

Solution 1 Solution 2

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1 # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 # O(log(n)) time | O(1) space
4 def shiftedBinarySearch(array, target):
5     return shiftedBinarySearchHelper(array, target, 0, len(array) - 1)
6
7
8 def shiftedBinarySearchHelper(array, target, left, right):
9     while left <= right:
10         middle = (left + right) // 2
11         potentialMatch = array[middle]
12         leftNum = array[left]
13         rightNum = array[right]
14         if target == potentialMatch:
15             return middle
16         elif leftNum <= potentialMatch:
17             if target < potentialMatch and target >= leftNum:
18                 right = middle - 1
19             else:
20                 left = middle + 1
21         else:
22             if target > potentialMatch and target <= rightNum:
23                 left = middle + 1
24             else:
25                 right = middle - 1
26     return -1
27

```