This lab was going to build from the previous lab and began to use instrument of light bulbs, resistance, and wires to measure the electrical v. We will be using a resistor which dissipates the electrical through one and another. Also, one using LCR measuring the resistance and capacitance. In part a of their experiment is connect the resistance to the power supply and measure the voltage and the current coming through. In part B we swap the bulb with resistor and performing the same experiment. The reason for the swap because there are 2 types of resistance om which obey olms law due to linear relationship of the current and voltage. The lightbulb is not olm law. We’re being introduced to new equipment compared to last lab.

Setting up the circuit, we must know the resistance doesn’t have or know when connecting to the power circuit. Voltage meter and current meter will measure the circuit. Voltmeter must be parallel to match the same voltage as the current meter has to be connect to the series. Voltmeter has resistance will current rarely have resistance. We are getting set to measure voltage and potential Difference.

Voltage = current \* resistance

The experiment its. Began with the resistance and turn on voltage meter to give some power to the power supply to get it to voltages. As voltage increment increase to data you will observe the current meter and voltage meter. The when were don will do the same thing with the bulb compare the data information.

In both experiments you notice that as the voltage increase the current increase on the power supply in both parts. The difference between part and b is the use resistor on part A and bulb on part be Notice on part A the voltage is increased the resistor current is only half what the voltage is. When the bulb is replaced with bulb, notice hold strong the current in when the voltage is increased.

Table

Description automatically generated

Conclusion is that do to resistor having the different resistance form the bulb, the current will be different even if you’re giving the power supply the same voltage. What’s interesting is olms voltage number are little off due to the face is has more resistance than the power supply box. Also, the power release from bulb is example because the current is higher due to barley no resistance. This is basic measurement of electricity

Power = voltage \* current