CSE250 | Lab **Assignment 1**

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Lab Section : 03

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#Experiment no. 02
Name of the Experiment: Verification of KCL and KVL

KVL

Given:
Power supply = 5V
R1 = 1 kΩ
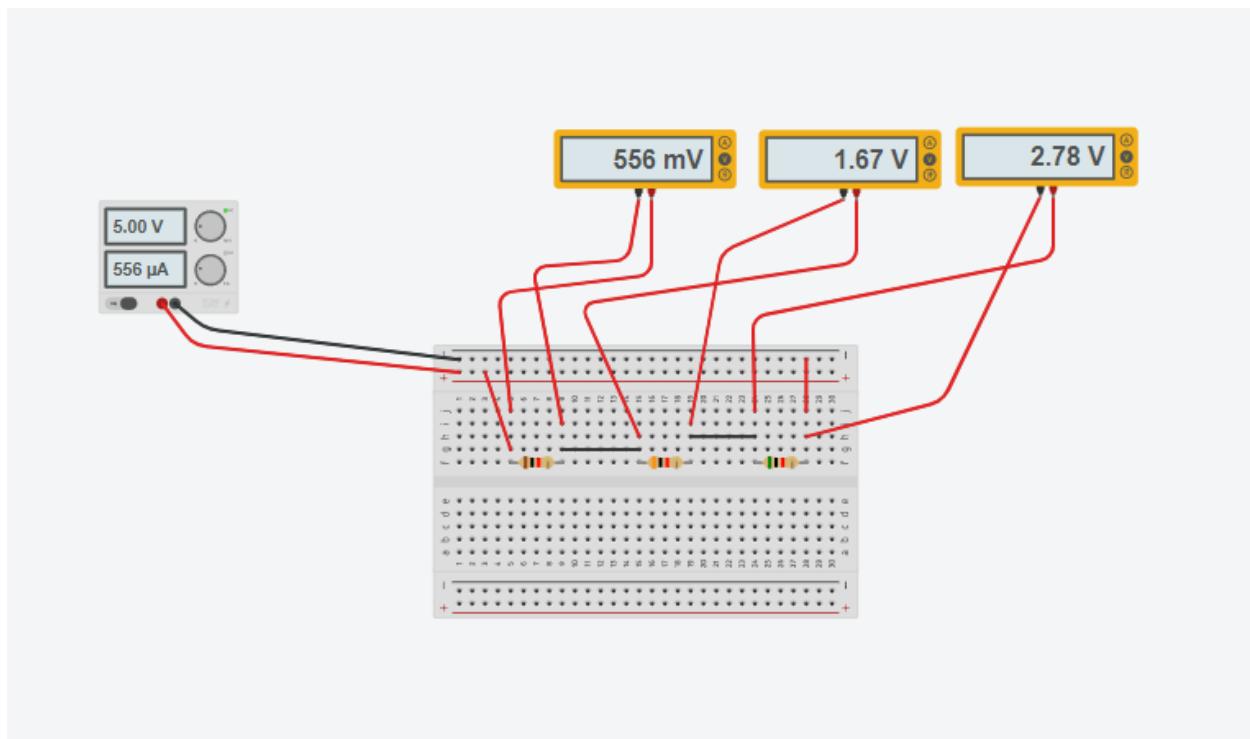R2 = 3 kΩ
R3 = 5 kΩ

Req = R1 + R2 + R3 = 1+ 3+5 = 9 kΩ

Theoretical analysis:

V1 = (R1 /Req)*V = (1/9) *5 = .556 V
V2 = (R1 /Req)*V = (3/9) *5 = 1.67V
V3 = (R1 /Req)*V = (5/9) *5 = 2.78V

Experiment:

Data table:

Observation	R1	R2	R3	V	V1	V2	V3
Experimental	1kΩ	3kΩ	5kΩ	5V	.556 V	1.67 V	2.78V
Theoretical	1kΩ	3kΩ	5kΩ	5V	.556 V	1.67V	2.78V

Report:
1. I have used a multimeter to take readings of all Voltage values by connecting them to the positive and negative wires connecting the resistors in the series circuit.
2. From the experiment we can see that both theoretical and experimental values are the same

KVL

Given:
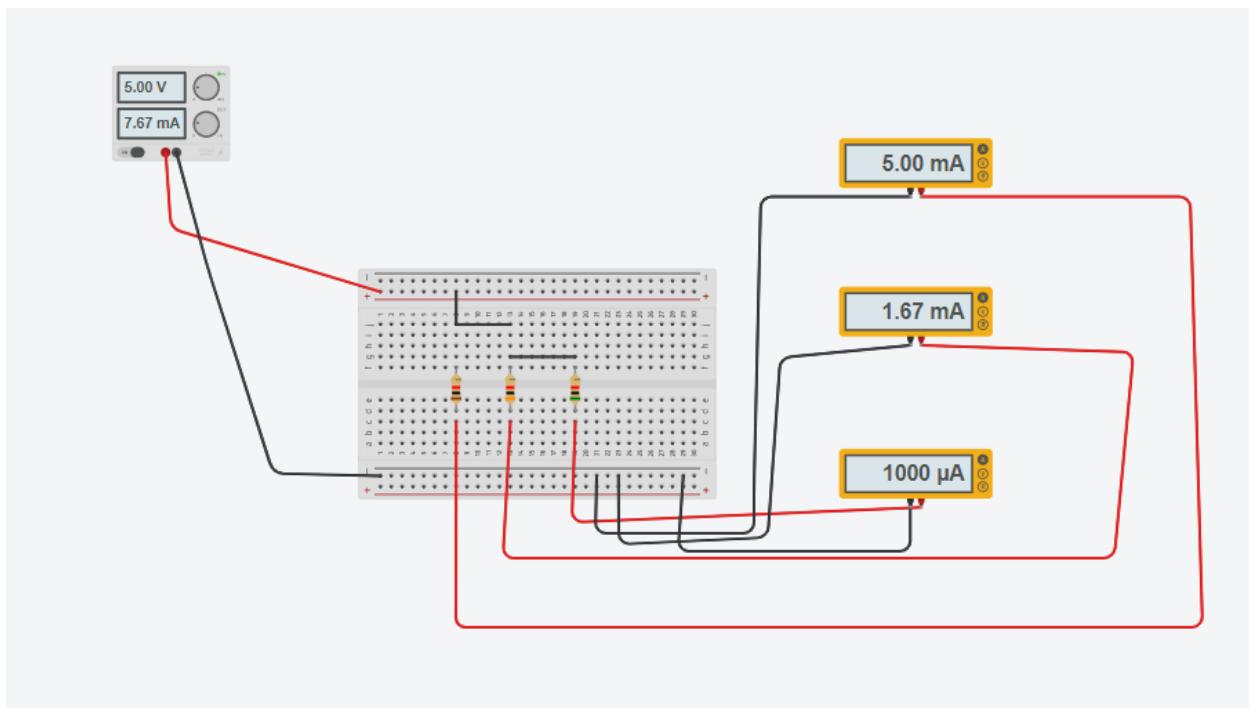Power supply = 5V
R1 = 1 kΩ
R2 = 3 kΩ
R3 = 5 kΩ

Analysis :
I1 = V/R1 = 5/1 = 5 mA
I2 = V/R2 = 5/ 3 = 1.67 mA
I3 = V/R3 = 5/ 5 = 1 mA

Experiment:

Data table:

Observation	R1	R2	R3	V	I1	I2	I3
Experimental	1kΩ	3kΩ	5kΩ	5V	5mA	1.67mA	1mA
Theoretical	1kΩ	3kΩ	5kΩ	5V	5mA	1.67mA	1mA

Report:
1. Both theoretical and experimental results are the same.