

BINARY SEARCH ALGORITHM

1. Declare a SORTED Array A with default values
2. Input x, the value to be search
3. Set $n = \text{length of Array}$
4. Set $\text{low} = 0$
5. Set $\text{high} = n - 1$
6. While ($\text{low} \leq \text{high}$)
 - a. Set $\text{mid} = \text{integer value of } (\text{low} + \text{high})/2$
 - b. If $x = A[\text{mid}]$, go to step 11
 - c. If $x > \text{mid}$, **$\text{low} = \text{mid} + 1$** , Else, **$\text{high} = \text{mid} - 1$**
7. If $\text{low} > \text{high}$, print "Not Found"
8. Print "Found at index ", mid
9. Exit