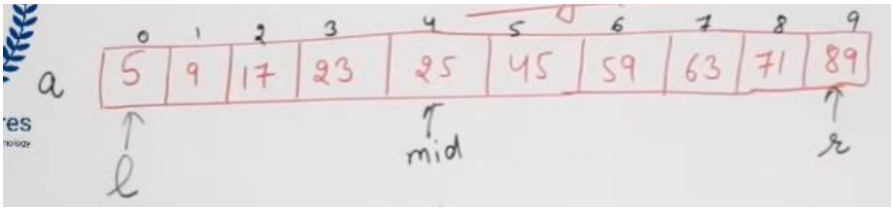
*The array should must be sorted.

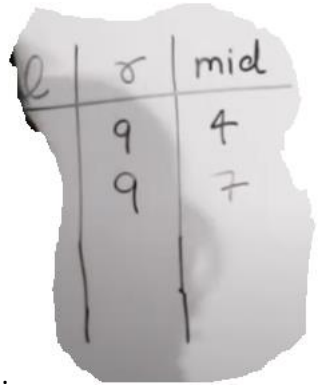
*If data is not sorted you can not apply to binary search.

It uses divide and conquer technique.




**We are looking for data 59**

1-First find the middle point by addition first element index and last element index L and H then we

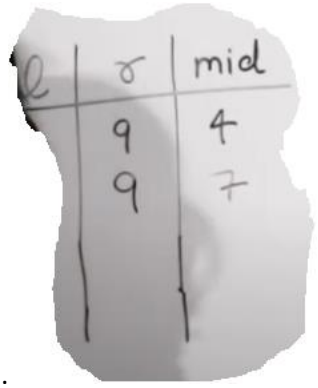



divide them 2  We find mid value as fourth value.

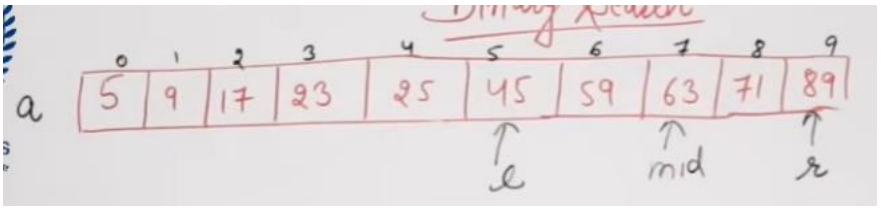
2-Okay now We want to find 59 is 59 less than 25 ? no So we are gonna look at right side of the array

Also our L index which was first element on beginning comes to right side because we will be bussy with right side of the array.

For right finding middle element of the right side  We add 5 and 9 index then we divide them by 2



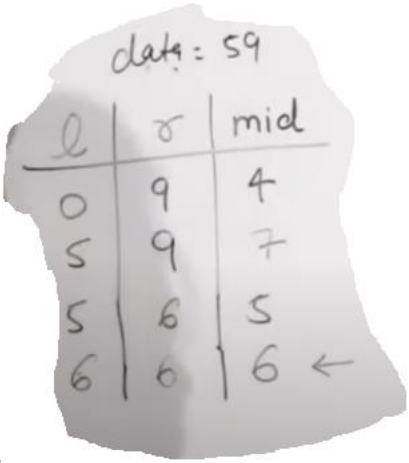

and We have Index of 7 as a middle.

Now our middle index is 7 


Now we ask again 59 is less than or higher than 63  59 is less than 63 so we should look that on left

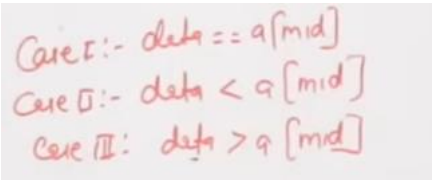

side of that item. Again We add indexes 5 and 6 then divide to 2 then We got 5 we ask then 59 is bigger than 45 answer  is Yes.

Now We come to the 59 and Left and Right is on the same index. We did left +1 because our data is




on the right.

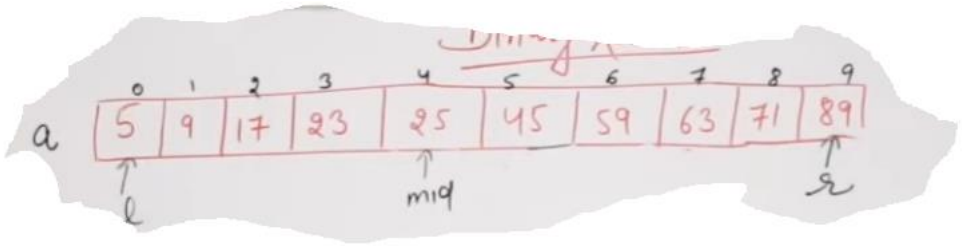
At the end we will return value of Mid because mid comes to our number.

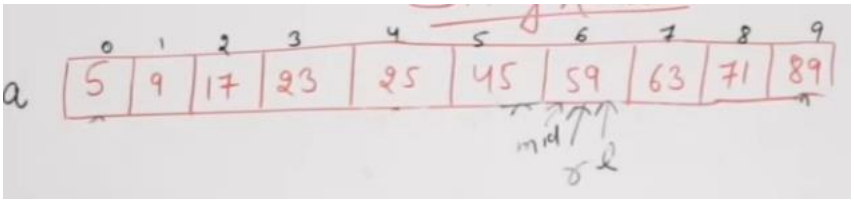


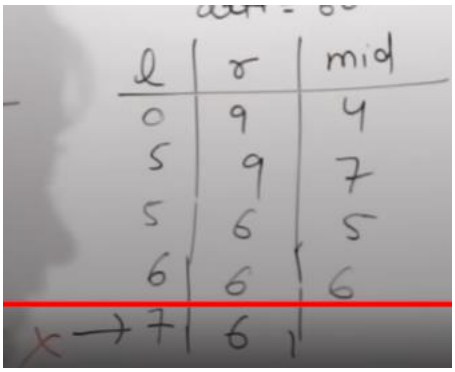

**Second cases if data is not presented in array?**

We are looking for 60 which is not represented in array.

60 is higher than 25 so we are looking for Right side.



| l | r | mid |
|---|---|---|
| 0 | 9 | 4 |
| 5 | 9 | 7 |
| 5 | 6 | 5 |
| 6 | 6 | 6 |
| → 7 | 6 | |

IF l value is greater than high value that means data is not represted in list. And stopping condition of that is