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

In [8]:
```
subject_marks = [('English', 88), ('Science', 90), ('Maths', 97), ('Social scienc

sorted_marks=list(sorted(subject_marks,key= lambda x:x[1]))

print(sorted_marks)
```

```
[('Social sciences', 82), ('English', 88), ('Science', 90), ('Maths', 97)]
```

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

In [12]:
```
subject_marks = [{"Sub":'English',"Marks": 88}, {"Sub":'Science',"Marks" :90}, {'
                 {"Sub":'Social sciences',"Marks": 82}]

sorted_by_marks=list(sorted(subject_marks,key=lambda x:x["Marks"]))

sorted_by_subnames=list(sorted(subject_marks,key=lambda x:x["Sub"]))

print(sorted_by_marks)
print(sorted_by_subnames)
```

```
[{'Sub': 'Social sciences', 'Marks': 82}, {'Sub': 'English', 'Marks': 88}, {'Su
b': 'Science', 'Marks': 90}, {'Sub': 'Maths', 'Marks': 97}]
[{'Sub': 'English', 'Marks': 88}, {'Sub': 'Maths', 'Marks': 97}, {'Sub': 'Scien
ce', 'Marks': 90}, {'Sub': 'Social sciences', 'Marks': 82}]
```

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

In [23]:
```

sqr=lambda l1: [i**2 for i in l1]
cube=lambda l1:[i**3 for i in l1]
print(sqr([1,2,3]))
cube([1,2,3])
```

```
[1, 4, 9]
```

Out[23]:
```
[1, 8, 27]
```

In [31]:
```
l1=[1,2,3]
sqr=list(map(lambda x: x**2,l1))
print(sqr)
cue=list(map(lambda x:pow(x,3),l1))
print(cue)
```

```
[1, 4, 9]
[1, 8, 27]
```

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

In [41]:
```
starts_with = lambda x: True if x.startswith('P') else False

print(starts_with('Python'))

starts_with = lambda x: True if x.startswith('P') else False

print(starts_with('Java'))
```

```
True
False
```

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

In [43]:
```
is_digit = lambda x:True if x.isnumeric() else False

is_digit("123456")
```

Out[43]:
```
True
```

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

In [56]:
```
def fibonacci(n):
    fibo=[0,1]
    list(map(lambda x:fibo.append(sum(fibo[-2:])),range(2,n)))
    return fibo[:n]
fibonacci(10)
```

Out[56]:
```
[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]
```

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

In [70]:
```
l1=[1,23,4,5,60]
l2=[2,3,4,5,6]
intersection = list(filter(lambda x:x in l1,l2))
intersection
```

Out[70]:
```
[4, 5]
```

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

In [21]:
```
def rearrange(arr):

    return [x for x in arr if x < 0] +[x for x in arr if x ==0]+ [x for x in arr
rearrange([1,2,3,0,-1,-2,-3])
```

Out[21]:
```
[-1, -2, -3, 0, 1, 2, 3]
```

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

In [26]:
```
def cnt_even_odd(arr):
    even=list(filter(lambda x:x%2==0,arr))
    odd=list(filter(lambda x: x%2 !=0,arr))
    print("count of even numbers is",len(even))
    print("cound of odd numbers is",len(odd))
cnt_even_odd([1,2,3,4,5,6,7,8,9])
```

```
count of even numbers is 4
cound of odd numbers is 5
```

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

In [38]:
```
def addtwolist(l1,l2):
    for i in range(0,abs(len(l1)-len(l2))):
        if len(l1)>len(l2):
            l2.append(0)
        else:
            l1.append(0)
    print(l1,l2)

    l3=list(map(lambda x,y:x+y,l1,l2))
    print("Resultant list is",l3)
l1=[27,6]
l2=[6,17,5,27,6]
addtwolist(l1,l2)
```

```
[27, 6, 0, 0, 0] [6, 17, 5, 27, 6]
Resultant list is [33, 23, 5, 27, 6]
```

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

In [54]:
```
def numdivby19or13(l1):
    l2=list(filter(lambda x:x%19==0 or x%13==0,l1))
    print(f"Numbers divided by 19 or 13 are {l2}")
numdivby19or13([23,38,39,13,19,45])
```

```
Numbers divided by 19 or 13 are [38, 39, 13, 19]
```

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

In [53]:
```
def palindrome(l1):

    return list(filter(lambda x: x==x[::-1],l1))

l1=["redivider","home","civic","radar","lion","level"]
palindrome(l1)
```

Out[53]:
```
['redivider', 'civic', 'radar', 'level']
```

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

In [87]:
```
lst=['listen','read','heart','dear','dare']
word='read'
(lambda x,w:[i for i in x if (set(w).issubset(set(i)) and set(i).issubset(set(w))
```

Out[87]:
```
['read', 'dear', 'dare']
```

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

In [55]:
```
def shr(l1,n):
    l2 = list(map(lambda x:x*n,l1))
    print("Desired output is",l2)
l1=[1,2,3,4,5,6]
n=5
shr(l1,n)
```

```
Desired output is [5, 10, 15, 20, 25, 30]
```

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 [58]:
```
def sumofpositive_and_negative(l1):
    positive=sum(filter(lambda x: x>=0,l1))
    negative=sum(filter(lambda x: x<0,l1))
    print("Sum of positive elements is",positive)
    print("Sum of negative element is",negative)
l1=[-1,2-3,4,-5,6,-7,8,-9]
sumofpositive_and_negative(l1)
```

```
Sum of positive elements is 18
Sum of negative element is -23
```

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

In [69]:
```
def max_and_min_lenghth_inlist(l1):

        max_length =  max(list(filter(lambda x:len(x),l1)))
        min_length =  min(list(filter(lambda x:len(x),l1)))

        print("Maximum length of list is",max_length)
        print("Minimum length of list is",min_length)

l1= [[0], [1, 3], [5, 7], [9, 11], [13, 15, 17]]

max_and_min_lenghth_inlist(l1)
```

```
Maximum length of list is [13, 15, 17]
Minimum length of list is [0]
```

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

In [92]:
```
l1=[2,3,1,4,5,6]
a =lambda x :print("List is sorted") if l1==sorted(l1) else print("List is not so
a(l1)
```

```
List is not sorted
```

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

In [91]:
```
def my_fun1(l1,l2):
    result = list(filter(lambda x: x not in list2, list1))
    return result
list1 = [1,2,3,4,56,8,9,10]
list2 = [2,4,6,8]
print("Original lists:")
print("list1:", list1)
print("list2:", list2)


my_fun1(l1,l2)
```

```
Original lists:
list1: [1, 2, 3, 4, 56, 8, 9, 10]
list2: [2, 4, 6, 8]
```

Out[91]:
```
[1, 3, 56, 9, 10]
```

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

lambda.

In [114]:
```
def str_to_int(tuple1):

     return tuple(map(lambda x: (int(x)), tuple1))


tuple1=("10","20","30","40")

print(tuple1)
print()
str_to_int(tuple1)
```

```
('10', '20', '30', '40')
```

Out[114]:
```
(10, 20, 30, 40)
```

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

In [125]:
```
def occurance(l1):
    dict1={}
    l2 = list(map(lambda x: l1.count(x),l1))
    dict1=dict(zip(l1,l2))
    print("Original list is",l1)
    print()
    print("Occurance of all the elements is:",dict1)

l1=[2,4,3,2,5,6,5,7,8,8]
occurance(l1)
```

```
Original list is [2, 4, 3, 2, 5, 6, 5, 7, 8, 8]

Occurance of all the elements is: {2: 2, 4: 1, 3: 1, 5: 2, 6: 1, 7: 1, 8: 2}
```

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

In [130]:
```
def count(l1,l2,l3):
    result = list(map(lambda x,y,z:x+y+z,l1,l2,l3))
    print("Original lists are",l1,l2,l3)
    print()
    print("Resultant list is",result)
l1=[1,2,3]
l2=[4,5,6]
l3=[7,8,9]
count(l1,l2,l3)
```

```
Original lists are [1, 2, 3] [4, 5, 6] [7, 8, 9]

Resultant list is [12, 15, 18]
```

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

In [132]:
```
def listify(l1):
    l2=list(map(lambda x:list(x),l1))
    print(l2)
listify(["Monday","Tuesday"])
```

```
[['M', 'o', 'n', 'd', 'a', 'y'], ['T', 'u', 'e', 's', 'd', 'a', 'y']]
```

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

In [135]:
```
def squareof_list(l1):

    return list(map(lambda x:x**2,l1))

l1=[16,17,18,19,20]
print("Original list is:",l1)
squareof_list(l1)
```

```
Original list is: [16, 17, 18, 19, 20]
```

Out[135]:
```
[256, 289, 324, 361, 400]
```

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

In [144]:
```
def add_of_lists(l1,l2):
    return list(map(lambda x,y:x+y,l1,l2))


l1=[1,2,3,4]
l2=[2,3,4,5]

print("original lists are" , l1,l2)


add_of_lists(l1,l2)
```

```
original lists are [1, 2, 3, 4] [2, 3, 4, 5]
```

Out[144]:
```
[3, 5, 7, 9]
```

In [143]:
```
def diff_of_lists(l1,l2):
    return list(map(lambda x,y:x-y,l1,l2))

l1=[1,2,3,4]
l2=[2,3,4,5]

print("original lists are" , l1,l2)


diff_of_lists(l1,l2)
```

```
original lists are [1, 2, 3, 4] [2, 3, 4, 5]
```

Out[143]:
```
[-1, -1, -1, -1]
```

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

In [149]:
```
def my_function(l1,t1):
    result = list(map(lambda x: str(x),l1))
    result1 = list(map(lambda y: str(y),t1))
    print(result)
    print(result1)
l1=[1,2,3]
t1=[4,5,6]
my_function(l1,t1)
```

```
['1', '2', '3']
['4', '5', '6']
```

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

In [175]:
```
def sumofelements(arr):
    a= list(map(lambda x:sum(arr),arr))
    print("Addition is",a[0])
arr=[2,3,4,5,6,7]

sumofelements(arr)
```

```
Addition is 27
```

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

In [3]:
```
def same_pair(l1,l2):
    result = list(filter(lambda x: x in l2, l1))
    numberofsame = list(map(lambda x: len(result),result))
    print(result,numberofsame[0])
l1=[1,2,3,4,5,6,7,8]
l2=[5,6,7,8,9]
same_pair(l1,l2)
```

```
[5, 6, 7, 8] 4
```

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

In [7]:
```
def strtolst(l1):
    l2=list(map(lambda x:x.split(),l1))
    print(l2)

strtolst(["Red","Blue","Green"])
```

```
[['Red'], ['Blue'], ['Green']]
```

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

In [9]:
```
def tupltolst(l1):
    l2=list(map(lambda x:str(x),l1))
    print(l2)

tupltolst([(12),(13),(14),(15)])
```

```
['12', '13', '14', '15']
```

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

In [17]:
```
def diff(l1,l2):

    r = list(filter(lambda x:x not in  l2,l1))
    print(r)
l1=[0,9,8,7,6,5]
l2=[11,67,9,7,5]
diff(l1,l2)
```

```
[0, 8, 6]
```

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

In [ ]:
```

```

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

In [30]:
```
def common(arr1,arr2):

    list1=list(filter(lambda x:x in arr2,arr1))
    print(list1)
arr1=[1,2,3,4]
arr2=[3,4]
common(arr1,arr2)
```

```
[3, 4]
```

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

In [31]:
```
def odd(l1):
    return list(filter(lambda x:x%2!=0,l1))
l1=[1,2,3,4,5]
odd(l1)
```

Out[31]: [1, 3, 5]

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

In [33]:
```
def even(l1):
    return list(filter(lambda x:x%2==0,l1))
l1=[1,2,3,4,5]
even(l1)
```

Out[33]: [2, 4]

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

In [44]:
```
def non_vowels(str1):
    l1=list(filter(lambda x:x!="a" and x!="e"and x!="i" and x!="o"and x!="u",str1
    print("Output string is :",end=" ")
    print("".join(l1))
str1="This is Python programming and i love doing it."
print("Input string is :",str1)
print()
non_vowels(str1)
```

```
Input string is : This is Python programming and i love doing it.

Output string is : Ths s Pythn prgrmmng nd  lv dng t.
```