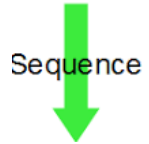# 2.2 PROGRAMMING TECHNIQUES CONTINUED

PROGRAMMING CONSTRUCTS

Sequence

A Sequence is when there are programming steps that are carried out one after another.

Selection

Selection is where there are different paths in your code eg: IF, ELIF, ELSE

Iteration

Iteration is when there is repetition (loops) in code. This could be a WHILE loop (do something WHILE a condition is met) or a FOR loop (do something for a set number of times)

This count-controlled loop would print "Hello World" 8 times.:
```
for i=0 to 7
    print ("Hello")
next i
```

These condition controlled loops would check if a password's correct:

```
while answer != "letmein123"
    answer=input("Enter password")
endwhile
```

```
do
    answer=input("Enter password")
until answer=="letmein123"
```

STRING MANIPULATION

0	1	2	3	The characters in a string are numbered starting
W	o	r	d	with position 0.

Function	Purpose
x.length	Gives the length of the string
x.upper	Changes the characters in the string to upper case
x.lower	Changes the characters in the string to lower case
x[i]	Gives the character in position i. Eg: x[2] = "r"
x.substring(a,b)	Gives the characters from position a with length b. Eg: x.subString(1,2) = or
+	Joins (concatenates) two strings together

FILE HANDLING

Myfile=openRead("myfile.text")	Opens the file in read mode
Myfile=openWrite("myfile.text")	Opens the file in write mode
Myfile.writeLine ("Hello")	Writes a line to the file
Line1=myfile.readLine()	Reads one line of the file
Myfile.close()	Closes the file
endOfFile()	Used to determine the end of a file

IF/ELSE AND SWITCH/CASE FOR SELECTION

IF ELSE	SWITCH/CASE

If choice == "a" then
    print("You chose A")
elseif choice=="b" then
    print("You chose B")
else
    print("Unrecognised choice")
	Switch entry:
	    case "A":
	        print("You chose A")
	    case "B":
	        print("You chose B")
	    default:
	        print("Unrecognised choice")