**Module Assignment 2**

Complete Module Assignment 2 when you finish Learning Package 6.

Complete the following:

a. Produce a Calculator program that does the following:

i. A keyboard input of the form of **number operator number** (e.g. 2.4 + 5.6) and print the result of the calculation on screen.

ii. It should be able to cope with the operations of multiplication, division, addition and subtraction.

b. Produce a program that can calculate the resistance of a circuit from Ohms Law when the user enters the voltage and the current values. You should choose appropriate methods for tackling these problems. As long as the basic problems are answered you can expand the problem to consider issues such as checking the right type of input was entered, the way it looks on screen or how the user uses the program. Ideally through the two tasks you should demonstrate the use of something from each learning package. For each task write a short report you should include the following:

• An introduction to the problem. What is the problem?

• Analysis

o What inputs do you need? What is the data type of the inputs?

o What formula or rules are needed? So equations that are needed. Rules needed within the program to get to the different parts, for example a menu while need rules that say on this do that.

o What outputs are needed?

• The program code with appropriate comments

• Testing- the data you put in and the results you got. Also create some data that breaks the program and show the results for this. You should discuss your results, even if it did not do what you thought it was going to do. Screenshots are one of the ways you can show include results in your report.

• Conclusions – Did the program work, what steps could be taken to improve the program.