# write a python program to find all elements or all subsets of elements that sums to zero.

In [2]:
```
from itertools import combinations

# function to generate all the sub lists
def sub_lists (l):
    # initializing empty list
    comb = []

    #Iterating till length of list
    for i in range(len(l)+1):
        # Generating sub list
        comb += [list(j) for j in combinations(l, i)]
    # Returning list
    return comb


list1 = [1,5,7,-8,-2]
sub_list = sub_lists(list1)
l_zerosum = []
for i in range(len(sub_list)):
    sum1 = 0
    for j in range(len(sub_list[i])):
        sum1 += sub_list[i][j]
    if sum1 == 0:
        l_zerosum.append(sub_list[i])
    else:
        continue
print(l_zerosum)
```

```
[[], [1, 7, -8]]
```

# write a python function to check duplicate letters(must accept sentence).

In [3]:
```
def duplicate(str1):
    words = str1.split()
    for i in range(len(words)):
        for j in range(len(words[i])-1):
            if words[i][j] == words[i][j+1]:
                return True
str2 = input("Enter String : ")
flag = duplicate(str2)

if flag == True:
    print("contains duplicate")
else:
    print("does not contains duplicate")
```

```
Enter String : krishna is good
contains duplicate
```

## Merge two sorted arrays into a single list.

In [5]:
```
list1 = [1,2,3,4,5,]
list2 = [6,7,8,9,10]
print("sorted list is :",sorted(list1)+sorted(list2))
```

```
sorted list is : [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

## standardlize mobile number.

In [6]:
```
num=input("Enter a Number: ")
if num.isdigit()==True and len(num)==10:
    print(f"+91-{int(num)}")
else:
    print("Not Valid.")
```

```
Enter a Number: 9974119065
+91-9974119065
```

## standardlize number format.

In [7]:
```
num = input("Enter Number: ")
list1 = list(num)
occ = (len(list1) + len(list1)//3)
for i in range(3,occ-1,4):
    list1.insert(-i,",")
str1 = "".join(list1)
print(str1)
```

```
Enter Number: 1000
1,000
```