## Lecture 10.1

Topics
1.  Basic Programming Structures – Revisited
2.  Menu Setup & Applications with **do-while** Statement

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## 1. Basic Programming Structures – Revisited

Recall that there are 3 programming structures as illustrated in the figure below.
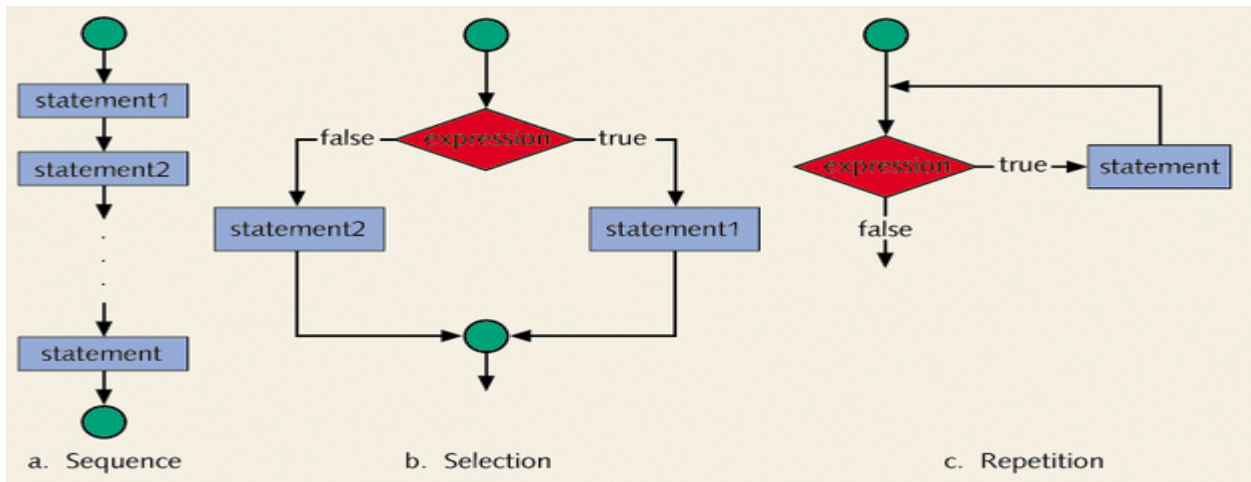


**Figure 1** Three basic programming structures

With these 3 basic programming structures, solutions to any given problem will be possible. One particular form of providing optional testing loop is the so-called menu application – Implemented through a combination of `switch` and `do-while` loop.

A sample output of a menu application is given below where a program will allow us to select and run the options until we decide to stop.

```
        MENU --

        (1) Add
        (2) Subtract
        (3) Multiply
        (4) Divide
        (5) Quit

    Select and enter an integer for option + ENTER: 1

    Enter first operand: 2

    Enter second operand: 3

    2.000000 + 3.000000 --> 5.000000

        MENU --

        (1) Add
        (2) Subtract
```

```
        (3) Multiply
        (4) Divide
        (5) Quit

Select and enter an integer for option + ENTER: 9

Invalid Option!

        MENU --

        (1) Add
        (2) Subtract
        (3) Multiply
        (4) Divide
        (5) Quit

Select and enter an integer for option + ENTER: 3

Enter first operand: 5

Enter second operand: 6

5.000000 * 6.000000 --> 30.000000

        MENU --

        (1) Add
        (2) Subtract
        (3) Multiply
        (4) Divide
        (5) Quit

Select and enter an integer for option + ENTER: 5

It is fun! Bye ...
```