A=[]

m=int(input("Enter the no of students who attending the training prg:"))

for i in range(m):

roll=int(input("Enter the roll no of students"))

A.append(roll)

def linearsearch(A):

while(1):

key=int(input("Enter the roll no for search:"))

flag=0

for i in A:

if key==i:

flag=1

break

if flag==1:

print("student present for the training prg")

else:

print("student absent for taining prg")

ch1=int(input("Do you want to continue same searching algorithm Press 1 for YES and 0 for NO"))

if ch1!=1:

break

def sentinelsearch(A):

while(1):

key=int(input("Enter the roll no for search:"))

A.append(key)

i=0

while A[i]!=key:

i+=1

if i<m:

print("student present for the training prg")

else:

print("student absent for taining prg")

ch1=int(input("Do you want to continue same searching algorithm Press 1 for YES and 0 for NO"))

if ch1!=1:

break

def binarysearch(A,low,high):

key=int(input("Enter the roll no for search:"))

while(1):

A.sort()

global flag

flag=0

if high>=low:

mid=(high+low)//2

if A[mid]==key:

flag=1

break

elif A[mid]<key:

binarysearch(A,mid+1,high)

elif A[mid]>key:

binarysearch(A,low,mid-1)

if flag==1:

print("students are present for training prg")

else:

print("students are not present for training prg")

ch1=int(input("Do you want to continue same searching algorithm Press 1 for YES and 0 for NO"))

if ch1!=1:

break

def fibonacci(A):

key=int(input("Enter the roll no for search:"))

while(1):

f2=0

f1=1

f=1

while f>m:

f2=f1

f1=f

f=f2+f1

offset=-1

i=0

while f>1:

i=min(offset+f2,m-1)

if key>A[i]:

f=f1

f1=f2

f2=f-f1

offset=i

elif key<A[i]:

f=f2

f1=f1-f2

f2=f-f1

else:

print("Student present for the training prg")

break

else:

print("student absent for training prg")

ch1=int(input("Do you want to continue same searching algorithm Press 1 for YES and 0 for NO"))

if ch1!=1:

break

while(1):

print("1.Linear search\n 2.sentinel search \n3.binary search \n4.fibonacci search\n5.Exit Search")

ch=int(input("Enter your choice:"))

if ch==1:

linearsearch(A)

elif ch==2:

sentinelsearch(A)

elif ch==3:

binarysearch(A,0,m-1)

elif ch==4:

fibonacci(A)

elif ch==5:

break