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Assignment no. 4. a)

Write a python program 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.

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def display\_output(array, num):

if num == 0:

print("NO records found in the database.")

else:

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

for i in range(num):

print(f"{array[i]}", end=' ')

print()

def linear\_search(array, key):

for i in range(len(array)):

if array[i] == key:

return i

return -1

def sentinel\_search(array, key ):

i = 0

while i < len(arr):

if arr[i] == key:

return i

i += 1

return -1

print("1. Linear Search")

print("2. Sentinel Search")

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

if a == 1:

arr = []

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

for i in range(number):

x = int(input(f"Enter the Roll no. of student {i + 1}: "))

arr.append(x)

key = int(input("Enter the Roll no. to be searched: "))

print("=========== Linear Search =============")

flag = linear\_search(arr, key)

if flag == -1:

print("Searched Roll no. not found.")

else:

print("Searched Roll no. found at location: ", (flag + 1))

elif a == 2:

arr = []

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

for i in range(number):

x = int(input(f"Enter the Roll no. of student {i + 1}: "))

arr.append(x)

key = int(input("Enter the Roll no. to be searched: "))

print("=========== Sentinel Search =============")

flag = sentinel\_search(arr, key)

if flag == -1:

print("Searched Roll no. not found.")

else:

print("Searched Roll no. found at location: ", (flag + 1))