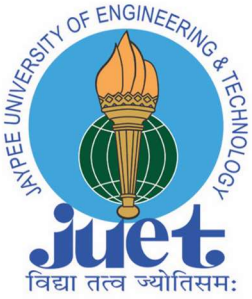
Jaypee University of Engineering and Technology, Guna



[LAB ACTIVITY 3]

Advance Programming Lab

(18B1C1373)

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Lab Exercise 3

1. Read elements into a list and show output by printing each element.

Sample Input	Expected Output
1,5,7,8,3.14, 4, 5	1 5 7 8 3.14 4 5
1,[2,3],4,5,6	1 2 3 4 5 6
1,2,[3,4,5],[6,7]	1 2 3 4 5 6 7
[(1,2,3)]	1 2 3

Solution:

```
def print_element(_list):
    for ele in _list:
        if type(ele) == list or type(ele) == tuple:
            print_element(ele)
        else:
            print(ele, end=' ')


print_element([1, 5, 7, 8, 3.14, 4, 5])
print()
print_element([1, [2, 3], 4, 5, 6])
print()
print_element([1, 2, [3, 4, 5], [6, 7]])
print()
print_element([(1, 2, 3)])
```

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
```

2. 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.

Sample Input	Expected Output
[1,1,5,100,-20,-20,6,0,0]	3
[10,20,30,40,30,20]	0
[1,2,2,3,4,4,4,10]	3

Solution:

```
lst = []
count=0
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    lst.append(ele)
for i in range(0,n-1):
    if lst[i]==lst[i+1]:
      count=count+1

print(lst)
print(count)
```

Output:

```
Enter number of elements : 8
1
2
2
3
4
4
4
10
[1, 2, 2, 3, 4, 4, 4, 10]
3
```

3. 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.

Solution:

```
lst = []
count=0
n = int(input("Enter number of elements : "))
for i in range(0, n):
    ele = int(input())
    lst.append(ele)

print(lst)
max = lst[0];
min = lst[0];
for i in range(0, len(lst)):
  if(lst[i] > max):
    max = lst[i];
  if(lst[i] <min):
    min = lst[i];
print("least value = ",min)
print("max value = ",max)
for i in range(0, len(lst)):
  if(lst[i]==max):
    least_index=i
  if(lst[i]==min):
    max_index=i
lst[least_index]=min
lst[max_index]=max
print(lst)
```

Output:

```
Enter number of elements : 5
10
20
30
40
50
[10, 20, 30, 40, 50]
least value =  10
max value =  50
[50, 20, 30, 40, 10]
```

4. Read two lists enrol and name from the user of 10 elements. The list enrol contains enrolment numbers and list name contain 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.

Solution:

```
enrol=[]
name=[]
for i in range(10):
    enrol.append(int(input('Enter Enrol Number : ')))
    name.append(input('Enter Name : '))
k=int(input('Enter Enrol Number to search : '))
flag=0
for i in range(len(enrol)):
    if k==enrol[i]:
        print('Name : ',name[i],'Enrol : ',enrol[i])
        flag=1
if flag==0:
    print('-1')
```

Output:

```
Enter Enrol Number : 11
Enter Name : Apple
Enter Enrol Number : 2
Enter Name : Ball
Enter Enrol Number : 3
Enter Name : Cat
Enter Enrol Number : 4
Enter Name : Dog
Enter Enrol Number : 5
Enter Name : Elephant
Enter Enrol Number : 6
Enter Name : Fish
Enter Enrol Number : 7
Enter Name : Grapes
Enter Enrol Number : 8
Enter Name : House
Enter Enrol Number : 9
Enter Name : Icecream
Enter Enrol Number : 10
Enter Name : Joker
Enter Enrol Number to search : 9
Name :  Icecream Enrol :  9
```