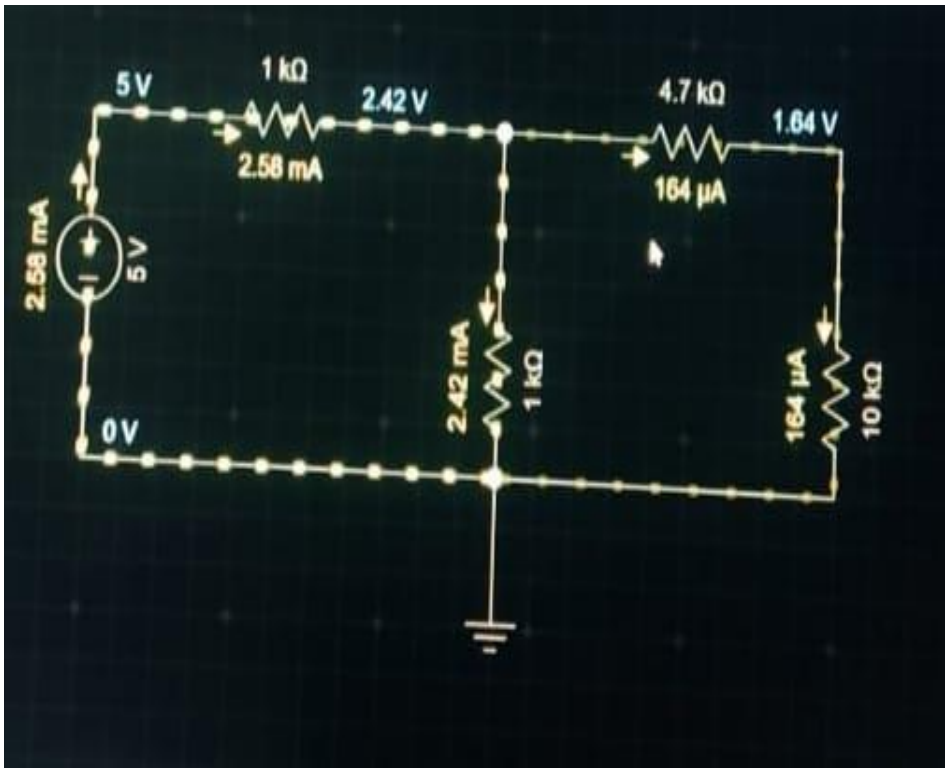


1.1 diagram of the circuit.

IMAGE OF THE CİRCUİT SİMULATİON ON SOME SİMULATİON PROGRAMS :

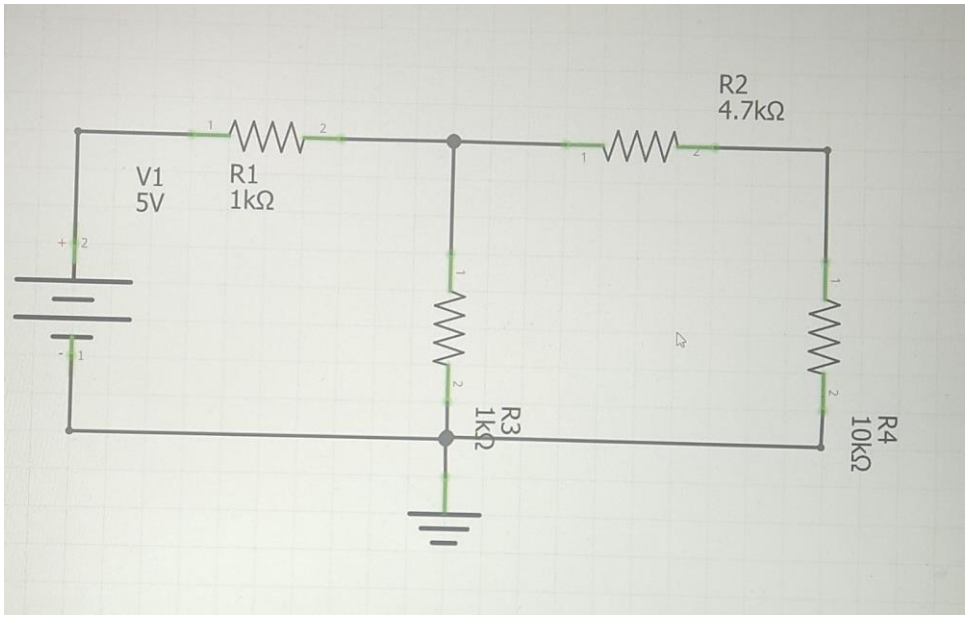


1.2 TİNKERCAD PROGRAM .

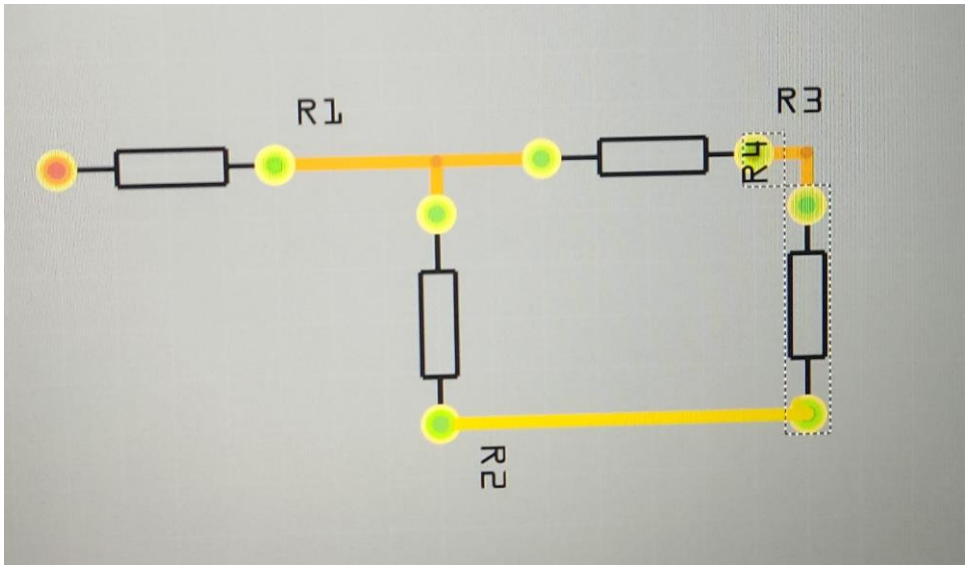


1.3 EVERYCURCUİT PROGRAM .

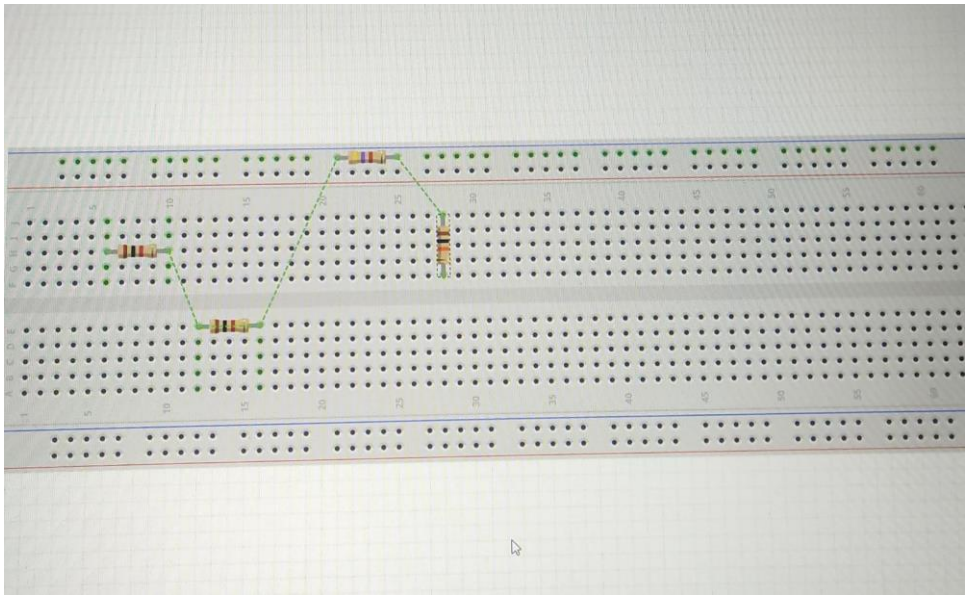
CURCUİT DİYAGRAM AND PCB AND BREADBOARD ON FRİZİNG PROGRAM :



1.4 diyagram



1.5 PCb



1.6 breadboard

SOME RESULTS OF CİRCUİT ANALYSİS ON SİMULATİON PROGRAMS :

	V_{1K}	V_{1K}	$V_{4.7K}$	V_{10K}	I_1	I_2	I_3
EL İLE Hesaplanan	2.604 V	2.396V	0.982V	2.09V	2.604A	-0.209A	2.396A
LtSpice	-2.6V	2.4V	0.94V	2V	-2.6mA	0.2mA	2.4mA
PROTEUS	-20.660nV	-46.82nV	14.97nV	-31.85nV	5nA	3.185nA	-46.82nA
Kicad	-2.311 V	2.4V	13.65nV	-256.543mA	4.13mA	0.4mA	2.756 mA
TİNKERCAD	-2.6v	-2.42V	-773mV	-1.64V	5.34 mA	-0.2A	-5A
EVERYCİRCUİT	2.42V	0.78v	1.64V	1.64V	2.58A	1.64MİKRO.A	2.42mA
Multimetre	–	–	–	–	–	–	–

What do resistors in the circuit do? What are their duties? What are the types?

1.Voltage Divider: Resistors can be used as voltage dividers. This can be used to get the desired voltage by dividing the voltage in the circuit. They can be used when a lower voltage is desired, for example by dividing a certain part of the +5V voltage.

2.Current Limiter: Resistors can be used as current limiters. This can be used to limit the current in the circuit to a certain value. For example, current-limiting resistors can be used to prevent damage to a particular component.

3.Pull-up or Pull-down Resistor: Pull-up or pull-down resistors can be used with microcontrollers and other digital devices. These resistors can be used to control the voltages on the input output pins of the microcontroller.

4.Load Resistor: Resistors can be used as load resistors of a circuit. This can be used to check if the current in a particular circuit is sufficient to a component.