CHAPTER 6 - ITERATIVE CONSTRUCTS

6.1

Loops are iterative constructs to execute the same task (i.e. the same source code block) several times.

Loops controlled by a condition use a true/false condition to control the number of repetitions, while a loop controlled by a counter is repeated a given number of times.

The while statement created a condition-controlled loop (the loop is repeated as long as the while condition is true), the for statement creates a counter-controlled loop.

6.2

The general syntax of the while statement is:

while condition:

statement1

statement2

statement3

etc.

If the loop has an end which is not easy to define, the while True syntax can be used:

while True:

statement1

statement2

statement3

etc.

if conditiontoexit:

break

6.3

The general syntax of the for statement is:

for countervariable in [value 1, value 2, etc.]:

statement1

statement2

statement3

etc.

6.4

The range function allows to specify a range of integer values, its syntax is:

range (start, stop, step)

Start - (optional parameter) is the lower limit of the range, which is included

Stop - upper limit of the range, which is excluded

Step - (optional parameter) is the step size of the sequence, it can be negative

It only works with integer type data

Remember to use it with in - i.e. “for x in range (start, stop, step)”

6.6

The continue statement rejects all the remaining statements in the current iteration and moves the control back to the top of the loop.