INPUT:

Input an integer n, and then input n numbers.
Input an integer m, which means there are m querys.

OUTPUT:

For each query, output the rank of number.

Binary Search Pseudo code:

```
1:  n ← INPUT                                          ▷ Input n
2:  for i ← 0 to n − 1 do                              ▷ Input n sorted numbers
3:      A[i] ← INPUT
4:  end for
5:
6:  m ← INPUT                                          ▷ Input m, means m querys
7:  for i in 1 to m do                                 ▷ Input m numbers
8:      x ← INPUT
9:      i ← 0                                          ▷ Initialize i and j
10:     j ← n
11:     mid ← (i + j)/2                                ▷ Find middle position
12:     while i < j do
13:         mid ← (i + j)/2
14:         if x < A[mid] then                         ▷ x is smaller than middle number
15:             j ← mid                                ▷ update j
16:         else
17:             if x > A[mid] then                     ▷ x is bigger than middle number
18:                 i ← mid                            ▷ update i
19:             else
20:                 break
21:             end if
22:         end if
23:     end while
24: end for
25: OUTPUT ← mid                                       ▷ Output mid
```