TASK-4

In [ ]:
```
# 1)Write a program to create a function show_employee() using the following conditions.
#●It should accept the employee's name and salary and display both.
#●If the salary is missing in the function call then assign default value 9000 to salary
```

In [4]:
```
def show_employee(name,salary="9000"):
    print("Name:",name,   "Salary:",salary)
show_employee("Ben",12000)
show_employee("Jessa")
```

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

In [ ]:
```
# 2)●Create an outer function that will accept two parameters, a and b
    #●Create an inner function inside an outer function that will calculate the addition of a and b
    #●At last, an outer function will add 5 into addition and return it
```

In [83]:
```
a=int(input("Enter the number:"))
b=int(input("Enter the number:"))
def addition(a,b):
    def add(a,b):
        print(a+b)
    return(a+b+5)
addition(a,b)
```

```
Enter the number:3
Enter the number:4
```

Out[83]:
```
12
```

In [ ]:
```
# 3)Generate a Python list of all the even numbers between 4 to 30
```

In [9]:
```
Even=[i for i in range(4,31) if i%2==0]
print(Even)
```

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

In [ ]:
```
# 4) Given a list, the task is to write a Python program to check if the value exists in the list or not using the lambda functio
```

In [11]:
```
L=[4,8,10,45,36]
n=int(input("Enter a number:"))
x=lambda n:L.count(n)
if x(n)==0:
    print("Element is not present in the list")
else:
    print("Element is present int he list")
```

```
Enter a number:45
Element is present int he list
```

In [ ]:
```
# 5)Sort the points based on their sum of elements in the tuples
```

In [12]:
```
List=[(1, 2), (5, 3), (0, 7), (3, 1)]
print(sorted(List,key=lambda a:a[0]+a[1]))
```

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

In [ ]:
```
# 6)Write a python function, which will find all such numbers between 1000 and 3000 (both included) such that each digit of the r
```

In [22]:
```
Items=[]
for i in range(1000, 3001):
    s=str(i)
    if (int(s[0])%2==0) and (int(s[1])%2==0) and (int(s[2])%2==0) and (int(s[3])%2==0):
        Items.append(s)
Items
```

Out[22]:
```
['2000',
 '2002',
 '2004',
 '2006',
 '2008',
 '2020',
 '2022',
 '2024',
 '2026',
 '2028',
 '2040',
 '2042',
 '2044',
 '2046',
 '2048',
 '2060',
 '2062',
 '2064',
```

In [ ]:
```
# 7)Write a python function that accepts a sentence and calculate and return the number of letters and digits.
```

In [26]:
```
n=input("Enter a string:")
a=0
for i in n:
    if(i.isalpha()):
        a=a+1
print("Number of letters:",a)
print("Number of digits:",len(n)-a)
```

```
Enter a string:springday2345
Number of letters: 9
Number of digits: 4
```

In [ ]:
```
# 8)Write a Python program to convert all the characters into uppercase and lowercase and eliminate duplicate letters from a give
```

In [31]:
```
n=(input("Enter the string:"))
u=map(lambda a:a.upper(),n)
l=map(lambda a:a.lower(),n)
d=''.join(set(n))
print(''.join(list(u)))
print(''.join(list(l)))
print(d)
```

```
Enter the string:helloworld
HELLOWORLD
helloworld
leorwdh
```

In [ ]:
```
# 9) Write a Python program to add two given lists and find the difference between them. Use the map() function
```

In [37]:
```
l1=[4,7,10,2,12]
l2=[10,20,11,9,1]
```

In [39]:
```
a=map(lambda i,j:i+j,l1,l2)
d=map(lambda i,j:i-j,l1,l2)
print(list(a))
print(list(d))
```

```
[14, 27, 21, 11, 13]
[-6, -13, -1, -7, 11]
```

In [ ]:
```
# 10) Write a Python program to filter the height and weight of students, which are stored in a dictionary using lambda.
```

In [40]:
```
d={'Cierra Vega': (6.2, 71), 'Alden Cantrell': (5.9, 65), 'Kierra Gentry': (6.0, 68), 'Pierre Cox': (5.8, 66)}
nd=filter(lambda i:d[i][0]>6 and d[i][1]>70,d)
for i in nd:
    print({i:d[i]})
```

```
{'Cierra Vega': (6.2, 71)}
```

In [ ]:
```
# 11) Write a Python program to remove all elements from a given list present in another list using lambda
```

In [48]:
```
a=[4,7,9,12,31,45,89,66]
b=[4,9,12,89]
r=filter(lambda i:i not in b,a)
print(list(r))
```

```
[7, 31, 45, 66]
```

In [ ]:
```
# 12) Write a Python program to calculate the product of a given list of numbers using lambda.
```

In [52]:
```
from functools import reduce
l=[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
p=reduce(lambda i,j:i*j,l)
print(p)
```

```
3628800
```

In [ ]:
```
# 13)  Write a Python program to multiply all the numbers in a given list using lambda
```

In [53]:
```
from functools import reduce
l=[4, 3, 2, 2, -1, 18]
p=reduce(lambda i,j:i*j,l)
print(p)
```

```
-864
```

In [ ]:
```
# 14) Write a Python program to calculate the average value of the numbers in a given tuple of tuples using lambda.
```

In [70]:
```
from functools import reduce
l=((10, 10, 10), (30, 45, 56), (81, 80, 39), (1, 2, 3))
a=map(lambda i:sum(i)/float(len(i)),zip(*l))
print(tuple(a))
```

```
(30.5, 34.25, 27.0)
```

In [ ]:
```
# 15) Write a Python program to sort a given mixed list of integers and strings using lambda. Numbers must be sorted before stri
```

In [78]:
```
l=[19, 'red', 12, 'green', 'blue', 10, 'white', 'green', 1]
s=sorted(l,key=lambda i:(isinstance(i,str),i))
print(s)
```

```
[1, 10, 12, 19, 'blue', 'green', 'green', 'red', 'white']
```

In [ ]:
```
# 16) Write a Python program to count the occurrences of items in a given list using lambda.
```

In [81]:
```
l=[3, 4, 5, 8, 0, 3, 8, 5, 0, 3, 1, 5, 2, 3, 4, 2]
c=map(lambda i:(i,list(l).count(i)),l)
dict(c)
```

Out[81]:
```
{3: 4, 4: 2, 5: 3, 8: 2, 0: 2, 1: 1, 2: 2}
```

In [ ]:
```
# 17) Write a Python program to remove None values from a given list using the lambda function.
```

In [80]:
```
l=[12, 0, None, 23, None, -55, 234, 89, None, 0, 6, -12]
r=filter(lambda x:x is not None,l)
list(r)
```

Out[80]:
```
[12, 0, 23, -55, 234, 89, 0, 6, -12]
```
