

LAB4: IT LAB
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Q1)

```
class sub:
    def f1(self, s1):
        return self.f2([], sorted(s1))
    def f2(self, curr, s1):
        if s1:
            return self.f2(curr, s1[1:]) + self.f2(curr + [s1[0]], s1[1:])
        return [curr]

a=[]
n=map(int,input("enter a list of elements:\n").split())
print(sub().f1(n))
```

OUTPUT:

```
C:\Users\OSLAB\AppData\Local\Programs\Python\Python37\python.exe
enter a list of elements:
10 20 30 40
[[], [40], [30], [30, 40], [20], [20, 40], [20, 30], [20, 30, 40], [10], [10, 40], [10, 30],
[10, 30, 40], [10, 20], [10, 20, 40], [10, 20, 30], [10, 20, 30, 40]]
Press any key to continue . . .
```

Q2)

```
class Pair:
    def pairs(self):
        flag=0
        a=input("enter a list of numbers\n").split(' ')
        targ=int(input("enter target value:\n"))
        print("the pairs are:")
        for i in range(len(a)):
            for j in range(i+1,len(a)):
                if(int(a[i])+int(a[j])==targ):
                    flag=1
                    print(i,",",j)
        if(flag==0):
            print("no such pair exists")

ob=Pair()
ob.pairs()
```

OUTPUT:

```
C:\Users\OSLAB\AppData\Local\Programs\Python\Python37\python.exe
enter a list of numbers
10 20 30 40 50
enter target value:
50
the pairs are:
0 , 3
1 , 2
Press any key to continue . . .
```

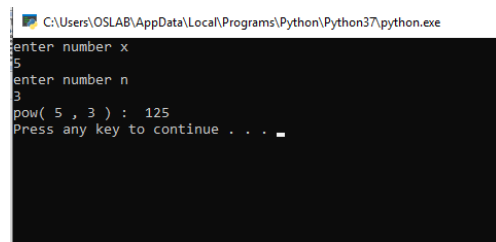
```
C:\Users\OSLAB\AppData\Local\Programs\Python\Python37\python.exe
enter a list of numbers
1 2 3 4 5
enter target value:
10
the pairs are:
no such pair exists
Press any key to continue . . .
```

Q3)

```
class Poww:
    def poww(self,a, b):
        res=a**b
        return res

x=int(input("enter number x\n"))
n=int(input("enter number n\n"))
ob=Poww()
print("pow(",x,"",n,"") : ",ob.poww(x,n))
```

OUTPUT:

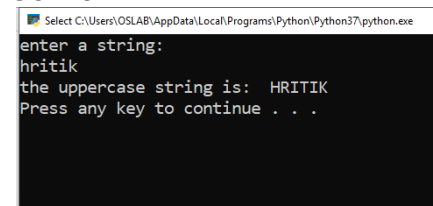


```
C:\Users\OSLAB\AppData\Local\Programs\Python\Python37\python.exe
enter number x
5
enter number n
3
pow( 5 , 3 ) : 125
Press any key to continue . . .
```

Q4)

```
class Strings:
    def get_String(self):
        a=input("enter a string:\n")
        return a
    def put_String(self,a):
        a=a.upper()
        print("the uppercase string is: ",a)
ob=Strings()
ob.put_String(ob.get_String())
```

OUTPUT:



```
Select C:\Users\OSLAB\AppData\Local\Programs\Python\Python37\python.exe
enter a string:
hritik
the uppercase string is: HRITIK
Press any key to continue . . .
```