## 1. Write a Python program to sort a list of tuples using Lambda.

In [1]:
```
d=lambda x:sorted(x)
s=[2,6,89,3,45,78]
d(s)
```

Out[1]:
```
[2, 3, 6, 45, 78, 89]
```

## 2. Write a Python program to sort a list of dictionaries using Lambda

In [21]:
```
a=[{"kiran":67,"swati":43,"aishu":89},{"sunil":90,"patil":34,"pravin":12}]
s={}
b=lambda x :[s.update(sorted(i.items())) for i in x]
b(a)
s

```

Out[21]:
```
{'aishu': 89, 'kiran': 67, 'swati': 43, 'patil': 34, 'pravin': 12, 'sunil': 90}
```

### 3.Write a Python program to find square and cube every number in a given list of integers using Lambda

In [19]:
```
def squre_no(s):
    b=s**2
    return b
def cube_no(s):
    b=s**3
    return b


s=10
print(squre_no(s))
print(cube_no(s))


```

```
100
1000
```

In [14]:
```
a=[2,4,6,8]
squre_list=list(map(lambda a:squre_no(a),a))
print("squre list of given list---->  "   ,squre_list)
cube_list=list(map(lambda a:cube_no(a),a))
print("cube of given list ---->",       cube_list)

```

```
squre list of given list---->   [4, 16, 36, 64]
cube of given list ----> [8, 64, 216, 512]
```

In [4]:
```
a=12
b=(lambda x:x**2)
print(b(a))
```

```
144
```

### 4.Write a Python program to find if a given string starts with a given character using Lambda

In [5]:
```
a="have a nice day"
s=lambda a: a.startswith("h")
s(a)
```

Out[5]:
```
True
```

In [9]:
```
a="have a nice day!"
b=input("enter the character  ")
check_starts=lambda a,character:a[0]==character
print(check_starts(a,b))
```

```
enter the character  h
True
```

### 5. Write a Python program to check whether a given string is number or not using Lambda

In [16]:
```
a="123"
s=lambda a:print("given string is no")if a.isdigit() else print("not a no.")
s(a)
```

```
given string is no
```

## 6. Write a Python program to create Fibonacci series using Lambda

In [12]:
```
fib= lambda n:n if n<=1 else fib(n-1)+fib(n-2)
for n in range(0,9):
    print(fib(n),end=" ")

```

```
0 1 1 2 3 5 8 13 21
```

### 7. Write a Python program to find the intersection of two given arrays using Lambda

In [7]:
```
a={2,3,4,5}
b={2,5,8,9}
s=lambda a,b:a.intersection(b)
list(s(a,b))
```

Out[7]:
```
[2, 5]
```

## 8.Write a Python program to rearrange positive and negative numbers in a given array using Lambda

In [12]:
```
a=[1,2,3,4,-1,-2,-4,-5]
b=[]
c=[]
for i in a:
    if i>0:
        b.append(i)
    else:
        c.append(i)

c+b
```

```
[1, 2, 3, 4]
[-1, -2, -4, -5]
```

Out[12]:
```
[-1, -2, -4, -5, 1, 2, 3, 4]
```

In [21]:
```
def rearrange_positive_and_negative(a):
    b=[]
    c=[]
    for i in a:
        if i>0:
            b.append(i)
#             print(b)
        elif i<0:
            c.append(i)
#             print(c)
    return c+b


a=[-12,4,-55,5,6,-66,89]
rearrange_positive_and_negative(a)
```

Out[21]:
```
[-12, -55, -66, 4, 5, 6, 89]
```

In [ ]:
```

```

## 9.Write a Python program to count the even, odd numbers in a given array of integers using Lambda

In [22]:
```
def count_odd_even(a):
    even=0
    odd=0
    for i in a:
        if i%2==0:
            even+=1
        else :
            odd+=1
    print("count of the even -----> " ,  even)
    print("count of the odd -------> " ,   odd)

a=[1,23,4,56,8,9,7]
count_odd_even(a)
```

```
count of the even -----> 3
count of the odd -------> 4
```

In [23]:
```
a=[1,23,4,56,8,9,7,88,3,7,10]
d=lambda a:count_odd_even(a)
d(a)
```

```
count of the even -----> 5
count of the odd -------> 6
```

In [21]:
```
a=[1,23,4,56,8,9,7,88,3,7,10]
even_no=list (filter(lambda x: x%2==0,a))
odd_no=list(filter(lambda x:x%2!=0,a))
print("even no. in the list is",even_no)
print("odd no in the list", odd_no)
```

```
even no. in the list is [4, 56, 8, 88, 10]
odd no in the list [1, 23, 9, 7, 3, 7]
```

## 10. Write a Python program to add two given lists using map and lambda

In [34]:
```
a=[1,2,3,4]
b=[11,12,13,14]
c=(list(map(lambda a,b:a+b,a,b)))
c
```

Out[34]:
```
[12, 14, 16, 18]
```

In [22]:
```
# using lambda
lst1 = [2,4,6,8]
lst2 = [1,3,5,7]
add = lambda x ,y : x + y
add(lst1,lst2)
```

Out[22]:
```
[2, 4, 6, 8, 1, 3, 5, 7]
```

### 11. Write a Python program to find numbers divisible by nineteen or thirteen from a list of numbers using Lambda

numbers using Lambda

In [41]:
```
a=[1,23,4,56,8,9,7,88,3,7,10,38,26,39]
b =lambda a:[i for i in a   if i%19==0 or i%13==0]
b(a)
```

Out[41]: [38, 26, 39]

## 12. Write a Python program to find palindromes in a given list of strings using Lambda

In [23]:
```
lst = ["noon","wow","peep","deed","hello","1221","python"]
palindrom = lambda x : [i for i in lst if i==i[::-1]]
palindrom(lst)
```

Out[23]: ['noon', 'wow', 'peep', 'deed', '1221']

In [27]:
```
list1 = ["Python", "level", "1211", "program","pop","dad"]
list(filter(lambda x: x == x[::-1],list1))
```

Out[27]: ['level', 'pop', 'dad']

## 13. Write a Python program to find all anagrams of a string in a given list of strings using lambda

In [12]:
```
lst1 = ["act", "dam","listen","silent","tea","eat","hello", "cat"]
b=list(filter(lambda x: "".join(sorted(x)) in list1,list1))
b
```

Out[12]: ['act', 'cat']

### *14. Write a Python program that multiplies each number of a given list with a given number using lambda function. Print the result*

In [43]:
```
a=[1,23,4,56,8,9,7,88,3,7,10,38,26,39]
b=eval(input("enter the no"))
s=lambda a: [i*b for i in a]
s(a)
```

```
enter the no2
```

Out[43]: [2, 46, 8, 112, 16, 18, 14, 176, 6, 14, 20, 76, 52, 78]

## 15. Write a Python program to calculate the sum of the positive and negative numbers of a given list of numbers using lambda function

In [45]:
```
a=[1,2,34,5,-4,-3,-2,-1]
total_negative_nums = list(filter(lambda a:a<0,a))
total_positive_nums = list(filter(lambda a:a>0,a))
print("Sum of the positive numbers: ",sum(total_negative_nums))
print("Sum of the negative numbers: ",sum(total_positive_nums))
```

```
Sum of the positive numbers:  -10
Sum of the negative numbers:  42
```

## 16. Write a Python program to find the list with maximum and minimum length using lambda

In [61]:
```
a=[[1,23],[4,56,8,9,7],[88],[3,7,10,38,26,39]]
b=[]
for i in a:
    b.append(len(i))
print(max(b))
b

```

```
6
```

Out[61]:
```
[2, 5, 1, 6]
```

In [13]:
```
lst = [[0], [1, 3], [5, 7], [9, 11], [13, 15, 17]]
max_length = max(len(x) for x in lst)
max_list = max(lst, key = lambda x: len(x))
print(max_length, max_list)
min_length = min(len(x) for x in lst)
min_list = min(lst, key = lambda x: len(x))
print(min_length, min_list)
```

```
3 [13, 15, 17]
1 [0]
```

### 17. Write a Python program to check whether a specified list is sorted or not using lambda

In [19]:
```
a=[3,4,5,6,7,9,12]
b=[12,3,4,5,6,7,9]
s=lambda a:print("list is sorted")if a== sorted(a) else print("list is not s
d=lambda a:print("list is sorted")if b== sorted(b) else print("list is not s
print(s(a))
print(d(b))

```

```
list is sorted
None
list is not sorted
None
```

### 18. Write a Python program to remove all elements from a given list present in another list

**using lambda.**

In [4]:
```
a=[12,3,4,67,54,34]
b=[12,23,5,6,67]
c=lambda a,b:[x for x in a if x not in b]
c(a,b)

```

Out[4]:
```
[3, 4, 54, 34]
```

In [20]:
```
lst1 = [1,2,3,4,5,6,7,8]
lst2 = [2,4,6,8,10]
remove_element = lambda i,j: [i for i in lst1 if i not in lst2]
remove_element(lst1,lst2)
```

Out[20]:
```
[1, 3, 5, 7]
```

**19. Write a Python program to convert string element to integer inside a given tuple using**

In [8]:
```
a=("3243","3455")
b= lambda a:[int(i) for i in a if type(i)==str]
b(a)
print(tuple(b(a)))
```

```
(3243, 3455)
```

In [21]:
```
tuple1 = ("123","34.67","56","python","34,7")
integer = lambda x : [int(i) for i in x if i.isdecimal()]
integer(tuple1)
```

Out[21]:
```
[123, 56]
```

**20 Write a Python program to count the occurrences of the items in a given list using lambda**

In [12]:
```
def find_occurances(a):
    b={}
    for i,world in enumerate(a):
        c=a.count(world)
        b.update({world:c})
    print(b)

a="kiran rajendra sonawane"
find_occurances(a)
```

```
{'k': 1, 'i': 1, 'r': 3, 'a': 5, 'n': 4, ' ': 2, 'j': 1, 'e': 2, 'd': 1, 's': 1, 'o': 1, 'w': 1}
```

In [14]:
```
a=[1,2,3,4,5,6,7,8,5,1]
c=lambda i,num: i.count(num)
n=int(input("enter the no   "))
c(a,n)
```

```
enter the no   1
```

Out[14]: 2

In [22]:
```
lst = [1,2,3,4,5,6,2,4,3,5,2,3,7,8,2]
repeat = lambda x ,i : x.count(i)
repeat(lst,3)
```

Out[22]: 3

**21.Write a Python program to add three given lists using Python map and lambda**

In [1]:
```
a=[1,2,3,4]
b=[5,6,7,8]
c=[11,12,13,14]
s=list(map(lambda a,b,c:a+b+c,a,b,c))
s
```

Out[1]: [17, 20, 23, 26]

## 22. Write a Python program to listify the list of given strings individually using Python map

In [23]:
```
lst = ["kiran","shubham","sanu"]
string = list(map(lambda x : list(x),lst))
print(string)
```

```
[['k', 'i', 'r', 'a', 'n'], ['s', 'h', 'u', 'b', 'h', 'a', 'm'], ['s', 'a',
'n', 'u']]
```

**23. Write a Python program to square the elements of a list using map() function**

In [5]:
```
a=[1,2,3,4]
c=list(map(lambda a:a**2,a))
c
```

Out[5]: [1, 4, 9, 16]

***24. Write a Python program to add two given lists and find the difference between lists. Use map() function***

In [28]:
```
a=[1,2,3,4,10]
b=[5,6,7,8,8]
add=list(map(lambda x,y : x+y ,a,b))
diff=list(map(lambda a,b:a-b,a,b))
print("add give two list  ------->",add)
print("difference between two list----->  ",diff)


```

```
add give two list  -------> [6, 8, 10, 12, 18]
difference between two list----->   [-4, -4, -4, -4, 2]
```

***25.Write a Python program to convert a given list of integers and a tuple of integers in a list of strings***

In [29]:
```
a=[1,223,43,5,67,6,7]
b=(12,3,54,656,5768)
c=lambda a:[str(i) for i in a if type(i)==int]
print(c(a))
print((c(b)))
```

```
['1', '223', '43', '5', '67', '6', '7']
['12', '3', '54', '656', '5768']
```

**26. Write a Python program to compute the sum of elements of an given array of integers, use map() function**

In [30]:
```
a=[1,223,43,5,67,6,7]
s=lambda a:sum(a)
s(a)
```

Out[30]: 352

In [31]:
```
lst1 = [12,34,56,78,90]
lst2 =[98,76,54,32,21]
sum1 = list(map(lambda x,y : x+y , lst1 , lst2))
sum1
```

Out[31]: [110, 110, 110, 110, 111]

## 27. Write a Python program to count the same pair in two given lists. use map() function

In [34]:
```
lst1 = [ 10,20,40,60,70,90,90]
lst2 = [40,55,40,70,50,20,90]
pair = list(map(lambda x,y : y==x ,lst1,lst2))
print("Same pair in lists" , pair)
print(pair.count(True))
```

```
Same pair in lists [False, False, True, False, False, False, True]
2
```

**28.Write a Python program to convert a given list of strings into list of lists using map function**

In [50]:
```
s=[["k","i","r","a","n"], ["s","o","n","a","w","a","n","e"]]
a=list(map(lambda s:"".join(s),s))
a
```

Out[50]:
```
['kiran', 'sonawane']
```

**29.Write a Python program to convert a given list of tuples to a list of strings using map function**

In [70]:
```
s=[("k","i","r","a","n"), ("s","o","n","a","w","a","n","e")]
a=list(map(lambda s:"".join(s),s))
a
```

Out[70]:
```
['kiran', 'sonawane']
```

**30. Python program to find the diff. between two lists using filter() function**

In [110]:
```
list1 = [1,2,3,4,5,6,7,8,9]
b=[1,223,43,5,67,6,7]
a=list(filter(lambda k :k not in b,list1))
a
```

Out[110]:
```
[2, 3, 4, 8, 9]
```

**31. Python program to remove stop words from string using filter() function**

In [94]:
```
a='''a Data science is the domain of study that deals a with vast volumes of
                        modern tools and techniques to find unseen patterns,
                        derive meaningful information, and make business deci
b = ["in", "of", "a", "and"]
s=a.split()
filtred_string = " ".join ((filter(lambda d:d not in b ,s)))
filtred_string


```

Out[94]:
```
'Data science is the domain study that deals with vast volumes modern tools tec
hniques to find unseen patterns, derive meaningful information, make business d
ecisions'
```

In [35]:
```
string = "Try to stop the excuses if you want to become successful"
str1 = string.split()
# print(str1)
lst = list(filter(lambda x: x.lower() != "stop" ,str1))
print(" ".join(lst))
```

```
Try to the excuses if you want to become successful
```

**32. Python program to find common items in two arrays using lambda and filter() function**

In [102]:
```
list1 = [1,2,3,4,5,6,7,8,9]
c=     [1,223,43,5,67,6,7]
d=list(filter (lambda list1:list1 in c,list1))
d


```

Out[102]:
```
[1, 5, 6, 7]
```

In [36]:
```
list1 = [1,2,3,4,5,6,7,8,9]
c=     [1,223,43,5,67,6,7]
list(filter (lambda list1:list1 in c,list1))

```

Out[36]:
```
[1, 5, 6, 7]
```

**33. Python program to filter odd numbers from the list using filter() function**

In [83]:
```
list1 = [1,2,3,4,5,6,7,8,9]
a=list(filter(lambda list1:list1%2==0,list1))
a
```

Out[83]:
```
[2, 4, 6, 8]
```

**34. Python program to filter even numbers from the list using filter() function**

In [84]:
```
list1 = [1,2,3,4,5,6,7,8,9]
a=list(filter(lambda list1:list1%2!=0,list1))
a
```

Out[84]: [1, 3, 5, 7, 9]

### 35. Python program that filters non-vowels from the list using filter() function

In [100]:
```
a=["s","k","r","a","e","o"]
vowels=["a","e","i","o","u"]
c="".join (filter(lambda k:k not in vowels,a))
c

```

Out[100]: 'skr'

In [38]:
```
lst = "India is country of unity in diversity"
vowels = "AEIOUaeiou"
a = list(filter(lambda x : [i for i in x if i not in vowels],lst))
print(a)
```

```
['n', 'd', ' ', 's', ' ', 'c', 'n', 't', 'r', 'y', ' ', 'f', ' ', 'n', 't',
'y', ' ', 'n', ' ', 'd', 'v', 'r', 's', 't', 'y']
```

In [ ]:
```

```