

# LastPositionFinder.java

```

1  package BinarySearch;
2
3  public class LastPositionFinder {
4      public int findLastPosition(int[] nums, int target) {
5          1      int low = 0, high = nums.length - 1;
6              int lastPosition = -1;
7
8          2      while (low <= high) {
9              3          int mid = low + (high - low) / 2;
10             1          if (nums[mid] == target) {
11                 lastPosition = mid;
12             1          low = mid + 1;
13             2          } else if (nums[mid] < target) {
14             1          low = mid + 1;
15                 } else {
16             1          high = mid - 1;
17                 }
18             }
19             1      return lastPosition;
20     }
21 }

```

## Mutations

[5](#) 1. Replaced integer subtraction with addition → KILLED  
[8](#) 1. changed conditional boundary → KILLED  
 2. negated conditional → KILLED  
[9](#) 1. Replaced integer division with multiplication → KILLED  
 2. Replaced integer addition with subtraction → KILLED  
 3. Replaced integer subtraction with addition → KILLED  
[10](#) 1. negated conditional → KILLED  
[12](#) 1. Replaced integer addition with subtraction → TIMED\_OUT  
[13](#) 1. changed conditional boundary → SURVIVED  
 2. negated conditional → KILLED  
[14](#) 1. Replaced integer addition with subtraction → TIMED\_OUT  
[16](#) 1. Replaced integer subtraction with addition → TIMED\_OUT  
[19](#) 1. replaced int return with 0 for BinarySearch/LastPositionFinder::findLastPosition → KILLED

## Active mutators

- CONDITIONALS\_BOUNDARY
- EMPTY\_RETURNS
- FALSE\_RETURNS
- INCREMENTS
- INVERT\_NEGS
- MATH
- NEGATE\_CONDITIONALS
- NULL\_RETURNS
- PRIMITIVE\_RETURNS

- TRUE\_RETURNS
- VOID\_METHOD\_CALLS

## Tests examined

- BinarySearch.LastPositionFinderTest.testLastPosition(BinarySearch.LastPositionFinderTest) (0 ms)

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