Homework2

程序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

错误：在这个程序中，应该遍历3次，即i = 2 1 0都得遍历一遍，但是因为i>0这个条件使得i=0时无法遍历，只能遍历两次。

If possible, identify a test case that does not execute the fault：

test: x=[]

If possible, identify a test case that executes the fault, but

does not result in an error state：

test：x = [2,3,5]， y = 3

If possible identify a test case that results in an error, but

not a failure：

test：x = [2,3,5]，y = 1

程序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

错误：这个程序想找到最后一个0，但是数组的第一个就是0，导致结果错误。

If possible, identify a test case that does not execute the fault：

test: x=[]

If possible, identify a test case that executes the fault, but

does not result in an error state：

 test：x = [0]

If possible identify a test case that results in an error, but

not a failure：

 test：x = [2,3,5]