```python
# 1 sum of a list
a=[1,3,4,5,23,5,7]
```

```python
sum=0
for i in a:
    sum=sum+i
print("sum of this list a is = ",sum)
```

```
sum of this list a is =  48
```

```python
# 2 largest number from a list
a=[1,3,4,34,23,45]
```

```python
print("largest number in the list = ",max(a))
```

```
largest number in the list =  45
```

```python
# 3 program to count string with first and last charctrs are same
a = ['abc', 'xyz', 'aba', '1221']
c = 0
for i in a:
    f = i[0:1]
    l = i[(len(i)-1):len(i)]
    if f == l:
        c= c + 1

print("Result = ",c)
```

```
Result =  2
```

```python
# 4 remove duplicates from the list
a=[1,2,2,3,7,7,6,44,44,8,7,6,]
s=[]
for i in a:
    if i not in s:
        s.append(i)
print(a)
print("new list with out duplicates = ",s)
```

```
[1, 2, 2, 3, 7, 7, 6, 44, 44, 8, 7, 6]
new list with out duplicates =  [1, 2, 3, 7, 6, 44, 8]
```

```python
# 5 check the list empty or not
a=[]


if not a:
    print("The list is empty")
else:
    print("The list has values")
```

```
The list is empty
```

```python
# 6 filter list with less than 4 characters
a=['abc','xyz','aba','1221']
for i in a:
    if len(i)<4:
        print(i)
```

```
abc
xyz
aba
```

```python
# 7 find the second largest number from a list
w=[23,34,56,67,45,31,48,96]
w.sort()
w[-2]
```

```
67
```

```python
# 8 reverse the list at specific location
a=[23,43,55,4,66,56,2,1,78]
n=int(input("enter the position = "))
a[n::-1]
```

```
enter the position = 3

[4, 55, 43, 23]
```

```python
# 9 check the list is palindrome or not
list=[1,2,3,5,3,2,6]
rvrse=list[::-1]
if rvrse==list:
    print("true")
else:
    print("false")
```

```
false
```

```python
# 10 union and intersection of two sets
list1=[2,3,6,7,98,45]
list2=[4,6,5,2,3,76,89]
union=list1+list2
intersection=[i for i in list1 if i in list2]
print("union of list is = ",union)
print("intersection of list is = ",intersection)
```

```
union of list is =  [2, 3, 6, 7, 98, 45, 4, 6, 5, 2, 3, 76, 89]
intersection of list is =  [2, 3, 6]
```

```
# 11 sorting a dictionary by values
# accending order
dict ={'z':7,'r':4,'k':3,'q':5,'j':9}
a=sorted([(k,v)for k,v in dict.items()])
a
```

```
[('j', 9), ('k', 3), ('q', 5), ('r', 4), ('z', 7)]
```

```
# decending order
d=a[::-1]
d
```

```
[('z', 7), ('r', 4), ('q', 5), ('k', 3), ('j', 9)]
```

```
# 12 python script for whether the key is existing or not
a={'r':3,'t':4,'f':9,'d':6}
n=input("enter your key = ")
if n in a:
    print("yes")
else:
    print("NO")
```

```
enter your key = a
NO
```

```
# 13 sum all values in dictionary
d={'w':3,'e':5,'t':8,'g':7}
sum=sum(d.values())
sum
```

```
23
```

```
# 14 create dictionary with square values
n=int(input("enter your limit = "))
d={i:i**2 for i in range (1,n+1) if n<10}
print(d)
```

```
d={i:i**2 for i in range (1,n+1) if n<10}
print(d)
```

```
enter your limit = 5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

```
# 15 sort a given dictionary by its key
a={'white':4,'blue':8,'grey':9,'orange':2,'berry':3}
l=sorted(i for i in a.keys())
l
```

```
['berry', 'blue', 'grey', 'orange', 'white']
```

```
# 16 create a dictionary from string
a="ASMABLAISY"
d={i:a.count(i)for i in a}
d
```

```
{'A': 3, 'S': 2, 'M': 1, 'B': 1, 'L': 1, 'I': 1, 'Y': 1}
```

```
# 17 program for get top 3 items in a shop
d={'pant':2500,'shirt':1000,'kurta':1500,'tshirt':500,'jeans':800}
a=d.values()
b=sorted(a,reverse=True)
for i in range(0,3):
    for j in d:
        if b[i]==d[j]:
            print(j,':',b[i])
```

```
pant : 2500
kurta : 1500
shirt : 1000
```