

# Тестирование в JavaScript

# Задача

```
export function MyCustomAbs (x: number) : number {  
    return x < 0 ? -x : x;  
}
```

# Обложим тестами

```
describe('MyCustomAbs', () => {  
  for (let x = -3; x < 3; x++) {  
    let expected = Math.abs(x);  
  
    it(`should return ${expected} for ${x}`, () => {  
      expect(MyCustomAbs(x)).toBe(expected);  
    });  
  }  
});
```

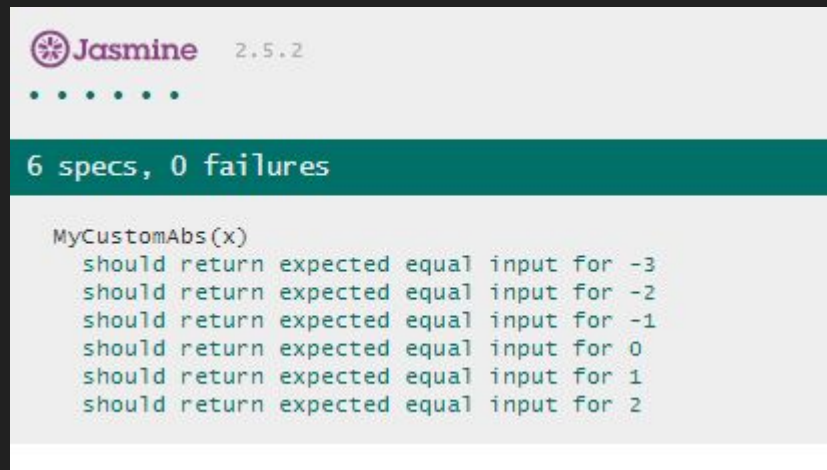
# Результат

Started

.....

6 specs, 0 failures

Finished in 0.006 seconds

A screenshot of the Jasmine test runner interface. At the top left is the Jasmine logo (a purple flower-like icon) followed by the text "Jasmine" in purple and "2.5.2" in grey. Below this is a horizontal line of six green dots. A teal-colored bar contains the text "6 specs, 0 failures" in white. Below the bar, the text "MyCustomAbs(x)" is followed by six lines of test results, each starting with "should return expected equal input for" and ending with a number from -3 to 2.

```
Jasmine 2.5.2
.....
6 specs, 0 failures
MyCustomAbs(x)
  should return expected equal input for -3
  should return expected equal input for -2
  should return expected equal input for -1
  should return expected equal input for 0
  should return expected equal input for 1
  should return expected equal input for 2
```

# Вроде все хорошо... или нет?

Started

.....F..

Failures:

1) should return expected equal input for 0

Message:

Expected false to be true.

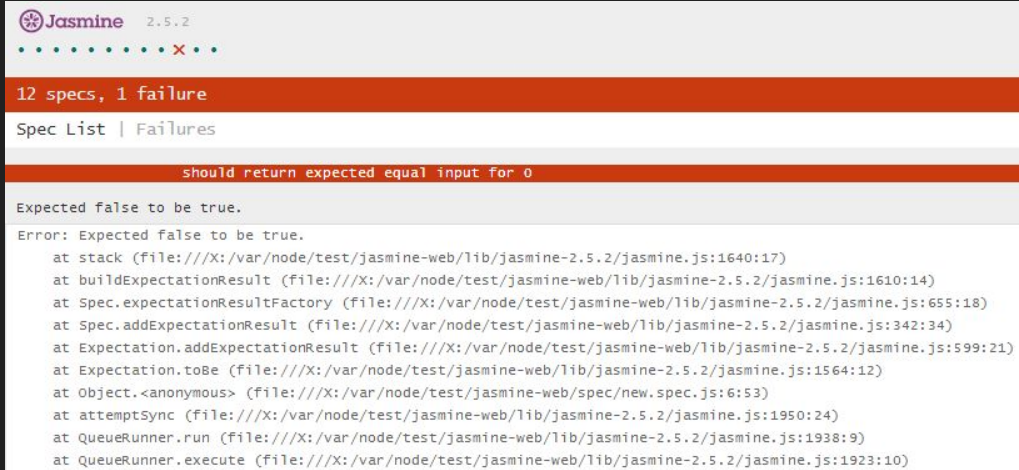
Stack:

Error: Expected false to be true.

at Object.<anonymous> (X:\var\node\test\math-tests\spec\index.spec.js:18:61)

12 specs, 1 failure

Finished in 0.006 seconds



The screenshot shows the Jasmine test runner interface. At the top, it displays the Jasmine logo and version 2.5.2. Below that, a progress bar shows 12 specs and 1 failure. The failure is highlighted in red and labeled "12 specs, 1 failure". Below the progress bar, there are two tabs: "Spec List" and "Failures". The "Failures" tab is selected, showing the details of the failure. The failure message is "Expected false to be true." and the error stack trace is visible below it.

```
Jasmine 2.5.2
.....x.....
12 specs, 1 failure
Spec List | Failures
should return expected equal input for 0
Expected false to be true.
Error: Expected false to be true.
  at stack (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1640:17)
  at buildExpectationResult (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1610:14)
  at Spec.expectationResultFactory (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:655:18)
  at Spec.addExpectationResult (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:342:34)
  at Expectation.addExpectationResult (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:599:21)
  at Expectation.toBe (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1564:12)
  at Object.<anonymous> (file:///X:/var/node/test/jasmine-web/spec/new.spec.js:6:53)
  at attemptsSync (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1950:24)
  at QueueRunner.run (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1938:9)
  at QueueRunner.execute (file:///X:/var/node/test/jasmine-web/lib/jasmine-2.5.2/jasmine.js:1923:10)
```

# Почему?

Ищем причины...

А зачем?

# Инструменты

test framework

Jasmine, QUnit, ...

test runner

Karma, Wallaby, Chutzpah, ...

web-driver

v8, PhantomJS, Chrome, Firefox, Internet Explorer, ...

