1.

mylist = [1,4,2,5,7,8,9]

mylist.insert(4,99) #a

print(mylist) #b

mylist.remove(4) #c

print(mylist)

mylist.append(20) #d

print(mylist)

mylist.sort() #e

print(mylist)

mylist.pop() #f

print(mylist)

mylist.reverse() #g

print(mylist)

2.

import random

mylist = []

n = int(input("Enter the number of elements:\n"))

for num in range(n):

ran = random.randint(0,20000)

mylist.append(ran)

print(mylist)

e = int(input("Ener the element you wanna search for..."))

flag = 0

for i in range(len(mylist)):

if e==mylist[i]:

flag += 1

print("Element found in position ",i)

break

if flag ==0:

print("Element not found")

3.

import random

mylist = []

n = int(input("Enter the number of elements:\n"))

for num in range(n):

ran = random.randint(0,20000)

mylist.append(ran)

print(mylist)

e = int(input("Ener the element you wanna search for..."))

flag = 0

l = len(mylist)

mylist.sort()

lp = 0

up = l-1

while(lp<=up):

mid = (lp+up)//2

if e==mylist[mid]:

flag += 1

print("Element was found")

break

elif e<mylist[mid]:

up = mid-1

else:

lp = mid+1

if flag == 0:

print("Element not found")

4.

n = int(input("How many values do you want to enter??\n"))

mylist = []

for i in range(n):

e = int(input("Enter value... "))

mylist.append(e)

print(mylist)

flag = 0

maxp = 0

for j in range(n):

p = 0

for prime in range(2,mylist[j]):

if mylist[j]%prime==0:

p += 1

break

if p==0:

if maxp<=mylist[j]:

maxp = mylist[j]

if maxp==0:

print("There was no prime number")

else:

print("The largest prime number is : ",maxp)

5.

mylist = []

n = int(input("Enter the number of elements:\n"))

for num in range(n):

mylist.append(int(input("Input element: ")))

for i in range(len(mylist)):

#swap = 0

for j in range(len(mylist)-1-i):

if mylist[j] > mylist[j+1]:

temp = mylist[j]

mylist[j] = mylist[j+1]

mylist[j+1] = temp

swap = 1

#if swap==0:

# break

print(mylist)

6.

mylist = []

n = int(input("Enter the number of elements:\n"))

for num in range(n):

mylist.append(int(input("Input element: ")))

for i in range(1,n):

temp = mylist[i]

j = i-1

while(j>=0 and temp < mylist[j]):

mylist[j+1] = mylist[j]

j = j-1

mylist[j+1] = temp

print(mylist)

7.

mylist = []

n = int(input("Enter the number of elements:\n"))

for num in range(n):

mylist.append(int(input("Input element: ")))

mylist = list(dict.fromkeys(mylist))

print(mylist)

8.

student = []

n = int(input("Enter the number of Students whose info you wanna store:\n"))

for num in range(n):

indiv\_Student = []

print("Please Enter the data for Student Number: ",num+1)

student\_name = input("Enter Student's Name: ")

indiv\_Student.append(student\_name)

roll\_number = int(input("Enter Student's Roll No.: "))

indiv\_Student.append(roll\_number)

avg\_marks = float(input("Enter Student's Average Marks: "))

indiv\_Student.append(avg\_marks)

student.append(indiv\_Student)

print(student)

9. Challenge Question…

i = int(input("Enter the starting day number(it should be between 1 and j) :\n"))

j = int(input("Enter the ending day number(it should be between i and 2x10^6) :\n"))

k = int(input("Enter the divisor(it should be between 1 and 2x10^9) :\n"))

nobd = 0 #number of beautiful days

if (i>=1 and i<=j) and (j<=(2\*(10\*\*6))) and (k>=1 and k<=(2\*(10\*\*9))):

for num in range(i,j+1):

rev =0

t = num

while(t!=0):

digit = t%10

rev = rev\*10 + digit

t = t//10

if rev>num:

out = (rev-num)/k

elif num>rev:

out = (num-rev)/k

else:

out = 0

if ((out\*10)%10)==0:

nobd += 1

print(nobd)

else:

print("Some values among i, j or k might not follow the given condition")