In [ ]: In [1]:

```
def summ(num):
 return(num+10)

summ(10)

# The function name is summ
# the variable name is num
# the return output is num+10
```

- Lambda functions is also a kind of functions represenatation - More efficient way

Out[1]: 20

```
<variable_name>:<return output>
```

In [ ]: In [2]:

```
summ=lambda num:num+10
summ(20)
```

<function_name>=lambda

Out[2]: 30

```
return(num*num*num) cube(10)
```

In [4]:

```
def cube(num):
```

Out[4]: 1000

```
num*num*num
cube(20)
```

In [5]:

```
cube=lambda num :
```

Out[5]: 8000

Two arguments

```
return(n1+n2
)
add(100,200)
```

In [7]:

```
def
add(n1,n2):
```

Out[7]: 300

```
<var1>,<var2>:<return output>
```

In [ ]: In [8]:

```
add=lambda n1,n2 : n1+n2
add(10,20)
```

<function_name>=lambda

Out[8]: 30

```
:n1*n2
mul(10,20)
```

In [12]:

```
mul=lambda n1,n2
```

Out[12]: 200

In [13]:

```
def
avg(n1,n2,n3):
```

```
return((n1+n2+n3
)/3)
avg(100,200,300)
```

Out[13]: 200.0

```
:(n1+n2+n3)/3
avg(10,20,30)
```

In [14]:

```
avg=lambda n1,n2,n3
```

Out[14]: 20.0

```
In [15]:
def
avg(n1,n2,n3=300
                ):
                return((n1+n2+n3
                )/3)
                avg(100,200)
```

```
Out[15]: 200.0
```

```
In [16]:
avg=lambda n1,n2,n3=30
                    :(n1+n2+n3)/3
                    avg(10,20)
```

```
Out[16]: 20.0
```

```
In [17]:
def
Max(n1,n2):
if n1>n2:
 return(n1)
else:
 return(n2)
Max(100,200)
```

```
Out[17]: 200
```

```
In [ ]: In [18]:
```

```
[<if_output> <if_con> else <else_ouput>]

<function_name>=lambda
<var1,var2>:<if_output> <if_con> else
<else_ouput>

Max=lambda n1,n2: n1 if n1>n2 else n2
Max(100,200)
```

```
lambda <v1,v2,v3...>: <output>

if -else we need to write in a single
```

```
Out[18]: 200
In [21]:
list1=['hyd','mumbai','chennai']
#
list2=['Hyd','Mumbai','Chennai']
##################################
##################
list2=[]
for i in list1:
                        list2.append(i.capitalize())
                        ##################################
                        ######################
                        list2=[i.capitalize() for i in
                        list1]
                        list2
```

```
Out[21]: ['Hyd', 'Mumbai', 'Chennai']
```

```
In [ ]: In [31]:
```

```
<variable>:<output>,<iterator>))

list1=['hyd','mumbai','chennai']

list(map(lambda
```

```
list(map(lambda i :                    list(map(a,b))
i.capitalize(),list1)) #
```

```
Out[31]: ['Hyd', 'Mumbai', 'Chennai']
```

```
                                  ################## list2=[]
In [ ]: In [34]:                  for i in list1:
                                   list2.append(i.capitalize())

                                  ##################################
                                  ######################
                                  list2=[i.capitalize() for i in
                                  list1]
                                  list2
                                  ##################################
                                  ###################
                                  list1=['hyd','mumbai','chennai']
                                  list2=list(map(lambda i :
                                  i.capitalize(),list1))
```

```
list1=['hyd','mumbai','chennai']  l1=[1,2,3,4]
#                                 #l2=[1,4,9,16]
list2=['Hyd','Mumbai','Chennai']
################################  list(map(lambda i: i*i,l1))
```

```
Out[34]: [1, 4, 9, 16]
```

```
                                  if '#' in i:
In [37]:                          l2.append(i)
l1=['hyder#abad','Mum#bai','Che   l2
nn#ai','Blr','pune'] #
l2=['hyder#abad','Mum#bai','Che   ##################################
nn#ai']                           ###################### l2=[i
################################  for i in l1 if '#' in i]
#################### l2=[]       l2
for i in l1:
```

```
Out[37]: ['hyder#abad', 'Mum#bai', 'Chenn#ai']
```

```
                                  enn#ai','Blr','pune']
                                  list(map(lambda i : '#' in
                                  i,l1))
In [45]:
```

```
                                  enn#ai','Blr','pune']
l1=['hyder#abad','Mum#bai','Ch    list(filter(lambda i : '#' in
                                  i,l1))
```

```
Out[45]: [True, True, True, False, False]
```

```
In [46]:
l1=['hyder#abad','Mum#bai','Ch
```

```
Out[46]: ['hyder#abad', 'Mum#bai', 'Chenn#ai']
```

```
                                  ]: In [ ]: In [ ]: In [ ]:
 In [ ]:
                                  In [ ]:

                                  map means map the input
                                  values to output  i i*i  i
 In [ ]: In [ ]: In [ ]: In [    i.capitalize()  i '#' in i
                                  (T/F)
```