

Repetition Structures (Loops)

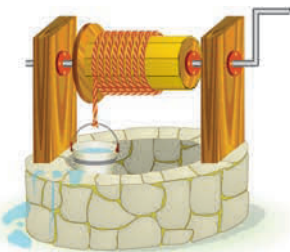
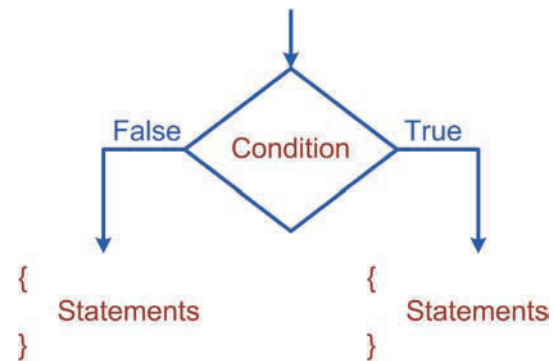
Any computer program is executed sequentially if the programmer doesn't change the flow of the program. The sequential programs start from the first line of the program code and execute all the statements one by one until the end of the program.

There are two kinds of program flow controls: **decision structures** and **repetition structures**.



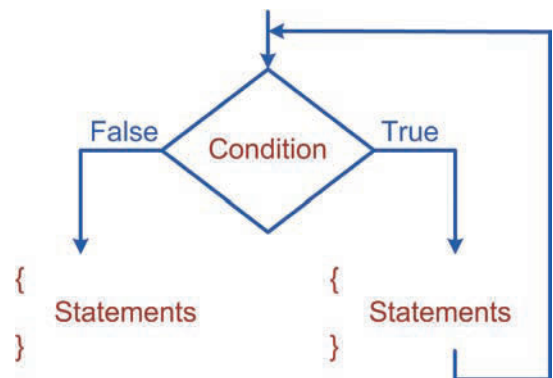
Making decisions is a feature granted to human beings.

Decision structures are used to alter the normal flow of program execution based on an evaluation of one or more logical expressions (condition). We have already studied decision structures in the previous chapter.



Loops are everywhere.

Repetition structures are used to repeat a block of code either a specific number of times or while some condition remains true. For example, "Read 50 items from the input file" or "While there are more items in the input file, continue reading the input."



Executing a block of code is one of the most basic but useful tasks in programming. Many programs or Web sites that produce complex output are really only executing a single task many times.

There are three kinds of repetition structures in C++:

- While
- Do While
- For