LAB - List

Prob1: Read elements into a list and show output by printing each elements
Sample Input
1,5,7,8,3.14, 4, 5
1,[2,3],4,5,6
1,2,[3,4,5],[6,7]
[(1,2,3)]
Expected Output
1 5 7 8 3.14 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
1 2 3

```
first=list[1 , 5 , 7 , 8 , 3 , 14 , 4 , 5 ]
second=list[ 1 , [ 2 , 3 ] , 4 , 5 , 6 ]
third=list[1 , 2 , [ 3 , 4 , 5 ] , [ 6 , 7 ] ]
fourth=list[(1 , 2 , 3 )]

print(first)
print(second)
print(third)
print(fourth)
```

Output:
```
list[1, 5, 7, 8, 3, 14, 4, 5]
list[1, [2, 3], 4, 5, 6]
list[1, 2, [3, 4, 5], [6, 7]]
list[1, 2, 3]
```

Prob2: Given a list of integer values. Write a python program to check whether it contains same number in adjacent position. Display the count of such adjacent occurrences.

```
li1=[1,1,5,100,-20,-20,6,0,0]
li2=[10,20,30,40,30,20]
li3=[1,2,2,3,4,4,4,10]
c=0
for i in range(len(li1)-1):
        x=i+1
        if li1[i]==li1[x]:
```

```
        c=c+1
print(c)
c=0
for i in range(len(li2)-1):
        x=i+1
        if li2[i]==li2[x]:
        c=c+1
print(c)
c=0
for i in range(len(li3)-1):
        x=i+1
        if li3[i]==li3[x]:
        c=c+1
print(c)
```

Output:
3
0
3

Prob3: Read a list from the user of arbitrary length, and show following:
print the list entered by the user
print least value and largest value
swap positions of least and largest element
print the list after swapping positions.

```
def printing(li):
        for x in li:
        print(x,end=',')
        print("\n")
def lela(li,n):
        min=li[0]
        max=li[0]
        z=0
        y=0
        for i in range(n):
        if(max<li[i]):
        max=li[i]
        y=i
        if min>li[i]:
```

```
        min=li[i]
        z=i
        print(f"least={min} and max={max}")
        li[z],li[y]=swap(min,max)
def swap(min,max):
        temp=min
        min=max
        max=temp
        return min,max
n=int(input("Size of list: "))
li=[]
for i in range(n):
        x=int(input("Element of list: "))
        li.append(x)
printing(li)
lela(li,n)
printing(li)
```

Output:

```
Size of list: 4
Element of list: 1
Element of list: 2
Element of list: 3
Element of list: 2
1,2,3,2,

least=1 and max=3
3,2,1,2,
```

Prob4: Read two lists enrol and name from the user of 10 elements. The list enrol contains enrolment numbers and list name contains names of the students. Now read enrolment number from the user to search in the list, if the enrolment is found in the list then print enrolment and name of the student. Otherwise print -1.

```
enroll=[]
name=[]
for x in range(5):
        i=int(input("Enter the enrolment number: 221b"))
        enroll.append(i)
        j=input("Enter the name: ")
        name.append(j)
z=int(input("Enter the enrolment number to be searched: 221b"))
c=0
```

```
for x,y in zip(enroll,name):
        if z==x:
        print(f" Enrolment id= 221b{x} and name of the student is {y}")
        c=c+1
if c==0:
        print("-1")
```

Output:

```
Enter the enrolment number: 221b004
Enter the name: Aanant Singh
Enter the enrolment number: 221b049
Enter the name: Alok Yadav
Enter the enrolment number: 221b050
Enter the name: Alokik Sharma
Enter the enrolment number: 221b054
Enter the name: Aman Singh
Enter the enrolment number: 221b056
Enter the name: Aman SIngh Rawat
Enter the enrolment number to be searched: 221b056
 Enrolment id= 221b56 and name of the student is Aman SIngh Rawat
```