

Algorithm for binary search

1. Find $\text{mid} = (\text{low} + \text{high}) / 2$
2. Then check if the number is at mid position, if found then return mid
3. If $\text{num} < \text{arr}[\text{mid}]$, then search in the array (low,mid-1)
4. Else if $\text{num} > \text{arr}[\text{mid}]$, then search in the array (mid+1,high)
5. Repeat steps 1 to 4, until $\text{low} \leq \text{high}$, otherwise return -1

Time complexity --- $(\log n)$

Binary search is faster than sequential search

For binary search, the data has to be in sorted order