Engineering 1D04
Assignment VI

The following is due at the **BEGINNING** of the tutorial the week of
March 3 to 7, 2003:

1) A printout of the C code implementation of the pseudo-code from the previous assignment. The C code must have appropriate comments and indentation.
2) The output of the C program including <u>at least three</u> good test cases. (See the 1D04 website for information on how to capture program output.)
3) The pseudo-code that the C code is based on. Place your pseudo-code as an appendix at the BACK of the assignment. NOTE: If your pseudo-code had errors in it, you must fix the errors and submit the new pseudo-code with the C code.

NOTE: Please include your tutorial number on every assignment. Remember that the top-page of every assignment is to include the statement :

"This assignment represents my own work"

followed by your signature, and your e-mail address. You need to include this information, or your assignment mark will be ZERO.

Problem

The problem was described in the previous assignment. Write a C program based on the pseudo-code that you developed for the previous assignment.

Numerical application

Given E = 12 volts and a seven element array of resistance values as follows: R_1 = 2.5 Ω, R_2=2.7 Ω, R_3 = 0.5 Ω, R_4 = 23.0 Ω, R_5 = 1.7 Ω, R_6 =10.4 Ω, R_7=1.5Ω

Compute:
(i)   compute the value R
(ii)   compute the current I in accordance with Ohm's law
(iii)   compute the maximum value of R_i

In addition your program must read in and check the validity of the given resistance values and return a user input value that is greater than zero. Also create and run two more sets of resistance values and try some invalid values as well. Make sure you capture all the output results and test cases.