

Week 5 Programming Assignment

Question 1

```
list_temp = input()
temp = list_temp.split()
my_list = [eval(i) for i in temp]

num = int(input())

l = 0
h = len(my_list)-1

found = False

while(l < h):
    m = (l+h)//2
    if my_list[m] > num:
        h = m-1
    elif my_list[m] < num:
        l = m+1
    else:
        found = True
        break

if found == True:
    print(m)
else:
    print(-1)
```

Question 2:

```
l1 = input().split()
list1 = [eval(i) for i in l1]
l2 = input().split()
list2 = [eval(i) for i in l2]

new_list = []

i = 0
j = 0

while i < len(list1) and j < len(list2):
    if list1[i] < list2[j]:
        new_list.append(list1[i])
        #print(list1[i])
        i+=1
    elif list1[i] > list2[j]:
        new_list.append(list2[j])
        #print(list2[j])
        j+=1
    elif list1[i] == list2[j]:
```

```

        #print(list2[j])
        new_list.append(list1[i])
        new_list.append(list2[j])
        i+=1
        j+=1

while i < len(list1):
    new_list.append(list1[i])
    i+=1

while j < len(list2):
    new_list.append(list2[j])
    j+=1

for k in new_list:
    print(k,end=" ")

```

Question 3

```

l1 = input().split()
mylist = [eval(i) for i in l1]

mylist.sort()

k = int(input())

if len(mylist)%2 != 0 and k-1 == len(mylist)//2:
    print(1)
elif mylist[k+1] == mylist[-k]:
    print(-1)
else:
    print(0)

```