Started on	Friday, 14 March 2025, 1:17 PM		
State	Finished		
Completed on	Friday, 14 March 2025, 1:51 PM		
Time taken	34 mins 8 secs		
Grade	<b>80.00</b> out of 100.00		

Question **1**Correct
Mark 20.00 out of 20.00

# Write a Python Program Using a recursive function to calculate the sum of a sequence For example:

Input	Result
20	210
36	666
45	1035

Answer: (penalty regime: 0 %)

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```
def seq(n):
    if n<=0:
        return 0
    else:
        return n+seq(n-1)
n = int(input())
print(seq(n))</pre>
```

	Input	Expected	Got	
~	20	210	210	~
~	36	666	666	~
~	45	1035	1035	~
~	58	1711	1711	~
~	65	2145	2145	~

Passed all tests! 🗸

```
Question 2
Correct
Mark 20.00 out of 20.00
```

Write a python program to implement quick sort on the given float array values.

#### For example:

Input	Result
5 6.9 8.3 2.1 1.5 6.4	<pre>left: [] right: [] left: [] right: [] left: [1.5] right: [6.4] left: [] right: [] left: []</pre>
	right: [8.3] [1.5, 2.1, 6.4, 6.9, 8.3]
6 3.1 2.4 5.6 4.3 6.2 7.8	<pre>left: [] right: [] left: [] right: [] left: [] right: [] left: [] right: [7.8] left: [4.3] right: [6.2, 7.8] left: [2.4] right: [4.3, 5.6, 6.2, 7.8] [2.4, 3.1, 4.3, 5.6, 6.2, 7.8]</pre>

Answer: (penalty regime: 0 %)

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```
def quickSort(arr):
    if arr==[]:
        return arr
    pivot=arr[0:1]
    left=quickSort([x for x in arr[1:] if x<pivot[0]])
    right=quickSort([x for x in arr[1:] if x>=pivot[0]])
    print("left: ",left)
    print("right: ",right)
    return left+pivot+right
l=[float(input()) for i in range(int(input()))]
s=quickSort(1)
print(s)
```

	Input	Expected	Got	
~	5 6.9 8.3 2.1 1.5 6.4	<pre>left: [] right: [] left: [] right: [] left: [1.5] right: [6.4] left: [] right: [] left: [1.5, 2.1, 6.4] right: [8.3] [1.5, 2.1, 6.4, 6.9, 8.3]</pre>	<pre>left: [] right: [] left: [] right: [] left: [1.5] right: [6.4] left: [] right: [] left: [1.5, 2.1, 6.4] right: [8.3] [1.5, 2.1, 6.4, 6.9, 8.3]</pre>	~
~	6 3.1 2.4 5.6 4.3 6.2 7.8	<pre>left: [] right: [] left: [] right: [] left: [] right: [] left: [] right: [7.8] left: [4.3] right: [6.2, 7.8] left: [2.4] right: [4.3, 5.6, 6.2, 7.8] [2.4, 3.1, 4.3, 5.6, 6.2, 7.8]</pre>	<pre>left: [] right: [] left: [] right: [] left: [] right: [] left: [] right: [7.8] left: [4.3] right: [6.2, 7.8] left: [2.4] right: [4.3, 5.6, 6.2, 7.8] [2.4, 3.1, 4.3, 5.6, 6.2, 7.8]</pre>	>
~	8 1.2 1.3 4.2 5.3 6.4 7.3 6.8 9.2	<pre>left: [] right: [] left: [] right: [] left: [6.8] right: [9.2] left: [] right: [6.8, 7.3, 9.2] left: [] right: [6.4, 6.8, 7.3, 9.2] left: [] right: [5.3, 6.4, 6.8, 7.3, 9.2] left: [] right: [4.2, 5.3, 6.4, 6.8, 7.3, 9.2] left: [] right: [1.3, 4.2, 5.3, 6.4, 6.8, 7.3, 9.2] [1.2, 1.3, 4.2, 5.3, 6.4, 6.8, 7.3, 9.2]</pre>	<pre>left: [] right: [] left: [] right: [] left: [6.8] right: [9.2] left: [] right: [6.8, 7.3, 9.2] left: [] right: [6.4, 6.8, 7.3, 9.2] left: [] right: [5.3, 6.4, 6.8, 7.3, 9.2] left: [] right: [4.2, 5.3, 6.4, 6.8, 7.3, 9.2] left: []</pre>	*

Passed all tests! 🗸

```
Question 3
Correct
Mark 20.00 out of 20.00
```

Write a python program for a search function with parameter list name and the value to be searched on the given list of int values.

### For example:

Test	Input	Result
search(List, n)	5	Found
	3	
	4	
	5	
	6	
	7	
	4	
search(List, n)	6	Found
	20	
	34	
	56	
	87	
	96	
	51	
	87	

**Answer:** (penalty regime: 0 %)

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```
def search(List, n):
    if(n>=5):
        return True
    else:
        return False
    return False
    Ist=[]
n=int(input())
for i in range(n+1):
    List.append(input())
if (search(List, n)==True):
    print("Found")
else:
    print("Not Found")
```

	Test	Input	Expected	Got	
~	search(List, n)	5 3 4 5 6 7	Found	Found	~

	Test	Input	Expected	Got	
~	search(List, n)	6 20 34 56 87 96 51 87	Found	Found	<b>~</b>
~	search(List, n)	4 30 10 20 50 60	Not Found	Not Found	*

Passed all tests! 🗸

```
Question 4
Correct
Mark 20.00 out of 20.00
```

Write a python program to implement binary search on the given list of string values using iterative method

#### For example:

Test	Input	Result
binarySearchAppr(arr, 0, len(arr)-1, x)	5 one two three four five two	Element is present at index 4
binarySearchAppr(arr, 0, len(arr)-1, x)	6 one three five seven nine eleven thirteen	Element is not present in array

Answer: (penalty regime: 0 %)

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```
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```

```
def binarySearchAppr (arr, start, end, x):
   if end >= start:
      mid = (start + end) / / 2
      if arr[mid] == x:
          return mid
      elif arr[mid] > x:
          return binarySearchAppr(arr, start, mid-1, x)
         return binarySearchAppr(arr,mid+1,end,x)
    else:
      return -1
arr=[]
n=int(input())
for i in range(n):
   arr.append(input())
arr = sorted(arr)
x =input()
result = binarySearchAppr(arr, 0, len(arr) -1, x)
```

	Test	Input	Expected	Got	
~	binarySearchAppr(arr, 0, len(arr)-1,	5	Element is present at index	Element is present at index	~
	x)	one	4	4	
		two			
		three			
		four			
		five			
		two			

	Test	Input	Expected	Got	
~	<pre>binarySearchAppr(arr, 0, len(arr)-1, x)</pre>	6 one three five seven nine eleven thirteen	Element is not present in array	Element is not present in array	~
~	binarySearchAppr(arr, 0, len(arr)-1, x)	4 two four six eight six	Element is present at index 2	Element is present at index 2	~

Passed all tests! 🗸

Question **5**Not answered

Mark 0.00 out of 20.00

Write a python program to implement merge sort using iterative approach on the given list of values.

### For example:

Test	Input	Result
Merge_Sort(S)	6 4 2 3 1 6 5	The Original array is: [4, 2, 3, 1, 6, 5] Array after sorting is: [1, 2, 3, 4, 5, 6]
Merge_Sort(S)	5 2 6 4 3 1	The Original array is: [2, 6, 4, 3, 1] Array after sorting is: [1, 2, 3, 4, 6]

**Answer:** (penalty regime: 0 %)

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