In [54]:
```
# Python 3 code to people above 18 yrs
ages = [13, 90, 17, 59, 21, 60, 5]
adults = list(filter(lambda age: age>18, ages))
print(adults)
```

```
[90, 59, 21, 60]
```

Using lambda() Function with map() The map() function in Python takes in a function and a list as an argument. The function is called with a lambda function and a list and a new list is returned which contains all the lambda modified items returned by that function for each item. Example:

In [55]:
```
# Python code to illustrate # map() with lambda()
# to get double of a list.
li = [5, 7, 22, 97, 54, 62, 77, 23, 73, 61]
final_list = list(map(lambda x: x*2, li))
print(final_list)
```

```
[10, 14, 44, 194, 108, 124, 154, 46, 146, 122]
```

In [56]:
```
# Python program to demonstrate # use of lambda() function
# with map() function
animals = ['dog', 'cat', 'parrot', 'rabbit']
# here we intend to change all animal names # to upper case and return the same

uppered_animals = list(map(lambda animal: str.upper(animal), animals))
print(uppered_animals)
```

```
['DOG', 'CAT', 'PARROT', 'RABBIT']
```

Using lambda() Function with reduce() The reduce() function in Python takes in a function and a list as an argument. The function is called with a lambda function and an iterable and a new reduced result is returned. This performs a repetitive operation over the pairs of the iterable. The reduce() function belongs to the functools module.

In [57]:
```
# Python code to illustrate # reduce() with lambda() # to get sum of a list
from functools import reduce
li = [5, 8, 10, 20, 50, 100]
sum = reduce((lambda x, y: x + y), li)
print (sum)
```

```
193
```

In [58]:
```
# python code to demonstrate working of reduce() # with a lambda function
# importing functools for reduce()
import functools
# initializing list
lis = [ 1 , 3, 5, 6, 2, ]
# using reduce to compute maximum element from list
print ("The maximum element of the list is : ",end="")
print (functools.reduce(lambda a,b : a if a > b else b, lis))
```

```
The maximum element of the list is : 6
```

In [60]:
```
#1.     Write a Python program to find the sum of all the elements in the list.
total = 0
list1 = [2,6,9,10,56]

for num in range(0, len(list1)):
    total = total + list1[num]
print("Sum of all elements in given list: ", total)
```

```
Sum of all elements in given list:  83
```

In [61]:
```
#2.     Write a Python program to print the even numbers from a given list.
l = [23,46,78,98,11]
for i in l:
    if i%2 == 0:
        print(i)
    else:
        pass
```

```
46
78
98
```

In [65]:
```
#3. Write a Python Program to print the largest even and largest odd number in a li
l = [23,46,78,98,11]
for i in range(len(l)):
    if l[i] %2 == 0:
        maxe = l[i]
    if l[i] %2 == 1:
        maxo = l[i]
for i in range(len(l)):
    if l[i] >= maxe and l[i]%2 == 0:
        maxe = l[i]
    if l[i] >= maxo and l[i]%2 == 1:
        maxo = l[i]
print(maxe)
print(maxo)
```

```
98
23
```

In [1]:
```
#4.     Write a Python program to swap first and last element of the list.
def swap_first_last(lst):
    # Check if the list has at least two elements
    if len(lst) >= 2:
        # Swap the first and last elements
        lst[0], lst[-1] = lst[-1], lst[0]
    else:
        print("List should have at least two elements for swapping.")

# Example usage:
my_list = [1, 2, 3, 4, 5]
print("Original List:", my_list)

swap_first_last(my_list)

print("List after swapping first and last elements:", my_list)
```

```
Original List: [1, 2, 3, 4, 5]
List after swapping first and last elements: [5, 2, 3, 4, 1]
```

In [67]:
```
#5. Write a Python program of Reversing a List.
def reverse(l):
    return l[::-1]
newlist = eval(input("Enter list : "))
print(reverse(newlist))
```

```
Enter list : [1,2,3,4]
[4, 3, 2, 1]
```

In [71]:
```
#6. Write a Python function to sum all the numbers in a list.
l = eval(input("Enter list : "))
sum=0
for i in l:
```

```
    sum=sum+i
print(sum)
```

```
Enter list : [12,23,34,45,56,78]
248
```

In [72]:
```
#7. Write a python program to merge 2 dictionaries.
def Merge(dict1, dict2):
    return(dict2.update(dict1))

dict1 = {'a': 10, 'b': 8}

dict2 = {'d': 6, 'c': 4}

print(Merge(dict1,dict2))

print(dict2)
```

```
None
{'d': 6, 'c': 4, 'a': 10, 'b': 8}
```

In [73]:
```
#8. Python Program to Multiply All the Items in a Dictionary
d={'A':10,'B':10,'C':239}
tot=1
for i in d:
    tot=tot*d[i]
print(tot)
```

```
23900
```

In [88]:
```
#9. Python Program to Sort a List According to the Second Element in Sublist.
a=[['A',34],['B',21],['C',26]]
for i in range(0,len(a)):
    for j in range(0,len(a)-i-1):
        if(a[j][1]>a[j+1][1]):
            temp=a[j]
            a[j]=a[j+1]
            a[j+1]=temp
print(a)
```

```
[['B', 21], ['C', 26], ['A', 34]]
```

In [81]:
```
#10. Python Program to Return the Length of the Longest Word from the List of Words
a=[]
n= int(input("Enter the number of elements in list:"))
for x in range(0,n):
    element=input("Enter element" + str(x+1) + ":")
    a.append(element)
max1=len(a[0])
temp=a[0]
for i in a:
    if(len(i)>max1):
        max1=len(i)
        temp=i
print("The word with the longest length is:")
print(temp)
```

```
Enter the number of elements in list:4
Enter element1:abhi
Enter element2:santiji
Enter element3:funday
Enter element4:jugnooo
The word with the longest length is:
santiji
```

In [83]:
```
# 11. Write a Python program to add two given lists using map and lambda.
nums1 = [0, 1, 2]

nums2 = [3, 4, 5]

print("Original list:")

print(nums1)

print(nums2)

result = map(lambda x, y: x + y, nums1, nums2)

print("\nResult: after adding two list")

print(list(result))
```

```
Original list:
[0, 1, 2]
[3, 4, 5]

Result: after adding two list
[3, 5, 7]
```

In [87]:
```
#12.Write a Python program to find numbers divisible by nineteen or thirteen from a
nums = [-19,38,89,788,453,233,26]
print("Original list:")
print(nums)
l = list(filter(lambda x : x%19==0 or x%13 == 0, nums))
print(l)
```

```
Original list:
[-19, 38, 89, 788, 453, 233, 26]
[-19, 38, 26]
```

In [91]:
```
#13. Write a python program to compare the three lists.
listl = [1,2,3]
list2 = [1,2,3]
list3=list1
print(id(listl))
print(id(list2))
print(id(list3))
if (listl == list2):
    print("True")
else:
    print("False")

if (listl is list2):
    print("True")
else:
    print("False")

if (listl is list3):
    print("True")
else:
    print("False")

list3 = list3 + list2

if (listl is list3):
    print("True")
else:
    print("False")
```

```
3021988804800
3021988798656
3021988213632
True
False
False
False
```

In [92]:
```
#14. Python Program to Print All Possible Combinations of Three Digits
a=int(input("Enter first number:"))
b=int(input("Enter second number:"))
c=int(input("Enter third number:"))
d=[]
d.append(a)
d.append(b)
d.append(c)
for i in range(0,3):
    for j in range(0,3):
        for k in range(0,3):
            if(i!=j&j!=k&k!=i):
                print(d[i],d[j],d[k])
```

```
Enter first number:10
Enter second number:20
Enter third number:34
10 20 34
10 34 20
20 10 34
20 34 10
34 10 20
34 20 10
```

In [ ]: