III

Link git hub: https://github.com/Hoancter/MKTG5883_N21_CTTT.git

In [ ]:
```
#Python basic 1, Datatype a, Numbers
```

In [4]:
```
1+1
```

Out[4]: 2

In [5]:
```
1*3
```

Out[5]: 3

In [6]:
```
1/2
```

Out[6]: 0.5

In [7]:
```
2**4
```

Out[7]: 16

In [8]:
```
4%2
```

Out[8]: 0

In [9]:
```
5%2
```

Out[9]: 1

In [10]:
```
(2+3)*(5+5)
```

Out[10]: 50

In [ ]:
```
#b, Variable assignment
```

In [14]:
```
name_of_var = 2
x=2
y=3
z = x+y
z
'single quotes'
"double quotes"
" wrap lot's of other quotes"
x='hello'
x
print(x)
num=12
name='Sam'
print('My number is: {one}, and my name is: {two}'.format(one='1', two='2'))
print('My number is: {}, and my name is: {}'.format(num,name))
```

```
hello
My number is: 1, and my name is: 2
My number is: 12, and my name is: Sam
```

In [78a:
```
#lists
[1,2,3]
['hI',l,[1,2]]
my_lzst=[' a',' b',' c']
my_lzst.append('d)


*y_lIst[ ]
my_lzst[l:]
my_lzst[:l]
my_l1s1[B]='¥EW'

rest=[1,2,3,[P,s,['target']]]
rest[3]
rest[3][2]
rest[3][2]0]



{1,2,3}
{1,2,3,1,2,1,2,3,3,3,3,2,2,2,1,1,2}

l›2

l›=l
l‹/
1==1
'h T ' == ' bye'

(1›2) and (2‹3)
(1›2) or (2‹3)
(1==2)or(2==3)or(4==4)
```

OF[78]: Tr ue

In [79a:
```
#dictionary
d={'key1':'item1','key2':'item2'}

d[ ' k ey1' §
```

OF[79]: 'ztemi'

In [81]:
```
@ooLear
True
False
```

Oul[81]: F az se

I0 [83]:
```
#tuples
t=(1,2,3)


I [0 § =' nEU '
I =t up2 e (I)
```

Out [83 § • ' NEW'

```
I0 [ ]:
```

```
I0 [ ]:
```

```
I0[2B]: #if ,else if, Else statement
        if 1 2:
            print ( '        ' )
```

```
        Yep!
```

```
I0 [23]: if 1‹2:
             print ( '        ' )
         if 1‹2:

         clse:
             pr i nt ( ' I ast ' )
         i f i› 2:

         else:
             print('last')
         if 1==2:


             print(' riddze')
         étse:
             print ( ' last ' )

         yep!

         Z ast
         rid ddz e
```

```
   [Z\:    to Loops
         seq=[1, 2,3,4, s§
         for Tteri in seq:
             print (it en)

         1
         2
```

```
I0 [2 : for  Tteri  in  seq:
             print ( ' Yep' )

         Yep
         Yep
         Yep
         Yep
         Yep
```

```
In [26a: for jelly in seq:
             print(jelly+jelly)
```

In [26]:
```
for jelly in seq:
    print(jelly+jelly)
```

```
2

6
```

In [27]:
```
#while Loops
i=1
wB*le z< s:
    przot('z zs:{}'.format(z))
    z=z+i
```

```
   s: 1
i  is:  2
```

In [28a : r an ge(s)

out [zsJ : range(e, s›

In [3e§ : for T i n r an ge(s):

```
1
2
```

In [31§ : Z T st (r an ge(s))

Out[31]: [0, l, 2, 3, S]

In [ ]:
```
#List comprehension
```

I0 [32a:
```
X= [l,2,3,Pj
```

In 3§ : out =[§
```
For zt em i n x:
    at . appen d zt eW2)
```

```
[1]
[l, P]
[l, P, 9]
[l, P, 9, 16]
```

In [34a : [it err**'2 for it en i n x§

OF[3P]:
```
[l, P, 9,16]
```

In [3 5 §: *run c I I o n*

```
In [36§ : del riy_-Func (par aril =' de-Fau Zt ' ):
                    Docstr Tng goes here
                    pr T nt (par aril)

In [37]: my_func
Out[37]: ‹function _mazn_.my_func(parami='default') ›

In [3 8§ : riy_-Fun c ()
              de-Fau Zt

In [3 9§ : riy_-Fun c ( ' n en par ari' )
               new parari

In [4s § : riy_-Func (par aril =' n en par ari' )
               new parari

In [41a : del square(x):
                    return W2

In [42a : out = s qu ar e(2)

In [43]: przt(ou)


  In [ss] : eL ndo expression


In [4s § : del I T ries 2(var):
                    return var+2

In [47a : I T lies 2(2)


    In [48a : I sha var: var'*2
out [48a : ‹-Funct T on Imagn . ‹Z ambda› (var) ›
```

```
In [49a: #map and filter

I0 [£B]: seq=[1, 2,3, 4, s§

In [£l]: nap(I T ries 2, seq)

OF[£l]: ‹nap at ex27bae72c 73e›

In [52§: Z T st (nap(I T ries 2, seq) )

Out [52j : [2, 4, 6, 8, GB §

I0 [£3]: Z T st (nap(I sha var: var+2, seq) )

Oul[53]: [2, 4, 6, 8, GB §

I0 [£P]: filter(lambda item: item%2==0,seq)

OF[£P]: ‹fz1ter at 0x27bae72cIo0›

In [57§: list(filter(lambda item: item%2==0,seq))

Out[57]: [2, 4]

I0 []: #methods

In [58§ : st =' her Z a riy n arie T s sari'

I0 [68]: st . Z ver ()

Oul[68]: ' her Z a riy n arie T s s ari'

In [61]: st . upper ()

Oul[61]: H E LLO BY N /'/SE IS S/"/S'

In [62a : st.split()

Out [62a : [ ' her Z a' , ' riy' , ' n arie' , ' T s ' , ' sari' §

I0 [63]: t ueet =' s a sport s esport s '

I0 [6 : tueet . spt at ( ' e' ›

Oul[6 : ['Go Sports! ', 'Sports']

In [66a : tueet . split ( ' e' › [iJ

Out [66a : 'Sports'

In [67a : cl

Out [67a : ] ' k ey1' : ' it eril' , ' k ey2' : ' it eri2' [
```

In [68a : d. k eys ()

Out [68a : dT ct_k eys ([' k ey1' , ' k ey2' §)

In [69a : d. it eris ()

Out [69a : dT ct_Tt eris ([(' k ey1' , ' it eril') , (' k ey2' , ' it eri2') §)

```
In [To]: ht-1,2,3]
```

```
In [71]: lst.pop()
OF[71]: 3
```

```
I0 [72]: 1s1
Out[72]: [l, 2
```

```
I0 [73j: 'X' ls [l,2,3j
```

OMt [73 : F az s e

```
In [7P]: 'x' iu ['x,'y,'z']
```

OMt [74a : Tr ue

```
I0 [ ]:
```

```
I0 [ ]:
```