Control Structures

Control Structures are just a way to specify flow of control in programs. Any algorithm or program can be more clear and understood if they use self-contained modules called as logic or control structures. It basically analyzes and chooses in which direction a program flows based on certain parameters or conditions. There are three basic types of logic, or flow of control, known as:

1. Sequence logic, or sequential flow
2. Selection logic, or conditional flow
3. Iteration logic, or repetitive flow

Let us see them in detail:

1. Sequential Logic (Sequential Flow)

Sequential logic as the name suggests follows a serial or sequential flow in which the flow depends on the series of instructions given to the computer. Unless new instructions are given, the modules are executed in the obvious sequence. Example BMI or Simple Interest the execution was done sequentially from top to bottom with any conditions set, therefore no need for code indentation.

2. Selection Logic (Conditional Flow)

Selection Logic simply involves a number of conditions which decides one out of several written conditions, the program runs where condition is true and ignores the ones that are false. For instance if a student get marks is equal to 40, we could write a program could award the student if marks is above 60 and ignore if its less. The structures which use these type of logic are known as Conditional Structures. These structures can be of three types: **Single Alternative(IF)**, **Double Alternative(IF-ELSE)**,**Multiple Alternative(ELIF).**

3. Iteration Logic (Repetitive Flow)

The Iteration logic employs a loop which involves a repeat statement followed by a module known as the body of a loop. For example if you have a list of 1 million contacts and you want to send each person a message, definitely you need a repetition procedure, meaning we need a loop to send a message in repetitive manner to each and every person