

**A Statement of Organisational Standards**

You must ensure that you provide indentation and internal comments throughout your code and that all variables and functions are appropriately named

**Variables**

Variables should have names that are meaningful and represent the type of data that they are designed to hold

e.g.

int num1, num2;

quite clearly indicates that two whole numbers are to be used

**Scope**

The scope of variables should be clearly defined

Where possible global variables should be avoided unless the variable is clearly going to be used throughout the code

**Modularity**

Functions should be modular and carry out a single operation, e.g. getting numbers, calculating and printing results could be carried out in a single function but these are all discrete actions and should be carried out in their own function. Functions should have names that are appropriate to their functionality or operation on the code. For example a function that carries out string functions could be called string\_functions() or if it calculated the average of some numbers it could be called calculate\_average()

**Control**

The flow of a program will be determined by the functionality of the system and should be controlled during execution. Code should be written to allow selection of control paths based on conditional decision making

**Maintainability**

Each statement should be presented on a new line with appropriate termination. Code should be easy to read and make appropriate use of white space and indentation. In particular control structures must be indented and aligned with the begin and end indicators, this is most likely to be in the form of curly brackets to open and close sections of code. In addition it is essential that you comment your code to describe processes. This also provides evidence of your understanding

**Structure**

All programs must follow the structure below. Dependant on the language environment some options may not be appropriate

* Opening comments (your name, description of program, date)
* Include libraries
* Declaration of constants
* Declaration of global variables
* Declaration of methods/functions
* Definition of methods/functions
* Description of methods
* Declaration of local variables
* Coding

**Testing**

All code must be thoroughly tested and the results of testing recorded. In addition this should be supported by screenshots of the tests. Testing will be carried out by you, the programmer, as the system is developed. This is known as glass or white box testing as you have knowledge of the code and what is expected. A test plan provides details of tests to be carried out and test data to be used. Once completed this becomes the test log for the system