What is a reference?**¶**

Very similar to a pointer in C

### A different var name pointing to the same data**¶**

In [ ]:

In [ ]:

Let's look at the following code:

In [1]:

x = [1,2,3,4,5]

In [2]:

x

Out[2]:

[1, 2, 3, 4, 5]

In [3]:

y = x

In [4]:

x.pop()

Out[4]:

5

In [5]:

x

Out[5]:

[1, 2, 3, 4]

In [6]:

y

Out[6]:

[1, 2, 3, 4]

In [7]:

id(x)

Out[7]:

4493606784

In [8]:

id(y)

Out[8]:

4493606784

How do we fix this?

In [9]:

y = x[:]

In [10]:

x.pop()

Out[10]:

4

In [11]:

x

Out[11]:

[1, 2, 3]

In [12]:

y

Out[12]:

[1, 2, 3, 4]

In [13]:

id(y)

Out[13]:

4501488128

In [ ]: