**Module Assignment 4**

Complete Module Assignment when you finish Learning Package 10.

Complete the following:

i) Task 6.5

ii) Produce a student record program that does the following:

a. stores the records on disk

b. can retrieve the records from disk

c. Each record has the following fields: name, marks in percentage and student number.

d. Search for a record by any of the fields.

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 (a single task will not necessarily demonstrate contents of the all the learning packages so far). File handing often uses pointers.

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 datatype 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.