

BinarySearch.java

```

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

```

Mutations

[6](#) 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
[11](#) 1. replaced int return with 0 for
 BinarySearch/BinarySearch::search → KILLED
[12](#) 1. changed conditional boundary → SURVIVED
 2. negated conditional → KILLED
[13](#) 1. Replaced integer subtraction with addition → TIMED_OUT
[15](#) 1. Replaced integer addition with subtraction → TIMED_OUT
[19](#) 1. replaced int return with 0 for
 BinarySearch/BinarySearch::search → 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.BinarySearchTest.testSearch(BinarySearch.BinarySearchTest) (0 ms)

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