Binary search algorithm
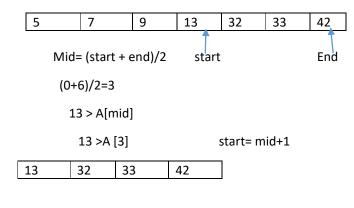
1. Inspect the middle item of an array of size N.
2. Inspect the middle of an array of size n/2
3. Inspect the middle of an array of size n/4 .And so on until lower bound becomes upper bound
   K=log2N
4. Binary search(A, Short, End, Key)
5. {
6. If(start<=end)
7. {
8. Mid=(start +end)/2
9. If(key equal to A[mid])
10. Return mid
11. Else
12. If(key<A[mid])
13. Return binary search(start,mid-1,key)
14. Else
15. Return binary search(mid+1,end,key)
16. }
17. Return-1

Example:

5	7	9	13	32	33	42

Mid= (start + end)/2   start   End

(0+6)/2=3

13 > A[mid]

13 >A [3]   start= mid+1

13	32	33	42

Mid =3 + 6/2 = 3

13 < A [mid]

13 < A [3]   End= mid-1