Keine Angst vor dem eigenen Quellcode

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Who are we?

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Content

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What kind of tests exists?

Unit Tests

- Test certain functions or units of code

- Super fast

- Easy to write

e2e Tests

- Runs the real application and simulate the users behavior

- Very slow

- Very fragile

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Tools & Setup

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Tools

KARMA

- Test runner

- Test code on various browsers

- Integrate with various continuous integration services like Jenkins

- Behavior-driven development framework

- Fast

- Dependency free

Protractor
end to end testing for AngularJS

- End-to-end test framework

- Built on top of Selenium WebDriverJS

- Runs in a real browser

- Test like a user

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Insiders' tip

Wallaby.js

- Integrated Continuous Testing Tool for JavaScript

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Demo

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Unit Tests

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■ Definition

Unit Testing is a level of software **testing** where individual functions of a sofware are tested. The **purpose** is to validate that each function of the software performs as designed.
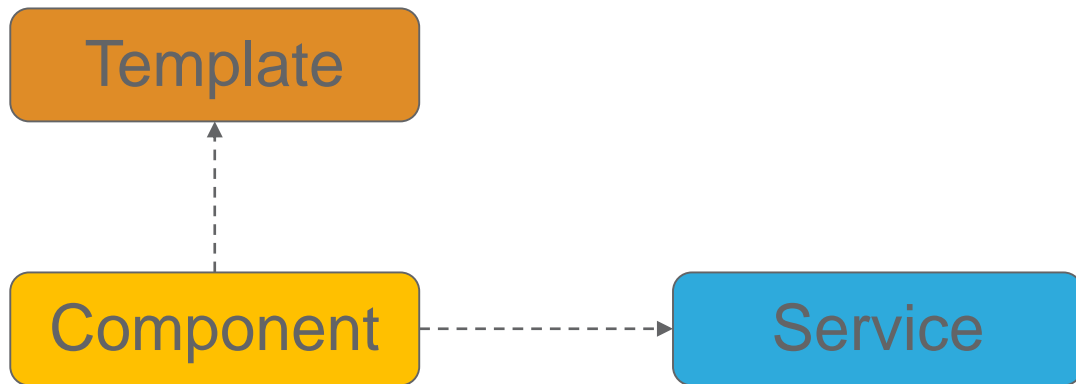
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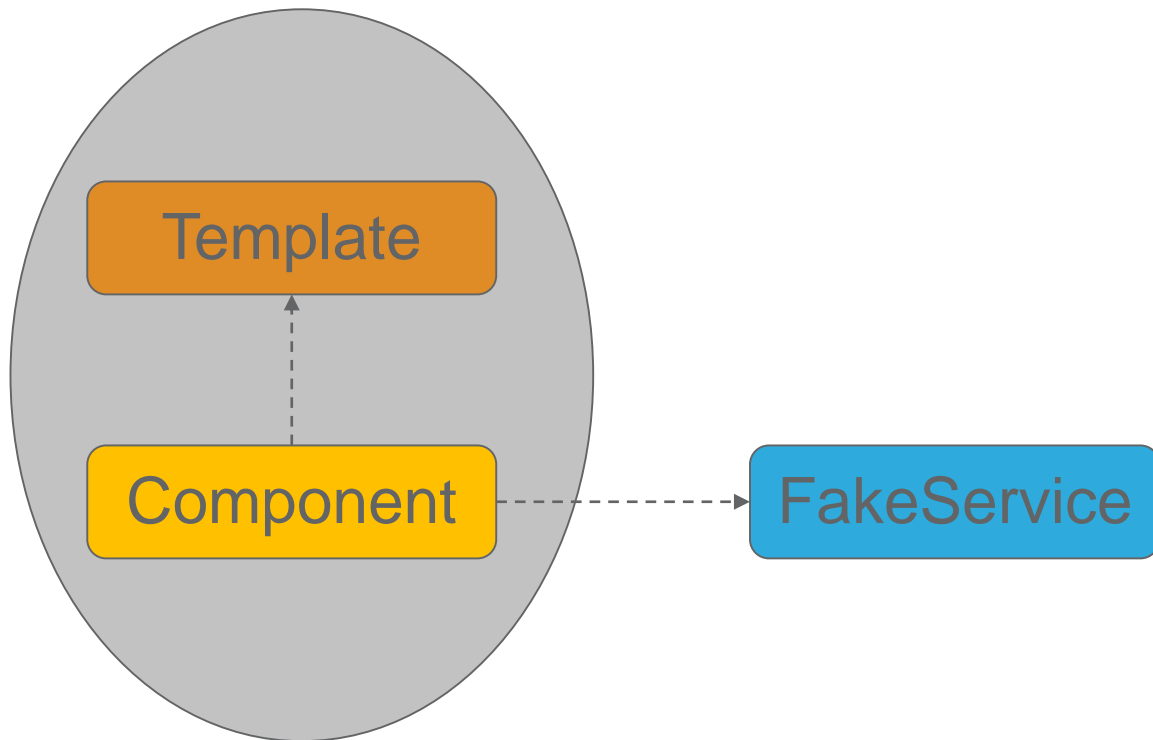
Unit Test vs. Integration Test

Unit Test

- Test in isolation, without external resources (e.g. templates)

- Just a simple function

Integration Test

- Test with external resources (e.g. templates)

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It helps you catch defects **before** releasing software

Basics

```javascript
describe('Test Suite', () => { //Test Suite
    it("A single spec", () => { // Spec or test

    });
});
```

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Make your test clean and readable

Arrange

Act

Assert

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Basics

```
describe('Test Suite', () => { // Test Suite
    it("A single spec", () => { // Spec or test
        // Arrange
        let component = new AppComponent();

        // Act
        component.ngOnInit();

        // Assert
        expect(component.title).toBe("hallo thomas");
    });
});
```

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E2e Tests

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e2e Tests

- Test the entire app as a whole

- Simulate a real user

- With protractor

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Basics

```
import { browser, element, by } from 'protractor';

describe('QuickStart E2E Tests', function () {

    beforeEach(function () {
        browser.get('/');
    });

    it('should display title', function () {
        expect(element(by.css('h1')).getText()).toEqual("hallo basta");
    });

});
```

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Demo

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How to start

- Angular CLI

- Our Demos

- Documentation on Angular Docs

- Ask us ☺

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Demos and slides

github.com/gassmannT/Angular-Testing-JavaLounge

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Thank you – Besten Dank

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