

```
In [1]: # TASK 4
# 1 Function with default argument

def Show_employee(name,salary=9000):
    print("Name : ",name)
    print("Salary : ",salary)
Show_employee("Ben",12000)
Show_employee("Jessa")
```

```
Name : Ben
Salary : 12000
Name : Jessa
Salary : 9000
```

```
In [2]: # 2 inner function to calculate the addition
```

```
def outer(x,y):
    def inner(a,b):
        return a+b
    sum=inner(x,y)
    return sum+5

result=outer(2,3)
print(result)
```

```
10
```

```
In [4]: # 3 python list all the even numbers between 4 to 30
```

```
list=[i for i in range(4,31)if i%2==0]
print(list)
```

```
[4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30]
```

4]: # 3 python list all the even numbers between 4 to 30

```
list=[i for i in range(4,31)if i%2==0]  
print(list)
```

[4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30]

5]: # 4 lambda function to check if value is in a list

```
list=[1,2,3,4,5,6]  
i=int(input("Enter a number : "))  
n=lambda i:list.count(i)  
if n(i)==0:  
    print("Your input is not in the list")  
else:  
    print("Your input is in the list")
```

Enter a number : 3

Your input is in the list

7]: # 5 sort list of tuples with their sum

```
points=[(1,2),(5,3),(0,7),(3,1)]  
a=sorted(points,key=lambda i:sum(i))  
print(a)
```

[(1, 2), (3, 1), (0, 7), (5, 3)]

In [8]: *# 6 find all the numbers b/w 1000 and 3000 in which all the digits are even*

```
list=[]  
for i in range(1000,3001):  
    digits=[int(digit) for digit in str(i)]  
    if all(digit%2==0 for digit in digits):  
        list.append(i)  
list
```

Out[8]: [2000,
2002,
2004,
2006,
2008,
2020,
2022,
2024,
2026,
2028,
2040,
2042,
2044,
2046,
2048,
2060,
2062,
2064

In [2]: *# 7 program to accept the sentences and calculate the letters and digits*

```
numeric=[]
a=input("Enter your input : ")
for i in a:
    if i.isnumeric():
        numeric.append(i)
print("number of digits : ",len(numeric))
letter=[]
for i in a:
    if i.isalpha():
        letter.append(i)
print("number of letters : ",len(letter))
```

```
Enter your input : July 08
number of digits : 2
number of letters : 4
```

In [4]: *# 8 program to convert all characters into upper lower cases and remove duplicates using map function*

```
a=input(" enter your input : ")
u=map(lambda a:a.upper(),a)
l=map(lambda a:a.lower(),a)
d=set(a)
```

```
enter your input : hello world
```

```
In [4]: # 8 program to convert all characters into upper lower cases and remove duplicates using map function
a=input(" enter your input : ")
u=map(lambda a:a.upper(),a)
l=map(lambda a:a.lower(),a)
d=set(a)
```

enter your input : hello world

```
In [5]: for i in u:
        print(i)
```

H
E
L
L
O

W
O
R
L
D

```
In [6]: for i in l:
        print(i)
```

h
e
l
l
o

w
o
r
l
d

```
In [7]: for i in d:  
        print(i)
```

r
d
e
l

o
w
h

```
In [9]: # 9 program for add two lists and find their difference  
l1=[2,4,6,8,0,14]  
l2=[1,3,5,7,9,15]  
add=map(lambda x,y:x+y,l1,l2)  
sub=map(lambda x,y:x-y,l1,l2)  
print(add)  
print(sub)
```

<map object at 0x10382db40>
<map object at 0x10382d2d0>

```
In [12]: # 10 program to filter height and weight of students using lambda  
d={"cierra vega":(6.2,71),"alden cantrell":(5.9,65),"kierra gentry":(6.0,68),"pierre cox":(5.8,66)}  
new=filter(lambda i:d[i][0]>6 and d[i][1]>70,d)  
for i in new:  
    print({i:d[i]})
```

{'cierra vega': (6.2, 71)}


```
In [13]: # 11 remove elements in given list present in another list
l1=[1,2,3,4,5,6,7,8,9,10]
l2=[2,4,6,8]
l3=filter(lambda x:x not in l2,l1)
print(l3)
```

<filter object at 0x10382e500>

```
In [2]: # 12 calculate the product of given list
from functools import reduce
l1=[1,2,3,4,5,6,7,8,9,10]
result=reduce(lambda x,y:x*y,l1)
result
```

Out[2]: 3628800

```
In [6]: # 13 program to multiply all number in given list using lambda
from functools import reduce
list=[4,3,2,2,-1,18]
mul=reduce(lambda i,j:i*j,list)
print(mul)
```

-864

```
In [ ]: # 14 program to calculate the average value of numbers in a given tuple of tuples using lambda
t=((10,10,10),(30,45,56),(81,80,39),(1,2,3))
```

```
In [18]: # 15 sort given mixed list of int and str using lambda,numbers must be sorted before string
list=[19,'red',12,'green','blue',10,'white','green',1]
new=sorted(list,key=lambda x:(isinstance(x,str),x))
new
```

Out[18]: [1, 10, 12, 19, 'blue', 'green', 'green', 'red', 'white']

```
In [17]: # 16 program to count the occurrences of items in given list using lambda
l1=[3,4,5,8,0,3,8,5,0,3,1,5,2,3,4,2]
new=dict(map(lambda i:(i,list(l1).count(i)),l1))
new
```

```
Out[17]: {3: 4, 4: 2, 5: 3, 8: 2, 0: 2, 1: 1, 2: 2}
```

```
In [16]: # 17 remove none values from a given list using lambda function
l1=[12,0,None,23,None,-55,234,89,None,0,6,-12]
new=list(filter(lambda x:x is not None,l1))
new
```

```
Out[16]: [12, 0, 23, -55, 234, 89, 0, 6, -12]
```