Group B - Assignment 11 a

a) Write a pythonprogram to store roll numbers of student in array who

attended training program in random order. Write function for searching

whether particular student attended training program or not,

using Linear search and Sentinel search.

"""

def accept\_array(A):

n = int(input("Enter the total no. of student : "))

for i in range(n):

x = int(input("Enter the roll no of student %d : "%(i+1)))

A.append(x)

print("Student Info accepted successfully\n\n")

return n

def display\_array(A,n):

if(n == 0) :

print("\nNo records in the database")

else :

print("Students Array : ",end=' ')

for i in range(n) :

print("%d "%A[i],end=' ')

print("\n");

def Linear\_Search(A,n,X) :

for i in range(n) :

if(A[i] == X) :

return i # found so returning the position i.e index

return -1 # Not found

def Sentinel\_Search(A,n,X) :

last = A[n-1]

i = 0

A[n-1] = X # Here X is the roll\_no to be searched.

while(A[i] != X) :

i = i +1

A[n-1] = last

if( (i < n-1) or (X == A[n-1]) ) :

return i #roll\_no found at location i

else :

return -1 # roll\_no not found"

def Main() :

A = []

while True :

print ("\t1 : Accept & Display Students info ")

print ("\t2 : Linear Search")

print ("\t3 : Sentinel Search")

print ("\t4 : Exit")

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

if (ch == 4):

print ("End of Program")

quit()

elif (ch==1):

A = []

n = accept\_array(A)

display\_array(A,n)

elif (ch==2):

X = int(input("Enter the roll\_no to be searched : "))

flag = Linear\_Search(A,n,X)

if(flag == -1) :

print("\tRoll no to be Searched not Found\n")

else :

print("\tRoll no found at location %d"%(flag + 1))

elif (ch==3):

X = int(input("Enter the roll\_no to be searched : "))

flag = Sentinel\_Search(A,n,X)

if(flag == -1) :

print("\tRoll no to be Searched not Found\n")

else :

print("\tRoll no found at location %d"%(flag + 1))

else :

print ("Wrong choice entered !! Try again")

Main()