

Python

{ Variables, Expression and Statements

Variable – Name of the Value

- ⌘ One of the basic objects Python uses in its program execution
- ⌘ A variable is assigned a value
- ⌘ A value can be different types (string and integer)
- ⌘ A variable can be manipulated throughout the program

input is a built-in function that takes input from a user's terminal
use **raw_input** if you use Python 2.7 - MAC

```
count = 3
in_name = input('Please enter your name: ')

print('Hello ' + in_name )

print('Hello ' + in_name * count)
```

Code Python Script

- ⌘ Open a Text Editor (IDLE)
- ⌘ Save the file as name.py
- ⌘ Run program
- ⌘ **For Mac and Linux** terminal, type python filename.py into the terminal
- ⌘ **On Windows** from the IDLE toolbar “Run Module” or from a terminal (be in your file directory) just type filename.py. Press enter to run your program
- ⌘ Output will be displayed in your monitor.

List of Python Key Words

and	del	from	not	while
as	elif	global	or	with
assert	else	if	pass	yield
break	except	import	print	
class	exec	in	raise	
continue	finally	is	return	
def	for	lambda	try	

Operators

& + addition

& - subtraction

& * multiplication

& / division

& ** exponentiation

INTEGER

```
total = 39  
result = total/4  
print (result)
```

STRING

```
total = '39'  
result = total + '00'  
print (result)
```

Statements

- ⌘ A unit of code that the Python interpreter can execute
- ⌘ Simple statement command example: print
- ⌘ Simple statement assignment example: count = 3

```
myName = input('What is your name?')  
print('It is good to meet you, ' + myName)  
print('The length of your name is:')  
lengthName = len(myName)  
print(lengthName)
```

```
myAge = input('What is your age?')  
myAge = int(myAge) + 1  
print('You will be ' + str(myAge) + ' in a year.')
```

Expression – combination of variables, operators and values that represents a single result value

```
hour = 3  
minute = 15  
totalMinutes = hour*60+minute
```

```
x = 25  
y = 10
```

```
if x < y :  
    z = x + 20  
else  
    z = x - 5
```


Mini program – Temp Converter

```
temp = raw_input('Enter temperature to convert: ')
print('Enter 1 to convert celsius to fahrenheit ')
num = raw_input('Enter 2 to convert fahrenheit to celsius > ')
```

```
temp = float(temp)
num = int(num)
```

```
if num == 1:
    result = 9.0 / 5.0 * temp + 32    ##celsius to fahrenheit
elif num == 2:
    result = (temp - 32.0) * 5.0 / 9.0 ##fahrenheit to celsius
else:
    result = 0
    print("Temp type not valid:")
    ##end if
print(result)
```

```
print ('Script complete.')
```

TEST VALUES

12.78, 1

100, 2

100, 3