



Keywords

Variable—A place to store data that can be changed

Constant— A place to store data that cannot be changed

Iteration— When part of your program repeats

Selection— A statement that uses a condition to determine which course of action a program should follow

Storage— An area of memory that is used to store data

Collection—A group of similar variables or constants, like a list

Fixed Loop— When you know how many times you want part of your code to repeat, you use a fixed loop

Conditional Loop— When you want part of your code to repeat until a certain condition has been met

Condition— A statement that is either true or false when it has been run

Integer— When the data is a positive or negative whole number

String— When data is in the form of text

Float— When the data is a number with a decimal point in it

Boolean— Data that is either True or False

Negation— The opposite of something. I.e. True is True and Not True is False (opposite of True). The negation in this is the “Not” part

Function— A self contained block of code that performs a specific task



High Level Skills you should think about to take your work to the next level:

- Use functions to break up your code
- Use Collections to group similar variables
- Use loops to ensure efficiency
- Use comments in your code to tell others what your train of thought is

Top Tips

As a rule of thumb, you will spend 30% of your time designing a program, 10% building it, and 60% fixing it!



Variables

```
X = 1 #Assigns the value 1 to the variable x
print ( x ) #Prints whatever value is stored in the x variable
```

Selection

```
if (condition A == True):
    #Do Part A
elif (condition B == True):
    #Do Part B
else:
    #Do Part C
```

This block of code allows your program to make decisions. If the conditions for the first statement comes back as being True, then only part A is done. Otherwise the next condition is checked. If that comes back as True, then part B is run. If neither condition A or B came back as True, then the final 'else' part acts as a default option, and Part C is run

Cheat Sheet



You should learn some of these terms, but also use it to help you during your tasks

Input

```
Answer = input ( "What is your name?" )
#Asks the user what their name is and stores their answer to a variable called Answer
```

Output

```
print ( Answer )
#Prints whatever value is stored in the Answer variable
```

Iteration

Fixed Loop — Lists

```
for item in List:
```

```
    #Run some code
```

This repeats some code until you reach the end of the list. 'item' is a variable used to store the current item in the list.

Fixed Loop — General

```
for number in range(0, 10):
```

```
    #Run some code
```

This repeats some code 10 times. The loop starts counting from 0 and stops at 10. 'number' is a variable that is used to store how many times the loop has been run (starting from 0)

Conditional Loop

```
while ( condition == True):
```

```
    #Run some code
```

This repeats some code until the condition statement is no longer True. This might be similar to: while (temperature < 10). The code will keep repeating until the temperature