

MajorityElement.java

```
1 package com.example;
2
3
4 public class MajorityElement {
5
6     public static int majorityElement(int []v) {
7         //size of the given array:
8         int n = v.length;
9
10        for (int i = 0; i < n; i++) {
11            //selected element is v[i]
12            int cnt = 0;
13            for (int j = 0; j < n; j++) {
14                // counting the frequency of v[i]
15                if (v[j] == v[i]) {
16                    cnt++;
17                }
18            }
19
20            // check if frequency is greater than n/2:
21            if (cnt > (n / 2))
22                return v[i];
23        }
24
25        return -1;
26    }
27
28    public static int majorityElement1(int []v) {
29        //size of the given array:
30        int n = v.length;
31        int cnt = 0; // count
32        int el = 0; // Element
33
34        //applying the algorithm:
35        for (int i = 0; i < n; i++) {
36            if (cnt == 0) {
37                cnt = 1;
38                el = v[i];
39            } else if (el == v[i]) cnt++;
40            else cnt--;
41        }
42
43        //checking if the stored element
44        // is the majority element:
45        int cnt1 = 0;
46        for (int i = 0; i < n; i++) {
47            if (v[i] == el) cnt1++;
48        }
49
50        if (cnt1 > (n / 2)) return el;
51        return -1;
52    }
53
54 }
```

Mutations

10	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
13	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
15	1. negated conditional → KILLED
16	1. Changed increment from 1 to -1 → KILLED
21	1. changed conditional boundary → SURVIVED 2. Replaced integer division with multiplication → KILLED 3. negated conditional → KILLED
22	1. replaced int return with 0 for com/example /MajorityElement::majorityElement → KILLED
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35	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
36	1. negated conditional → KILLED
39	1. Changed increment from 1 to -1 → SURVIVED 2. negated conditional → SURVIVED
40	1. Changed increment from -1 to 1 → SURVIVED
46	1. changed conditional boundary → KILLED 2. Changed increment from 1 to -1 → KILLED 3. negated conditional → KILLED
47	1. Changed increment from 1 to -1 → KILLED 2. negated conditional → KILLED
50	1. changed conditional boundary → KILLED 2. Replaced integer division with multiplication → KILLED 3. negated conditional → KILLED 4. replaced int return with 0 for com/example /MajorityElement::majorityElement1 → KILLED
51	1. replaced int return with 0 for com/example /MajorityElement::majorityElement1 → KILLED

Active mutators

- BOOLEAN FALSE RETURN
- BOOLEAN TRUE RETURN
- CONDITIONALS_BOUNDARY_MUTATOR
- EMPTY_RETURN_VALUES
- INCREMENTS_MUTATOR
- INVERT_NEGS_MUTATOR
- MATH_MUTATOR
- NEGATE_CONDITIONALS_MUTATOR
- NULL_RETURN_VALUES
- PRIMITIVE_RETURN_VALS_MUTATOR
- VOID_METHOD_CALL_MUTATOR

Tests examined

- com.example.MajorityElementTest.testMajorityElement(com.example.MajorityElementTest)
(0 ms)

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