01 December 2025 21:20

Key = 33

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

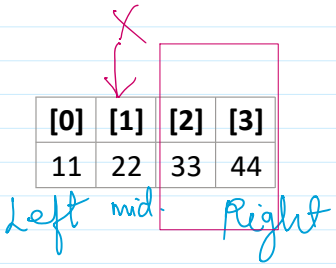
Left mid Right.

1) Get the key from the user.

2) Divide the array into half.
   Left : 0
   Right : 8
   Mid : (left + right) / 2
   (0+8) / 2
   4

3) Compare the key with the element at mid.
   If(key == arr[mid]
   Return the index,
   Else go to step 4

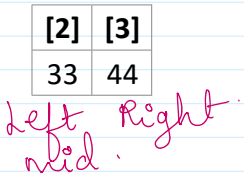
4) Check if the key is smaller to mid element or greater.
   Asa the key 33 is smaller, we will continue the search in the left sub-array.



2) Left : 0
   Right : mid-1 : 4-1 : 3
   Mid : (0+3) / 2
   1

3)Compare the key with the mid element.
If(key == arr[mid])
33 == 22 ? No

4) As 33 is greater to 22, we will continue our search in RSA



2) Left : mid + 1 : 1+1 : 2
   Right : 3
   Mid : (2+3) /2
   2

3) Compare the key with the mid element.
   If(key == arr[mid])

   If(33 == 33)
   Yes , key found at index 2