CHAPTER I: Python Quick Review

Pablo David Minango Negrete

RA: 226760

Lista de exercicios: L18

Data de entrega: 17/05/2019

In [1]:
```
## mathematical operations in Python :
3 + 3
print(3+3)
```

```
6
```

In [2]:
```
7 - 1
```

Out[2]: 6

In [3]:
```
5 * 2
```

Out[3]: 10

In [4]:
```
20 / 5
```

Out[4]: 4.0

In [5]:
```
9 % 2 #modulo operation, returns the remainder of the division
```

Out[5]: 1

In [6]:
```
2 ** 3   #exponentiation, 2 to the 3rd power
```

Out[6]: 8

In [7]:
```
# Assigning values to variables:
myName = "Thor"
print(myName)   #output is “Thor”
x = 5
y = 6
print(x + y)   #result is 11
print(x*3)     #result is 15
```

```
Thor
11
15
```

In [8]:
```
# Working on strings and variables:
myName = "Thor"
age = 25
hobby = "programming"
print('Hi, my name is ' + myName + ' and my age is ' + str(age) + '. Anyway, my hobby is
 ' + hobby + '.')
```

```
Hi, my name is Thor and my age is 25. Anyway, my hobby is programming.
```

In [9]:
```
# Make it understandable to you, learners, and other programmers.
# Comparison Operators
8 == 8
```

Out[9]: True

In [10]:
```
8 > 4
```

Out[10]: True

In [11]:
```
8 < 4
```

Out[11]: False

In [12]:
```
8 != 4
```

Out[12]: True

In [13]:
```
8 != 8
```

Out[13]: False

In [14]:
```
8 >= 2
```

Out[14]: True

In [15]:
```
8 <= 2
```

Out[15]: False

In [16]:
```
'hello' == 'hello'
```

Out[16]: True

In [17]:
```
'cat' == 'dog'
```

Out[17]: False

In [18]:
```
#If, Elif, and Else Statements (for Flow Control)
print('What's your email?')
myEmail = input()
print('Type in your password.')
typedPassword = input()
savedPassword = 'prueba'
if typedPassword == savedPassword:
    print('Congratulations! You're now logged in.')
else:
    print('Your password is incorrect. Please try again.')
```

```
What's your email?
pdavicho@gmail.com
Type in your password.
prueba
Congratulations! You're now logged in.
```

In [19]:
```
#While loop
inbox = 0
while inbox < 10:
    print('You have a message.')
    inbox = inbox + 1
```

```
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
You have a message.
```

In [20]:
```
name = ''
while name != 'Casanova':
    print('Please type your name.')
    name = input()
print('Congratulations!')
```

```
Please type your name.
David
Please type your name.
Casanova
Congratulations!
```

In [21]:
```
for i in range(10):
    print(i ** 2)
```

```
0
1
4
9
16
25
36
49
64
81
```

In [22]:
```
#Adding numbers from 0 to 100
total = 0
for num in range(101):
    total = total + num
print(total)
```

```
5050
```

In [23]:
```
#Another example. Positive and negative reviews.
all_reviews = [5, 5, 4, 4, 5, 3, 2, 5, 3, 2, 5, 4, 3, 1, 1, 2, 3, 5, 5]
positive_reviews = []
for i in all_reviews:
    if i > 3:
        print('Pass')
        positive_reviews.append(i)
    else:
        print('Fail')

print(positive_reviews)
print(len(positive_reviews))
ratio_positive = len(positive_reviews) / len(all_reviews)
print('Percentage of positive reviews: ')
print(ratio_positive * 100)
```

```
Pass
Pass
Pass
Pass
Pass
Fail
Fail
Pass
Fail
Fail
Pass
Pass
Fail
Fail
Fail
Fail
Fail
Pass
Pass
[5, 5, 4, 4, 5, 5, 5, 4, 5, 5]
10
Percentage of positive reviews:
52.63157894736842
```

In [24]:
```
# Functions
def hello():
    print('Hello world!')
hello()
```

```
Hello world!
```

In [25]:
```
#Define the function, tell what it should do, and then use or call it later.
def add_numbers(a,b):
    print(a + b)

add_numbers(5,10)
add_numbers(35,55)
```

```
15
90
```

In [26]:
```
#Check if a number is odd or even.
def even_check(num):
    if num % 2 == 0:
        print('Number is even.')
    else:
        print('Hmm, it is odd.')

even_check(50)
even_check(51)
```

```
Number is even.
Hmm, it is odd.
```

In [27]:
```
#Lists
my_list = ['eggs', 'ham', 'bacon']   #list with strings
colours = ['red', 'green', 'blue']
cousin_ages = [33, 35, 42]             #list with integers
mixed_list = [3.14, 'circle', 'eggs', 500]   #list with integers and strings
```

In [28]:
```
#Working with lists
colours = ['red', 'blue', 'green']
colours[0]   #indexing starts at 0, so it returns first item in the list which is 'red'
colours[1]   #returns second item, which is 'green'
```

Out[28]:
```
'blue'
```

In [29]:
```
#Slicing the list
my_list = [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
print(my_list[0:2])    #returns [0, 1]
print(my_list[1:])     #returns [1, 2, 3, 4, 5, 6, 7, 8, 9]
print(my_list[3:6])  #returns [3, 4, 5]
```

```
[0, 1]
[1, 2, 3, 4, 5, 6, 7, 8, 9]
[3, 4, 5]
```

In [30]:
```
#Length of list
my_list = [0,1,2,3,4,5,6,7,8,9]
print(len(my_list))   #returns 10
```

```
10
```

In [31]:
```
#Assigning new values to list items
colours = ['red', 'green', 'blue']
colours[0] = 'yellow'
print(colours)   #result should be ['yellow', 'green', 'blue']
```

```
['yellow', 'green', 'blue']
```

In [32]:
```
#Concatenation and appending
colours = ['red', 'green', 'blue']
colours.append('pink')
print(colours)
```

```
['red', 'green', 'blue', 'pink']
```

In [33]:
```
fave_series = ['GOT', 'TWD', 'WW']
fave_movies = ['HP', 'LOTR', 'SW']
fave_all = fave_series + fave_movies
print(fave_all)
```

```
['GOT', 'TWD', 'WW', 'HP', 'LOTR', 'SW']
```