Iterative Statements in PL/SQL

An iterative control Statements are used when we want to repeat the execution of one or more statements for specified number of times. These are similar to those in 

There are three types of loops in PL/SQL:   
• Simple Loop  
• While Loop  
• For Loop

1) Simple Loop

A Simple Loop is used when a set of statements is to be executed at least once before the loop terminates. An EXIT condition must be specified in the loop, otherwise the loop will get into an infinite number of iterations. When the EXIT condition is satisfied the process exits from the loop.

The General Syntax to write a Simple Loop is: 

*LOOP*

*statements;*

*EXIT;*

*{or EXIT WHEN condition;}*

*END LOOP;*

These are the important steps to be followed while using Simple Loop.

1) Initialise a variable before the loop body.  
2) Increment the variable in the loop.  
3) Use a EXIT WHEN statement to exit from the Loop. If you use a EXIT statement without WHEN condition, the statements in the loop is executed only once.

2) While Loop

A WHILE LOOP is used when a set of statements has to be executed as long as a condition is true. The condition is evaluated at the beginning of each iteration. The iteration continues until the condition becomes false.

The General Syntax to write a WHILE LOOP is:

*WHILE <condition>*

*LOOP statements;*

*END LOOP;*

Important steps to follow when executing a while loop: 

1) Initialise a variable before the loop body.  
2) Increment the variable in the loop.  
3) EXIT WHEN statement and EXIT statements can be used in while loops but it's not done oftenly.

3) FOR Loop

A FOR LOOP is used to execute a set of statements for a predetermined number of times. Iteration occurs between the start and end integer values given. The counter is always incremented by 1. The loop exits when the counter reachs the value of the end integer.

The General Syntax to write a FOR LOOP is:

*FOR counter IN val1..val2*

*LOOP statements;*

*END LOOP;*

* val1 - Start integer value.
* val2 - End integer value.

Important steps to follow when executing a while loop: 

1) The counter variable is implicitly declared in the declaration section, so it's not necessary to declare it explicity.  
2) The counter variable is incremented by 1 and does not need to be incremented explicitly.  
3) EXIT WHEN statement and EXIT statements can be used in FOR loops but it's not done oftenly.

**NOTE:**The above Loops are explained with a example when dealing with Explicit Cursors.