

# Year 9 – HT3 – Python Programming [Iteration]

Keywords:	
Python	A high-level general-purpose programming language
Variables	A data item that may take on more than one value during the runtime of a program
Assignment	a statement in computer programming that is used to set a value to a variable name (e.g. name = "Adam")
Constants	a value that should not be altered by the program during normal execution
Integer	A whole number
String	A sequence of characters
Float	A decimal number
Identifier	The name given to a variable
Conditions	statements that are created which evaluates actions in the program and returns if it's true or false
Booleans	a data type with two possible values: true or false
Criteria	A requirement in a condition that must be met

**while statement (condition-controlled):** when your program needs to repeat actions while a condition is satisfied.

Count-controlled loop in python repeatedly execute the code a fixed number of times:

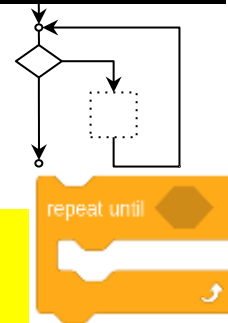
```
total = 0
for count in range(4):
    number = int(input("Type in a number: "))
    total = total + number
print("The total is: ")
print(total)
```

In for loops, range specifies the number of times the program will iterate. The code above will repeat the statements inside the for loop 4 times (the indented statements).

while

Condition:

block of statements



The following code sequence can be made efficient by using iteration:

```
count = 3
print(count)
count = count-1
print(count)
count = count-1
```

```
count = 3
while count >= 1:
    print(count)
    count = count-1
```

Reference: Count-controlled loops - [Count-controlled loops - using FOR - Iteration in programming - KS3 Computer Science Revision - BBC Bitesize](https://www.bbc.co.uk/bitesize/guides/z3khpv4/revision/4) - <https://www.bbc.co.uk/bitesize/guides/z3khpv4/revision/4>  
 Reference: <https://teachcomputing.org/curriculum/key-stage-3/introduction-to-python-programming>