In [1]:
```
#A. Lambda function works with:i)filter, ii) map, and iii) reduce. Lamb
da function is not needed to be defined.
```

In [2]:
```
#Example-01:
```

In [3]:
```
g = lambda x: x+x+x
```

In [4]:
```
g(3)
```

Out[4]: 9

In [5]:
```
#Example-02:
```

In [6]:
```
h = lambda x:x*x*x+2*x
```

In [7]:
```
h(2)
```

Out[7]: 12

In [8]:
```
#Example-03:
```

In [9]:
```
d = lambda x,y:x+y
```

In [10]:
```
d(2,3)
```

Out[10]: 5

In [11]:
```
#Example-04:
```

In [12]:
```
r = lambda x,y,z: (x+y+z)+(x*y*z)-(x*y-y*z+z*x)
```

In [13]:
```
r(4,3,2)
```

Out[13]:
```
19
```

In [14]:
```
#a.Lambda function with filter:
```

In [15]:
```
#Example-01:
```

In [16]:
```
l1 = [9,6,5,8,3,1,11,92,19,37,46]
```

In [17]:
```
final_l1=list(filter(lambda x: (x%2 != 0),l1))
```

In [18]:
```
final_l1
```

Out[18]:
```
[9, 5, 3, 1, 11, 19, 37]
```

In [19]:
```
#Example-02:
```

In [20]:
```
l2 = [24,34,2,5,68,44,32,8,90,96,64]
final_l2 = list(filter(lambda x: x%4 ==0, l2))
```

In [21]:
```
final_l2
```

Out[21]:
```
[24, 68, 44, 32, 8, 96, 64]
```

In [22]:
```
#Example-03:
```

In [23]:
```
l3 = [2,4,6,3,8,5,9,1]
final_list = list(filter(lambda x : x/2 == 2,l3))
final_list
```

Out[23]:
```
[4]
```

In [24]:
```
#b.Lambda function with map:
```

In [25]:
```
#Example-01:
```

In [26]:
```
l4 = [-1,-2,-3,-4,-5,-8,-9,-6]
final_list1 = list(map(lambda x: x*2,l4))
final_list1
```

Out[26]:
```
[-2, -4, -6, -8, -10, -16, -18, -12]
```

In [27]:
```
#Example-02:
```

In [28]:
```
l5 = [9,8,6,5]
final_list2 = list(map(lambda x:x+5,l5))
final_list2
```

Out[28]:
```
[14, 13, 11, 10]
```

In [29]:
```
#Example-03:
```

In [30]:
```
l6 = [45,36,63,90,78,81]
final_list3 = list(map(lambda x:x/9,l6))
final_list3
```

Out[30]:
```
[5.0, 4.0, 7.0, 10.0, 8.666666666666666, 9.0]
```

In [31]:
```
#c.Reduce function with lambda:
```

In [32]:
```
#Example-01:
```

In [33]:
```
#Importing reduce function from functools:
```

In [34]:
```
from functools import reduce
```

In [35]:
```
l1
```

Out[35]:
```
[9, 6, 5, 8, 3, 1, 11, 92, 19, 37, 46]
```

In [36]:
```
final_list4 = reduce(lambda x,y:x+y,l1)
final_list4
```

Out[36]: 237

In [37]:
```
#Example-02:
```

In [38]:
```
l2
```

Out[38]: [24, 34, 2, 5, 68, 44, 32, 8, 90, 96, 64]

In [39]:
```
final_list5 = reduce(lambda x,y:x*y,l2)
final_list5
```

Out[39]: 3456093074227200

In [40]:
```
#Example-03:
```

In [41]:
```
l3
```

Out[41]: [2, 4, 6, 3, 8, 5, 9, 1]

In [42]:
```
final_list6 = reduce(lambda x,y: x/y,l3)
final_list6
```

Out[42]: 7.716049382716048e-05