*#program -16-assignment*"""a Python program to generate and print a list of first and last 5 elements   
where the values are square of numbers between 1 and 30 (both included)."""  
def values():  
 l = list()  
 for i in range(1,30):  
 l.append(i\*\*2)  
 print(l[:5])  
 print(l[-5:])  
values()  
  
  
*#program-17 -assignment*"""a Python program to generate and print a list except for the first 5 elements,   
where the values are square of numbers between 1 and 30 (both included)"""  
def printvalues():  
 l = list()  
 for i in range(1,30):  
 l.append(i\*\*2)  
 print(l[5:15])  
printvalues()  
  
*#program-18  
#Write a Python program to sum all the items in a list*newlist=[]  
k=int(input("enter the number of elements in list"))  
for i in range(1,k):  
 newlist1= int(input("enter the elements one by one"))  
 newlist.append(newlist1)  
print(sum(newlist))  
  
*#program-19  
# Write a Python program to get the largest number from a list.*newlist=[]  
k=int(input("enter the number of elements in list"))  
for i in range(0,k):  
 newlist1= int(input("enter the elements one by one"))  
 newlist.append(newlist1)  
print("given elements" ,newlist)  
print(max(newlist))

*#program\_20  
#Write a Python program to get the smallest number from a list*newlist=[]  
k=int(input("enter the number of elements in list"))  
for i in range(0,k):  
 newlist1= int(input("enter the elements one by one"))  
 newlist.append(newlist1)  
print("given elements" ,newlist)  
print("Smallest element in the list" ,min(newlist))  
  
*#program=21  
# a Python program to count the number of strings  
# where the string length is 2 or more and the first and last character are same from a given list of strings*"""a Python program to count the number of strings  
where the string length is 2 or more and the first and last character are same from a given  
list of strings"""  
str=input("enter a string ")  
k=len(str)  
print("length of the string", k)  
for i in range(1,k):  
 if (k >=2 and str[0]==str[k-1]):  
 break  
print("string is ", str)  
  
*#progrma -22*"""a Python program to get a list, sorted in increasing order by the   
last element in each tuple from a given list of non-empty tuples"""  
  
newlist = [(2,1),(3,3),(1,2),(2,4)]  
print("GIven list ", newlist)  
def printitem(n):return n[-1]  
tuple1= newlist  
print("sorted list" , sorted(tuple1,key=printitem))  
  
*#Write a Python program to remove duplicates from a list.*newlist = [1,3,3,7,74,5,1,9,9]  
print("Given list", newlist)  
newset=set()  
list2=list()  
for x in newlist:  
 if x not in newset:  
 newlist.append(x)  
 newset.add(x)  
print("List without duplicates", newset)  
  
*#Write a Python program to check a list is empty or not*x=input("Enter the elements separated by comma: ")  
  
if x:  
 print("list is full")  
else:  
 print("empty")  
  
*#Write a Python program to clone or copy a list.*list1=[1,2,3,4,5]  
list2=[list1]  
print("original list", list1)  
print("cloning list",list2)  
  
*#Write a Python program to find the list of words that are  
# longer than n from a given list of words.*str=input("Enter the string ")  
n=int(input("Enter the number of characters "))  
b = []  
b=str.split(" ")  
for x in str:  
 if len(x) > n:  
 b.append(x)  
print(b)

Output:

[1, 4, 9, 16, 25]

[625, 676, 729, 784, 841]

[36, 49, 64, 81, 100, 121, 144, 169, 196, 225]

enter the number of elements in list4

enter the elements one by one23

enter the elements one by one15

enter the elements one by one14

enter the elements one by one26

78

enter a string god

length of the string 3

string is god

GIven list [(2, 1), (3, 3), (1, 2), (2, 4)]

sorted list [(2, 1), (1, 2), (3, 3), (2, 4)]

Given list [1, 3, 3, 7, 74, 5, 1, 9, 9]

List without duplicates {1, 3, 5, 7, 9, 74}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Enter the elements separated by comma: 4,1,2,1

list is full

original list [1, 2, 3, 4, 5]

cloning list [[1, 2, 3, 4, 5]]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Enter the string the brown fox jump over the lazy dog

Enter the number of characters 2

['the', 'brown', 'fox', 'jump', 'over', 'the', 'lazy', 'dog']