Binary Search - Divide and conquer technique   Pre-requisite : Sorted Array

28 October 2023   16:36

Key = 77

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

left   left Subarray   mid.   Right Subarray.   Right

① Get the key.

LSA

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

RSA

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

left mid.   Right

② left = 0
Right = 8
mid = $\frac{(L+R)}{2}$

mid = 4.

⭐ 77 == 77.

key found at index 6.

③ Compare the key with element at mid.
77 == 55. ⭐
if not matching, go to Step 4.

④ check if key is smaller or greater to mid Element.

if key is smaller, continue the search in left sub array
Else, search in Right sub array.