

Binary Search - Pre-requisite - Sorted array

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Key = 88

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

left

Left sub array

mid

Right sub array

right

Left = 0

Right = 8

Mid = (left+right)/2
= (0+8) / 2 = 4

If(88 == 55) -> no
88 is greater than 55

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

Mid = (left+right)/2
= (5+8)/2 = 6

[5]	[6]	[7]	[8]
66	77	88	99

left

Mid

right

Check if key is smaller to
element at mid
Or greater to the
element at mid

If(88 == 77) no
88 is greater than 77

Continue the search
in the right subarray

[5]
66

[7]	[8]
88	99

left
mid

right

If key is smaller to the element at mid
Narrow your search in the left sub array
For left sub array -> left remains the same - index 0
Right = mid -1

Key is found at
mid -7

If key is greater than the element at mid,
Narrow your search to the right sub array
For right sub array -> right remains the same -> size -1
Left = mid + 1