

## Shubhangi\_Dhikale\_35

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

```
In [6]: list1=[(3,4),(5,2),(6,7),(1,8)]
list2=sorted(list1,key=lambda x:x[0])
print(list2)
```

```
[(1, 8), (3, 4), (5, 2), (6, 7)]
```

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

```
In [10]: list1=[{'a':1},{'a':3},{'a':2},{'a':5}]
list2=sorted(list1,key=lambda x:x['a'])
print(list2)
```

```
[{'a': 1}, {'a': 2}, {'a': 3}, {'a': 5}]
```

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

```
In [13]: #square
list1=[1,2,3,4,5]
list2=lambda list1:[i**2 for i in list1]
print(list2(list1))
```

```
#cube
list3=lambda list1:[i**3 for i in list1]
print(list3(list1))
```

```
[1, 4, 9, 16, 25]
[1, 8, 27, 64, 125]
```

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

```
In [14]: string="we are learning data science and python"
a=lambda x:[x.startswith("w")]
a(string)
```

```
Out[14]: [True]
```

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

```
In [15]: string="12456789"
if string.isnumeric():
    print("given string is numeric")
else:
    print("given string is not numeric")
```

given string is numeric

```
In [16]: str1="234d567" #by using Lambda
a=lambda x:[x.isnumeric()]
a(str1)
```

Out[16]: [False]

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

```
In [17]: #f(0)=0, f(1)=1
#fn=fn-1+fn-2

fib=lambda x:x if x<=1 else fib(x-1)+fib(x-2)
for x in range(10):
    print(fib(x),end=' ')
```

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 [20]: list1=[1,2,3,4,5,6]
list2=[2,3,7,8,6,9]
list3=list(filter(lambda x:x in list1,list2))
print("intersection of two array is :",list3)
```

intersection of two array is : [2, 3, 6]

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

```
In [21]: list1=[1,2,-1,-2,4,3,-3,-6]
list2=sorted(list1)
list2
```

Out[21]: [-6, -3, -2, -1, 1, 2, 3, 4]

```
In [22]: list1=[1,2,-1,-3,-2,3,4,5]
list2=sorted(list1,key=lambda x:x>=0)
list2
```

Out[22]: [-1, -3, -2, 1, 2, 3, 4, 5]

```
In [23]: list1=[1,2,-1,-3,-2,3,4,5]
list2=sorted(list1,key=lambda x:x<0)
list2
```

```
Out[23]: [1, 2, 3, 4, 5, -1, -3, -2]
```

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

```
In [24]: l1=[1,2,3,4,5,6,7,8]
x=lambda a:[i for i in l1 if i%2==0]
print(x(l1))
print("count of even number:",len(x(l1)))
y=lambda b:[i for i in l1 if i%2!=0]
print(y(l1))
print("count of odd number:",len(y(l1)))
```

```
[2, 4, 6, 8]
count of even number: 4
[1, 3, 5, 7]
count of odd number: 4
```

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

```
In [29]: list1=[2,3,4,5]
list2=[1,2,3,4]
a=list(map(lambda x,y:x+y,list1,list2))
print(a)
```

```
[3, 5, 7, 9]
```

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

```
In [30]: list1=[19,65,13,121,39]
print("original list:",list1)

a=list(filter(lambda x:(x%19==0 or x%13==0),list1))
print("Number of the above list divisible by nineteen or thirteen:",a)
```

```
original list: [19, 65, 13, 121, 39]
Number of the above list divisible by nineteen or thirteen: [19, 65, 13, 39]
```

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

```
In [31]: str_list=["naman","nayana","nitin"]
a=list(filter(lambda x:x.upper()==x[::-1].upper(),str_list))
print("palindromes in list:",a)

palindromes in list: ['naman', 'nitin']
```

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

```
In [53]: str1=["bcda","abce","cbda","cbea","adcb"]
check="abcd"
output=list(filter(lambda x: sorted(x)==sorted(check),str1))
print(output)

['bcda', 'cbda', 'adcb']
```

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

```
In [2]: list1=[1,2,3,4,5,6]
n=int(input())
x=lambda x:[i*n for i in list1]
print(x(list1))

2
[2, 4, 6, 8, 10, 12]
```

### 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 [3]: list1=[-3,-6,5,9,3,-1,2,6,-4,1]
print("original list:",list1)
sum_positive=lambda x: sum([i for i in x if i>=0])
print("sum of positive number:",sum_positive(list1))
sum_negative=lambda x: sum([i for i in x if i<0])
print("sum of negative number:",sum_negative(list1))

original list: [-3, -6, 5, 9, 3, -1, 2, 6, -4, 1]
sum of positive number: 26
sum of negative number: -14
```

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

```
In [52]: list1=[[0],[1,3],[5,7],[1,2,3],[9,11],[13,15,17]]
l1=list(map(lambda x:len(x),list1))
l2=dict(zip(l1,list1))
l3=sorted(l2.items())
print(l2)
print(l3)
print("Maximum length list:",l3[-1])
print("Minimum length list:",l3[0])
```

```
{1: [0], 2: [9, 11], 3: [13, 15, 17]}
[(1, [0]), (2, [9, 11]), (3, [13, 15, 17])]
Maximum length list: (3, [13, 15, 17])
Minimum length list: (1, [0])
```

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

```
In [10]: l1=[1,2,3,4,5]
sort=lambda x: 'list is sorted' if x==sorted(x) else 'list is not sorted'
sort(l1)
```

```
Out[10]: 'list is sorted'
```

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

```
In [1]: list1=[2,3,4,5,6,7]
list2=[9,3,1,4]
list1=list(filter(lambda x: x not in list2,list1))
print(list1)
```

```
[2, 5, 6, 7]
```

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

```
In [3]: l1=('1234567')
l2=tuple(map(lambda x: int(x),l1))
l2
```

```
Out[3]: (1, 2, 3, 4, 5, 6, 7)
```

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

```
In [9]: list1=[1,2,3,3,4,4,6,6,1]
occurance=dict(map(lambda x:(x,list1.count(x)),list1))
print(occurance)

{1: 2, 2: 1, 3: 2, 4: 2, 6: 2}
```

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

```
In [10]: list1=[1,3,6,2]
list2=[4,7,4,1]
list3=[4,7,5,1]
a=list(map(lambda x,y,z: x+y+z,list1,list2,list3))
print(a)

[9, 17, 15, 4]
```

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

```
In [11]: list1=['mansi','omkar','1234']
a=list(map(lambda x: list(x),list1))
print(a)

[['m', 'a', 'n', 's', 'i'], ['o', 'm', 'k', 'a', 'r'], ['1', '2', '3', '4']]
```

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

```
In [17]: list1=[1,3,7,5,2]
a=list(map(lambda x:x**2,list1))
print(a)

[1, 9, 49, 25, 4]
```

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

```
In [24]: list1=[1,4,5,6,7]
list2=[4,5,6,2,1]
add=list(map(lambda x,y:x+y,list1,list2))
print('By adding two list:',add)

diff=list(map(lambda x,y:x-y,list1,list2))
print('By subtracting two list:',diff)

By adding two list: [5, 9, 11, 8, 8]
By subtracting two list: [-3, -1, -1, 4, 6]
```

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

```
In [27]: # list of integer
list1=[1,3,2,7,5]
a=list(map(lambda x: str(x),list1))
print(a)

#tuple of integer
tuple1=(3,5,7,1,0)
b=list(map(lambda x: str(x),tuple1))
print(b)

['1', '3', '2', '7', '5']
['3', '5', '7', '1', '0']
```

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

```
In [30]: list1=[10,20,30,40]
a=sum(map(lambda x:x,list1))
print(a)

100
```

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

```
In [34]: list1=[10,20,30,40]
list2=[40,20,10,40]
l1=sum(map(lambda x,y:x==y,list1,list2))
print('sum pair in two lists are:',l1)

sum pair in two lists are: 2
```

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

```
In [35]: list1=['sanket','vaibhav','rutuja']
l1=list(map(lambda x: x.split(),list1))
print('list of lists is:',l1)

list of lists is: [['sanket'], ['vaibhav'], ['rutuja']]
```

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

```
In [38]: list1=[('1234','2'),('a','b'),('sanket')]
a=list(map(lambda x: ''.join(x),list1))
print(a)

['12342', 'ab', 'sanket']
```

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

```
In [42]: list1=[10,20,30,40,50]
list2=[15,10,30,25,50]
a=list(filter(lambda x: x not in list1,list2))
b=list(filter(lambda x:x not in list2,list1))
print('The difference between two lists are:',(a+b))
```

The difference between two lists are: [15, 25, 20, 40]

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

```
In [46]: string=''python is a popular general purpose programming language.
It is used in machine learning,web development,desktop application,and many other
string=string.split()

list1=['is','a','and','in','It','on','for','the']
string1=list(filter(lambda x: x not in list1,string))
print(' '.join(string1))
```

python popular general purpose programming language. used machine learning,web development,desktop application,and many other fields.

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

```
In [47]: l1=[2,3,4,5,6,8]
l2=[1,2,5,9,20,3,6]
l3=list(filter(lambda x : x in l1,l2))
print("common items in two lists are:",l3)
```

common items in two lists are: [2, 5, 3, 6]

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

```
In [49]: list1=[2,4,1,5,8,9,3]
l1=list(filter(lambda x : x%2!=0,list1))
print("odd number:",l1)
```

odd number: [1, 5, 9, 3]



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

```
In [50]: list1=[2,4,1,5,8,9,3]
l1=list(filter(lambda x: x%2==0,list1))
print("even number:",l1)
```

even number: [2, 4, 8]

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

```
In [51]: list1=["s","h","u","b","h","n","g","i"]
vowels=["a","e","i","o","u"]
l1=list(filter(lambda x: x not in vowels,list1))
print("Non vowels from the list are:",l1)
```

Non vowels from the list are: ['s', 'h', 'b', 'h', 'n', 'g']