

left

mid

right

- ```
1) Key = 10
2) Left = 0
 Right = 8
 Mid = 4
```

Left

mid

right

- Left sub array :

- ```

2) Left = 0
   Right = mid-1
       4-1 = 3
   Mid = (0+3)/2
       = 1
3) Compare : 10 == arr[1]
   10 == 22 ? No
4) Check : consider left au

```

Left

Right
mid

- Left sub array:

- 2) Left= 0
Right = mid -1 =
= 1-1 =0
Mid = (0+0)/2
= 0
- 3) Compare : 10 == arr[0]
10 == 11 ? No

- 4) Check : consider left sub array as key is smaller to mid element

Left sub array is from left to mid-1

Left = 0

$$\begin{aligned}\text{Right} &= \text{mid} - 1 \\ &= 0 - 1 \\ &= -1\end{aligned}$$

Left = 0, right = -1

As right crosses left, the key is not found