Started on	Saturday, 26 April 2025, 10:02 AM
State	Finished
Completed on	Saturday, 26 April 2025, 2:55 PM
Time taken	4 hours 53 mins
Overdue	2 hours 53 mins
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 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 %)

```
            j += 1
        k += 1

    while i < n1:
        S[k] = L[i]
        i += 1
        k += 1

    while j < n2:
        S[k] = R[j]
        j += 1
        k += 1

n = int(input())
S = []
for i in range(n):
    element = eval(input())
    S.append(element)

print("The Original array is: ", S)
Merge_Sort(S)
print("Array after sorting is: ", S)
```

	Test	Input	Expected	Got	
✔	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]	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]	The Original array is: [2, 6, 4, 3, 1] Array after sorting is: [1, 2, 3, 4, 6]	✔

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

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Not answered

Mark 0.00 out of 20.00

Write a python program to implement linear search on the given tuple of string values.

note: As the tuple is immutable convert the list to tuple to perform search

For example:

Input	Result
5 ram john akbar seetha oviya john	Tuple: john found
4 rohini fathima jenifer nizam rakesh	Tuple: rakesh not found

Answer: (penalty regime: 0 %)

```
1
```

Question **3**

Correct

Mark 20.00 out of 20.00

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

For example:

Test	Input	Result
`binarySearchAppr(arr, 0, len(arr)-1, x)`	5 3.2 6.1 4.5 9.6 8.3 6.1	Element is present at index 2
`binarySearchAppr(arr, 0, len(arr)-1, x)`	6 3.1 2.3 5.1 4.6 3.2 9.5 4.6	Element is present at index 3

Answer: (penalty regime: 0 %)

```
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)
        else:
            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)
if result != -1:
   print ("Element is present at index "+str(result))
else:
   print ("Element is not present in array")
```

	Test	Input	Expected	Got	
✔	`binarySearchAppr(arr, 0, len(arr)-1, x)`	5 3.2 6.1 4.5 9.6 8.3 6.1	Element is present at index 2	Element is present at index 2	✔
✔	`binarySearchAppr(arr, 0, len(arr)-1, x)`	6 3.1 2.3 5.1 4.6 3.2 9.5 4.6	Element is present at index 3	Element is present at index 3	✔

	Test	Input	Expected	Got	
✔	binarySearchAppr(arr, 0, len(arr)-1, x)	8 2.1 6.3 5.2 4.2 9.3 6.7 5.6 9.8 7.2	Element is not present in array	Element is not present in array	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

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	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]
6 3.1 2.4 5.6 4.3 6.2 7.8	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]

Answer: (penalty regime: 0 %)

```
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(l)
print(s)
```

	Input	Expected	Got	
✔	5 6.9 8.3 2.1 1.5 6.4	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]	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]	✔
✔	6 3.1 2.4 5.6 4.3 6.2 7.8	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]	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]	✔
✔	8 1.2 1.3 4.2 5.3 6.4 7.3 6.8 9.2	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]	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]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write a Python Program to print factorial of a number recursively.

For example:

Input	Result
5	Factorial of number 5 = 120
6	Factorial of number 6 = 720

Answer: (penalty regime: 0 %)

```
def Factorial(n):
    if n==0 or n==1:
        return 1
    else:
        return n * Factorial(n-1)
n=int(input())

print("Factorial of number",n,"=",Factorial(n));
```

	Input	Expected	Got	
✔	5	Factorial of number 5 = 120	Factorial of number 5 = 120	✔
✔	6	Factorial of number 6 = 720	Factorial of number 6 = 720	✔
✔	7	Factorial of number 7 = 5040	Factorial of number 7 = 5040	✔
✔	8	Factorial of number 8 = 40320	Factorial of number 8 = 40320	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.