Lesson 3

- Functions

  Defining functions

  Scope

  Call by reference

  Call by value

  Call by assignment

  args, kwargs

  Copies

Code file name

functions.py

1) Functions

2) Scope : Local, enclosing, global, built in
            Exceptions

3) keywords : args, kwargs

4) importing modules (aka .py files)

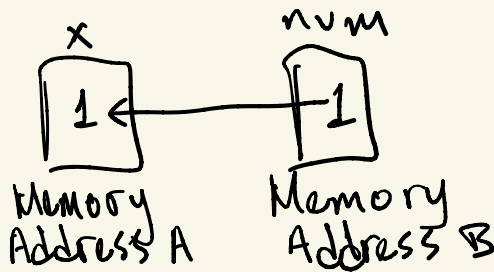5) call by value/reference and copies (see below)

6) Exercises 4,5,6 in Solutions_Lesson-3.py file teams

Call by value
(function does not
change original variable)

```
x = 1
def foo(num):
    num = 2
foo(x)
print(x)   # gives 1
```

x

| 1 |

Memory
Address A

num

| 1 |

Memory
Address B

Call by reference
(function does change
original variable)

```
list_1 = [1]
def foofoo(l):
    l[0] = 2
foofoo(list_1)
print(list_1)  # gives [2]
```

list_1

| [1] |

Memory Address A

l

| Memory
Address A |

Memory Address B