

Programming Techniques - Part 1

Variable

A name given to represent a value that can change during the running of the program i.e. "price"

Constant

A name given to represent a value that will not change during the running of the program i.e. "VAT_rate"

Operator

A character that represents an action for instance "+" is a mathematical operator

Input

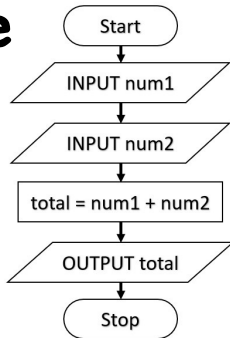
A value that is entered into the program after the program has started running

Output

A value that produced by the program and either saved or displayed to the user

Sequence

The running order of the program (usually from top to bottom unless directed to a subprogram).

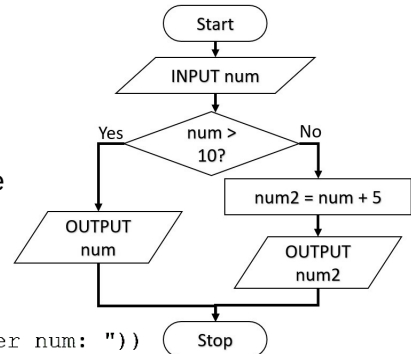


```

num1 = int(input("Enter num1: "))
num2 = int(input("Enter num2: "))
total = num1 + num2
print(total)
    
```

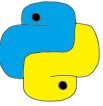
Selection

A decision is made to dictate the route that is taken, from two possible options, through the program



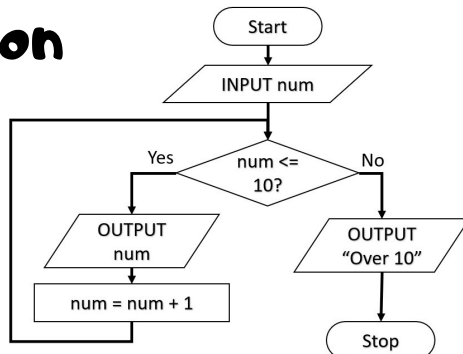
```

num = int(input("Enter num: "))
if num > 10:
    print(num)
else:
    num2 = num + 5
    print(num2)
    
```



Iteration

A loop which is repeated. This can be a condition-controlled loop or a count-controlled loop.



```

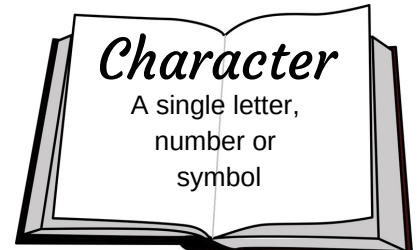
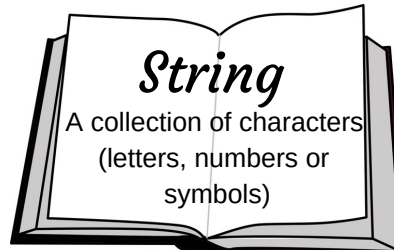
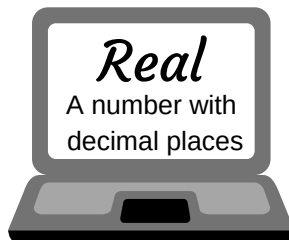
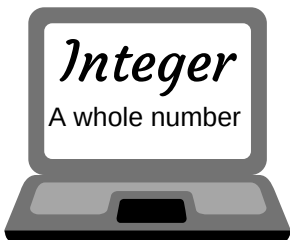
num = int(input("Enter num: "))
while num <= 10:
    print(num)
    num = num + 1
print("Over 10")
    
```



Common operators

==	>	<
Equal to	More than	Less than
!=	>=	<=
Not equal to	More than or equal to	Less than or equal to
+	-	*
Addition	Subtraction	Multiplication
/	DIV	MOD
Division	Whole number division	Remainder

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CASTING Defining or changing the types of value that a variable or constant can hold while the program is running

Integer num = int(input("Enter a whole number:"))

Real num = float(input("Enter a real number:"))

String name = input("Enter your name:")

Naming variables

