



```
function(b, c) {  
  var d = a(c.form.querySelectorAll('input[type=checkbox][name="' + b.el.name + '"']));  
  if (0 === d.index(b.el)) {  
    var e = d.filter(":checked").length;  
    return e >= b.arg || g.minChecked.replace("{count}", b.arg)  
  }  
},  
maxSelected: function(a) {  
  return null !== a.val ? a.val  
},  
minSelected: function(a) {  
  return null !== a.val && a.val  
},  
radio: function(b) {  
  var c = a(this.form.querySelector  
  return 1 === c  
},  
custom: function(a, b) {  
  var c = b.options.custom[a.arg],  
  d = new RegExp(c.pattern);  
  return d.test(a.val) || c.errorMessage  
},  
remote: function(a) {  
  a.remote = a.arg  
}
```

# Formación Desarrollo Aplicaciones Web con Angular 5

## 18.- Pruebas unitarias

## Angular | Pruebas unitarias



## Angular | Pruebas unitarias

- Archivos nombre.spec.ts

```
describe(texto, ()=>{.    // test suite
  it(texto, () => {        // test case
    expect().metodosMatcher() //código evaluación
  })

  ...

  it(texto, () => {
    //código evaluación
  })
})
```

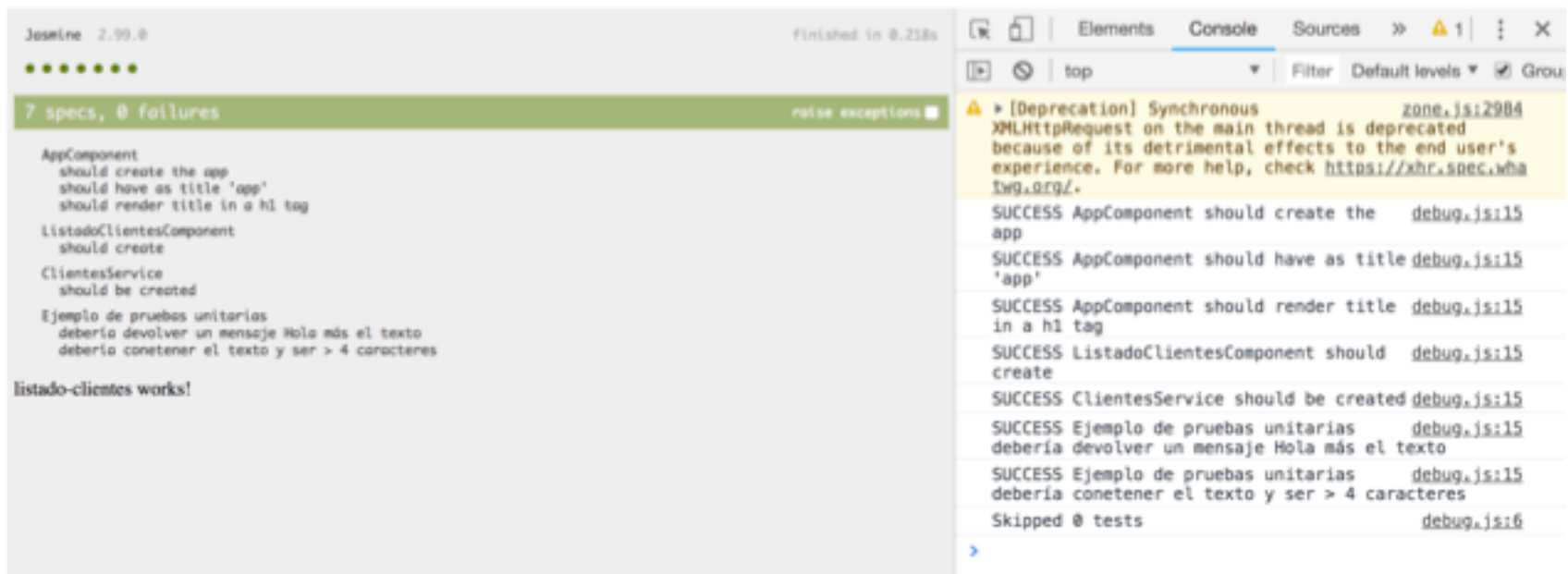
\*xdescribe y xit para saltar el test suite y test case respectivamente

## Angular | Pruebas unitarias

- Matcher
  - toBe()
  - toEqual()
  - toContain()
  - toMatch()
  - toBeDefined() | toBeUndefined()
  - toBeNull()
  - toBeTruthy() | toBeFalsy()
  - toBeLessThan() | toBeGreaterThan()
  - toThrow()
  - not.
  - ...

# Angular | Pruebas unitarias

- ng test  
http://localhost:9876



The image shows a Jest test runner window and a browser console. The Jest window on the left displays the results of a test suite, indicating that all tests passed. The browser console on the right shows a deprecation warning and several success messages for the tests.

**Jest Test Results:**

```

Jasmine 2.99.0
Finished in 0.218s
7 specs, 0 failures
raise exceptions
AppComponent
  should create the app
  should have as title 'app'
  should render title in a h1 tag
ListadoClientesComponent
  should create
ClientesService
  should be created
Ejemplo de pruebas unitarias
  debería devolver un mensaje Hola más el texto
  debería conetener el texto y ser > 4 caracteres
listado-clientes works!
  
```

**Browser Console:**

```

> [Deprecation] Synchronous XMLHttpRequest on the main thread is deprecated because of its detrimental effects to the end user's experience. For more help, check https://xhr.spec.whatwg.org/.
zone.js:2984
SUCCESS AppComponent should create the app debug.js:15
SUCCESS AppComponent should have as title 'app' debug.js:15
SUCCESS AppComponent should render title in a h1 tag debug.js:15
SUCCESS ListadoClientesComponent should create debug.js:15
SUCCESS ClientesService should be created debug.js:15
SUCCESS Ejemplo de pruebas unitarias debería devolver un mensaje Hola más el texto debug.js:15
SUCCESS Ejemplo de pruebas unitarias debería conetener el texto y ser > 4 caracteres debug.js:15
Skipped 0 tests debug.js:16
  
```

# Angular | Pruebas unitarias

- `ng test --code-coverage coverage/index.html`

## All files

96.55% Statements 28/29 100% Branches 8/8 88.89% Functions 8/9 95.65% Lines 22/23

Press n or j to go to the next uncovered block, b, p or k for the previous block.

File ▲		Statements ▾		Branches ▾		Functions ▾		Lines ▾	
src	<div><div></div></div>	100%	8/8	100%	0/0	100%	0/0	100%	8/8
src/app	<div><div></div></div>	100%	6/6	100%	0/0	100%	2/2	100%	4/4
src/app/clientes/listado-clientes	<div><div></div></div>	100%	6/6	100%	0/0	100%	3/3	100%	4/4
src/app/servicios	<div><div></div></div>	100%	5/5	100%	0/0	100%	2/2	100%	3/3
src/app/test	<div><div></div><div></div></div>	75%	3/4	100%	0/0	50%	1/2	75%	3/4

# Angular | Pruebas unitarias

## All files / src/app/test test-unitario.ts

75% Statements 3/4    100% Branches 0/0    50% Functions 1/2    75% Lines 3/4

Press *n* or *j* to go to the next uncovered block, *b*, *p* or *k* for the previous block.

```

1 1x export function mensaje(texto) {
2 2x   return 'Hola ' + texto + '!';
3     }
4
5 1x export function suma(a, b) {
6     return a + b;
7   }
8

```