Lab 1 help

Dr. Abraham

Help for lab #1. I will give you this kind of assistance for first two labs after that you are expected follow these examples.

Ohm's Law

For now all output is to the screen. I will teach you how to redirect the output to a file in the near future. Because it is on the screen, you need to capture the screen an include it with the source code so that the TAs can give you a grade.

In an electrical circuit, a current is generated if voltage is applied across one or more resistances.

Write a program to calculate Current (amps) in a parallel circuit, given values of three resistors and voltage applied.

The Ohm’s law states I = V/R, where I = current in amperes, V = voltage in volts,

 and R is the total resistance (ohms) in the circuit).

 Since there are three resistors in this parallel circuit,

 figure out how to find the total resistance.

 The total resistance of a set of resistors in parallel is found by

 adding up the reciprocals of the resistance values.

 R = 1.0 /(1.0/resistance1 + 1.0/restistance2 + 1.0/resistance3)

Program:

1. Make sure you have all the preprocessors as in the Hello world program. If you want send your output to a file you need to #include <fstream>
2. You need to have two functions: main () and findTotalResistance. You need to declare the prototype for the later.
3. In the main declare the variables you need to use, such as the voltage, three different resistors, and amp.
4. Read the inputs: applied voltage and resistor values.
5. Call the function to calculate total resistance, pass the three resistor values.
6. Find the amperage amp = volt/R;
7. Output the current in amps.