

```
while (Boolean Expression) {  
  
    // statements in body of loop  
  
    }
```

The Boolean expression forms the loop condition, and determines how many iterations there are. The loop stops when the Boolean expression is no longer true. This expression could be set to true at some point, or always be true, for an infinite loop.

Typically, a sentry variable is used in the Boolean expression to set a limit on the number of iterations.

```
for ( Initialization; Boolean Expression; Loop Statement) {  
  
    // Statements in body of loop  
  
    }
```

The for loop includes an initialization, which sets a pre-condition for the loop, like initializing a sentry variable. The Boolean expression forms the loop condition, and determines how many iterations there are. This expression could be set to true, or always be true, for an infinite loop. Typically, a sentry variable is used in the Boolean expression to set a limit on the number of iterations. This is done by comparing the sentry variable to a maximum value, with one of the relational operators (<, >, ...)

This loop includes an optional 'loop statement', which is executed after each loop iteration. Typically, it is used to update a sentry variable.

If we have variable index, set to 1, before the loop, and incremented by 1(or another number) each time through the loop (maybe in the loop statement), then the loop condition of $\text{index} \leq 3$ sets a limit of 3 for the number of times the loops runs.