GCSE Computer Science Topic 2.2 Programming (2)

Boolean operators are used to combine **STATEMENTS** and **OPERANDS** which can all be evaluated as True or False.

AND	Using the AND operator ensures that the overall statement is TRUE only if ALL of the individual statements are True. **8 == 8 AND 4>2**
OR	Using the OR operator ensures that the overall statement is True if ANY of the individual statements are True. **7 != 2 OR 5==4**
NOT	The NOT operator REVERSES the logical state of the other operators. **NOT (3>2 AND 3!=3)** *Remember the brackets means the equations inside must be evaluated first, then REVERSED using the NOT operator.*

```
01 myList = openRead("ToDoList.txt")
02 print(myList.readLine())
03 myList.close()
```

```
myList = openWrite("ToDoList.txt")
myList.writeLine("4. Make lunch for parents.")
myList.close()
```

String manipulation: performing operations on string data**.**

.upper	Changes all characters into UPPER CASE.
.lower	Changes all characters into lower case.
Concatenation (+)	Joins two or more strings together to form a new string.
.length	Returns the number of characters in a string.
Extracting characters using index positions	Extracts single characters from a string using their index numbers. **String[i]**
Substrings	Extracts a portion of the full string the first number is the string index, the second number is the amount of characters to extract. **.substring(a, b)**
String traversal	Moving through a string one character at a time; can be used to see if a string contains certain characters.

File handling is all about how a program can access data and change data stored in an external file.

Open	Before you can do anything with a file, you have to open it. This is done using an open command, and assigning the file to a variable. There are two modes in which you can open a file: • Open to READ / Open to WRITE Once a file is opened the program will start reading or writing from the beginning. As you read from or write to a file, the program keeps its place in the file (think of it like a cursor)
OpenRead	File=openRead("FileName.txt") Opens the file called FileName.txt in READ MODE and allows you to 'read' (fetch) the data into your program.
OpenWrite	File=openWrite("FileName.txt") Opens the file called FileName.txt in WRITE MODE and allows you to 'write' (add) data from your program into the file.

- You can read lines from a file using the readLine() command.
- You can write lines of text to a file using writeLine().
- ** If the file already contains some text then writeLine() will **overwrite** what is currently there.*
- endOfFile()returns TRUE when the cursor is at the end of the file. Its main use is to signify when a program should stop reading a file.
- When you finish reading or writing to a file, close it using the File.close() command.

GCSE Computer Science - Topic 2.2 Programming (2)

What I need to know:

What are Boolean operators used for?			
Explain, with examples, how the 3 main Boolean operators work.			
What is the purpose of string manipulation?			
Outline the 7 main string manipulation commands and their function.			
What is 'file handling'?			
Outline how the open command works.			
What is the difference between openRead and openWrite commands?			
Describe the function of readline(), writeline() and endoffile() commands.			
What command should be used when you have finished using a file?			