Binary Search

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[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
11	22	33	44	55	66	77	88	99

left mid Right

1) Key = 33.

2) L = 0
R = 8
M = 4.

3) 33 == arr[mid].
if no, go to Step 4.

4) Check if key is greater or smaller.
as 33 is smaller, consider LSA.

left subarray

[0]	[1]	[2]	[3]
11	22	33	44

left mid Right

② L = 0
R = 3
m = (0+3)/2
m = 1

③ 33 == arr[mid]
as key is not matching mid element, go to Step 4.

④ check 33 is greater to mid element, hence go to RSA.

RSA is from mid+1 to right

RSA.

[2]	[3]
33	44

left Right
mid.

② L = (mid+1) = 2.
R = 3
M = (2+3)/2
= 2

33 == arr[mid]
key found at index 2.

left subarray.
left index is same = 0.
Right index is mid -1.

Right subarray.
Right index remains the same = (SIZE-1)
left index is mid +1