3016218067 王晨

1.

public int findLast (int[] x, int y) {

//Effects: If x==null throw NullPointerException

// else return the index of the last element

// in x that equals y.

// If no such element exists, return -1

for (int i=x.length-1; i > 0; i--)

{

if (x[i] == y)

{

return i;

}

}

return -1;

}

// test: x=[2, 3, 5]; y = 2

// Expected = 0

1.fault: 循环条件应为 i>=0, 不应该为i>0;

2.test: x==null, y为任意, Expected: throw NullPointerException, 不会执行fault;

3.test: x=[1, 2, 3], y=3, Expected = 2, no error;

4.test: x=[1], y=3, Expected = -1, 由于循环无法访问数组第一个元素，导致无法访问数组，返回-1， 出现error; 又因为期望为-1，所以无failure.

2.

public static int lastZero (int[] x) {

//Effects: if x==null throw NullPointerException

// else return the index of the LAST 0 in x.

// Return -1 if 0 does not occur in x

for (int i = 0; i < x.length; i++)

{

if (x[i] == 0)

{

return i;

}

} return -1;

}

// test: x=[0, 1, 0]

// Expected = 2

1.fault: 循环条件错误，应为：int i=x.length-1; i>=0; i--;

2.当x不等于null时，总会执行fault;

3.test: x=[0], Expected: 0，即当x只有一个元素时，no error;

4.test:x=[0, 1, 2], Expected: 0，即x只有一个0时，由于返回第一个0，出现error;又由于此时第一个0也是最后一个0， 所以no failure。