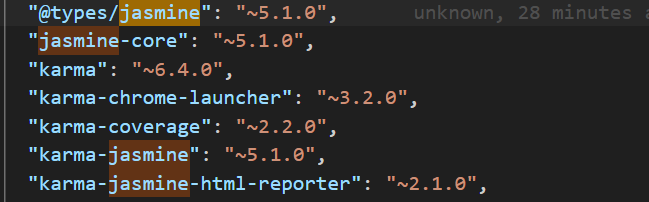
**Jasmine test framework** : Default unit testing framework in Angular

<https://angular.dev/guide/testing>

<https://angular.dev/cli/test>

In package.json



**Key Concepts**:

**TestBed**: Angular's testing utility that helps create a test module (like **NgModule** but for testing).

**ComponentFixture**<T>: A wrapper around the component that allows access to its instance and the DOM.

**describe**(): A Jasmine function used to define a **test suite** (a group of related tests).

**FirstComponentComponent**: A label for this test suite, typically the name of the component being tested.

**component**: A reference to the actual component instance.

**fixture**: A testing wrapper that helps control and inspect the component.

**it()** is a **Jasmine function** for defining a test case.

**Test Description**: 'should create the component' (explains what the test does).

expect(component).toBeTruthy();:

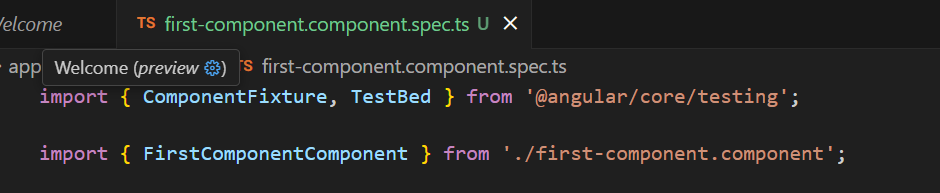
* expect() is a **Jasmine assertion function**.
* .toBeTruthy() checks if the component is successfully created (true if it exists) -> Matcher

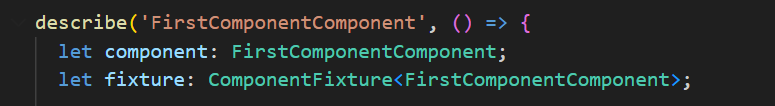
**beforeEach()**: Runs before each test (it() block).

TestBed.configureTestingModule({...}):

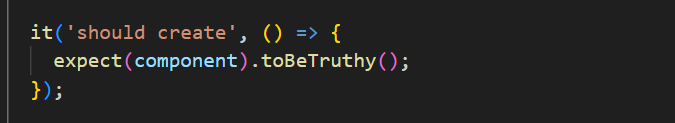
* Creates a test module that declares FirstComponentComponent.
* Mocks dependencies and sets up the testing environment.

.compileComponents(): Ensures the component's template and styles are compiled **before running the test**.

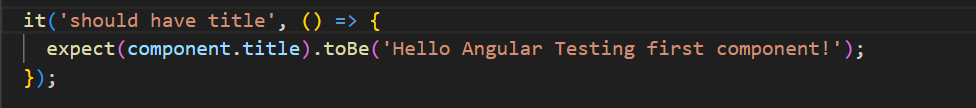




First test case:



Can add more test case

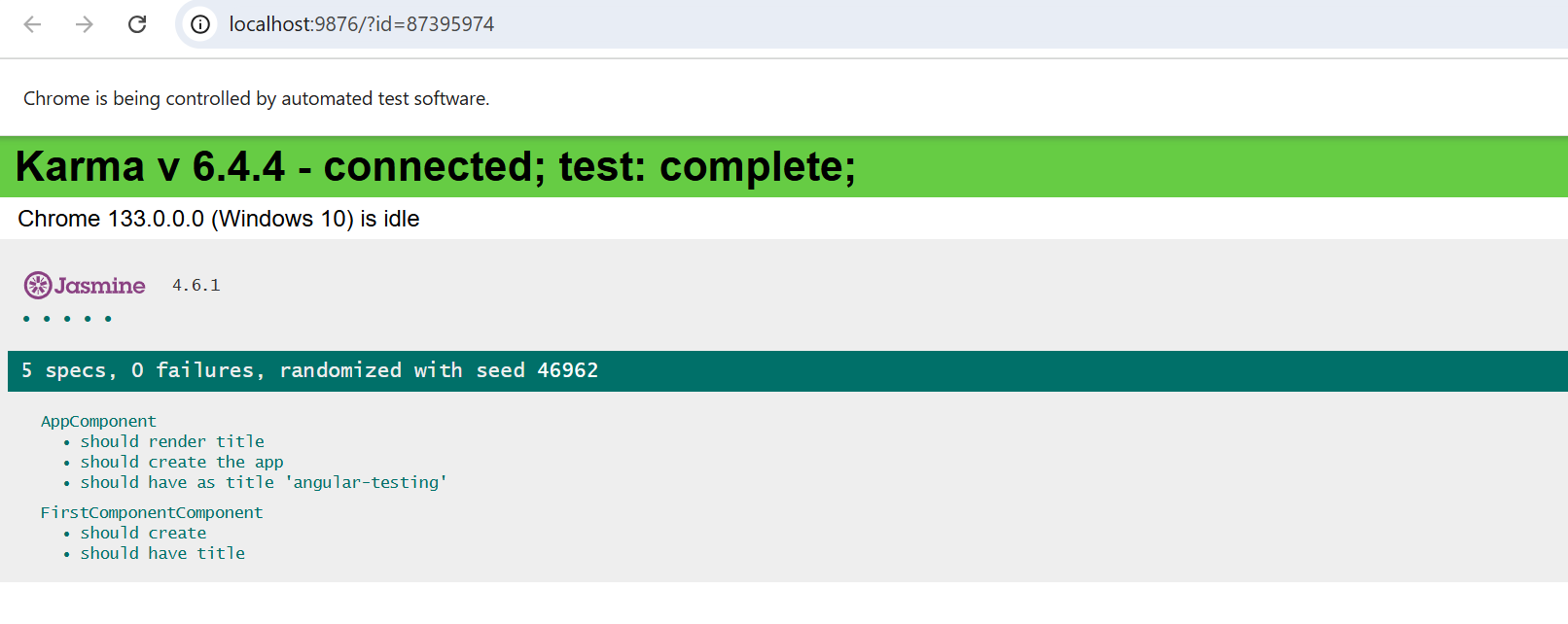


Run the test:

ng test

This will:

* Start **Karma**, which opens a browser.
* Run all tests inside \*.spec.ts files.
* Display test results in the console.



**(Optional) Run Tests in Headless Mode**

If you don’t want the browser to open, use:

ng test --watch=false --browsers=ChromeHeadless

**Using --include to Run a Single Component's Tests**

ng test --include=src/app/first-component/first-component.component.spec.ts

