Unit Testing in Angular

COURSE INTRODUCTION

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Agenda

Introduction

- Goal
- Demo application
- Testing & unit testing overview
- Tooling

Isolated unit tests

Integration tests

Testing DOM interaction & routing components

Advanced topics

Course Goal

Learn Angular Unit Testing

Good unit tests

Isolated vs. integration tests

This Is Not About

End to end testing

Testing tools

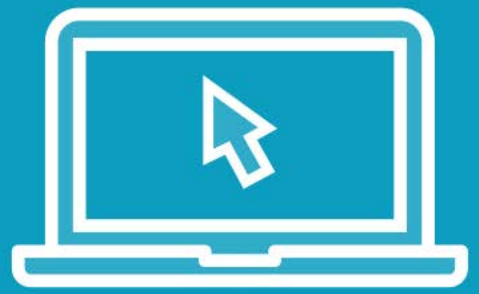
TDD/Test first vs. test after

The Demo Application

Course Repository

https://github.com/joeeames/PSAngularUnitTestingCourse

Demo



Tour of Heroes

- Modified

Don’t worry about package versions

Testing Overview

Unit testing

End to end testing

Integration or functional testing

Automated Testing

Live running application

Tests exercise live application

End to End Testing

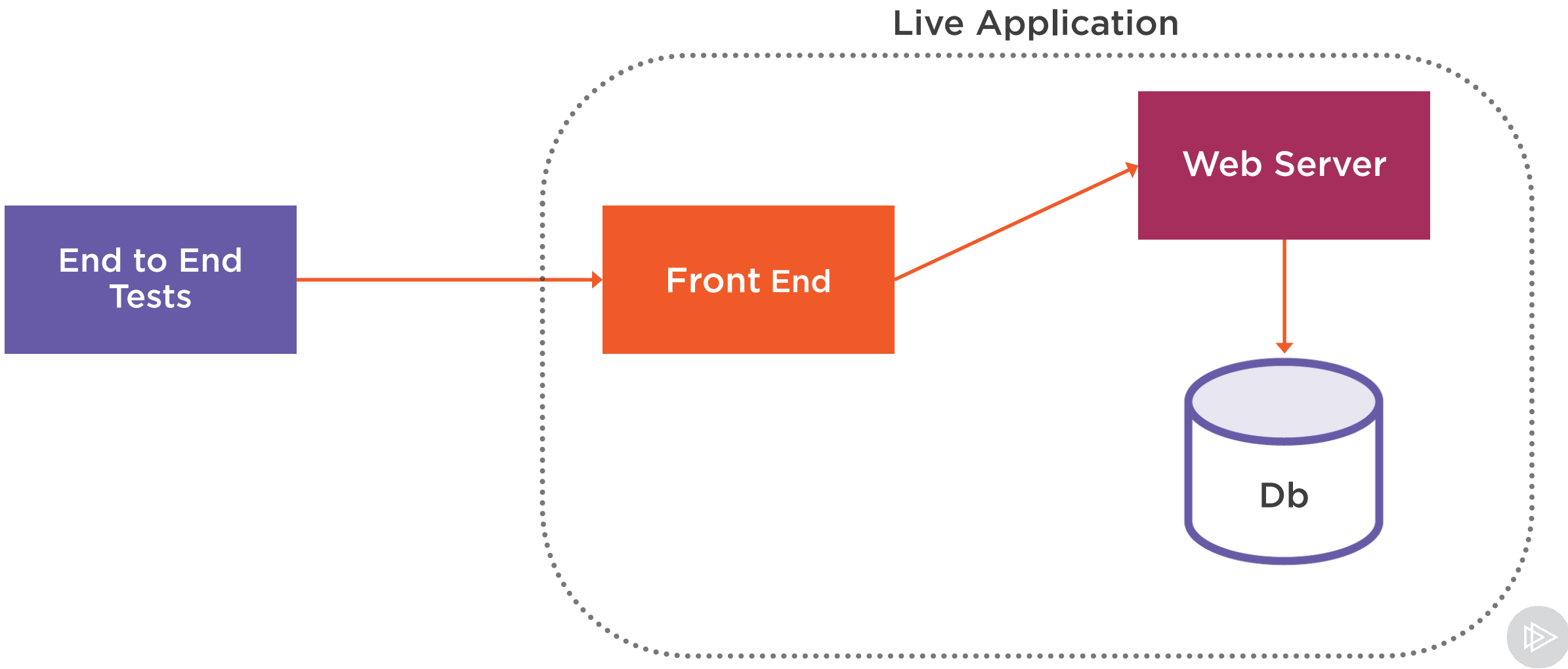
A single “unit” of code

Unit Testing

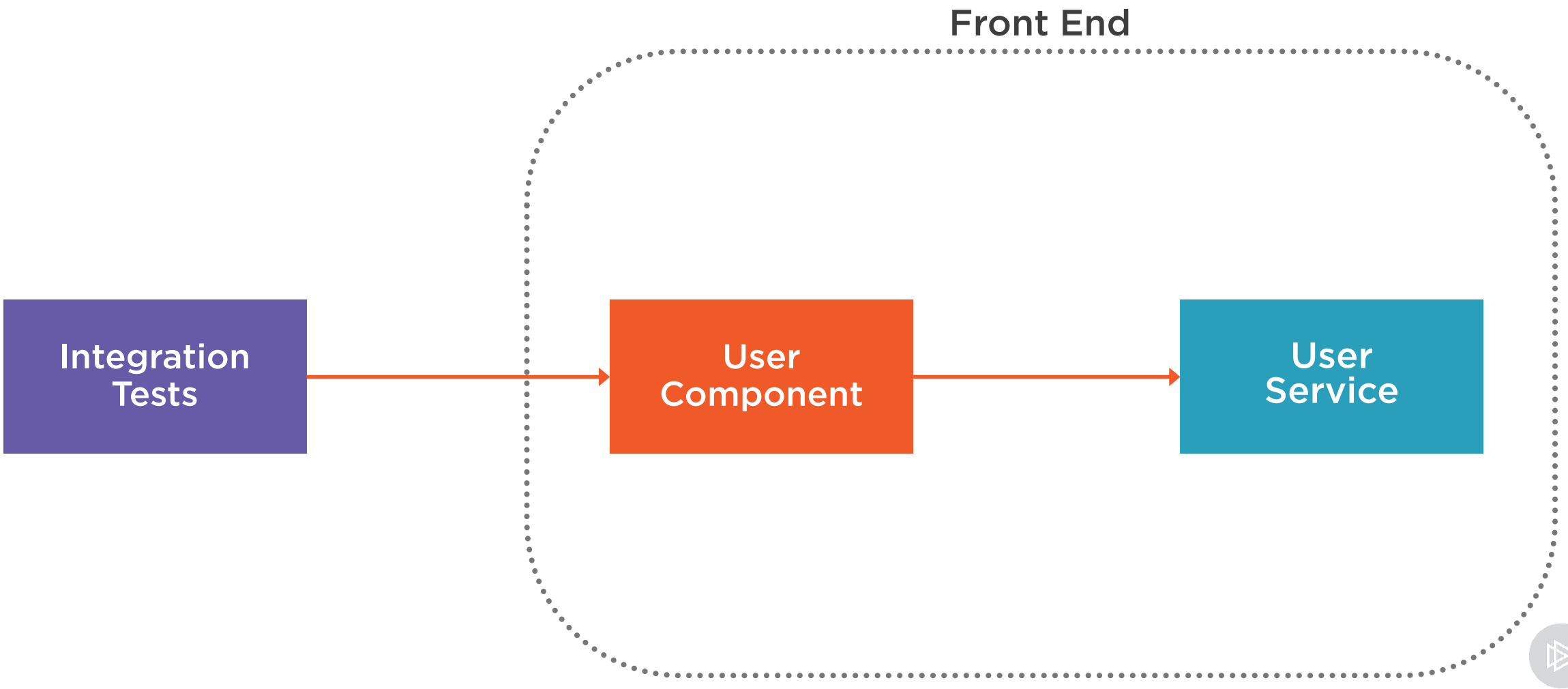
More than a unit, less than the complete application

Integration and Functional Testing

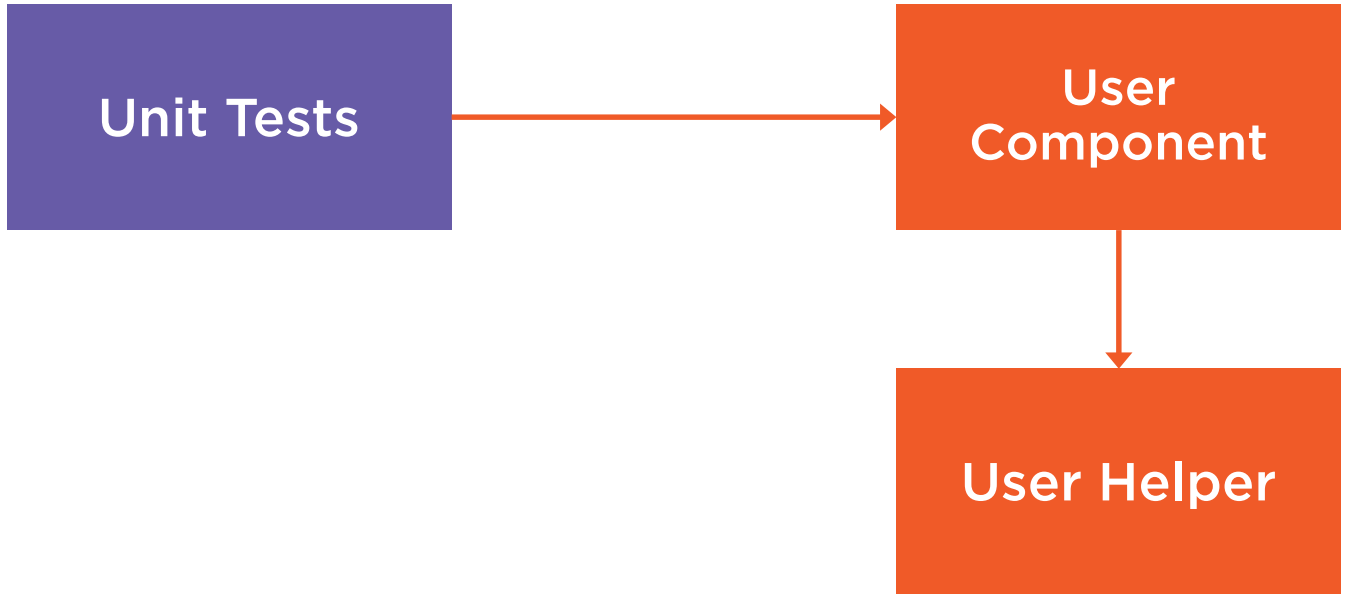
End to End Testing



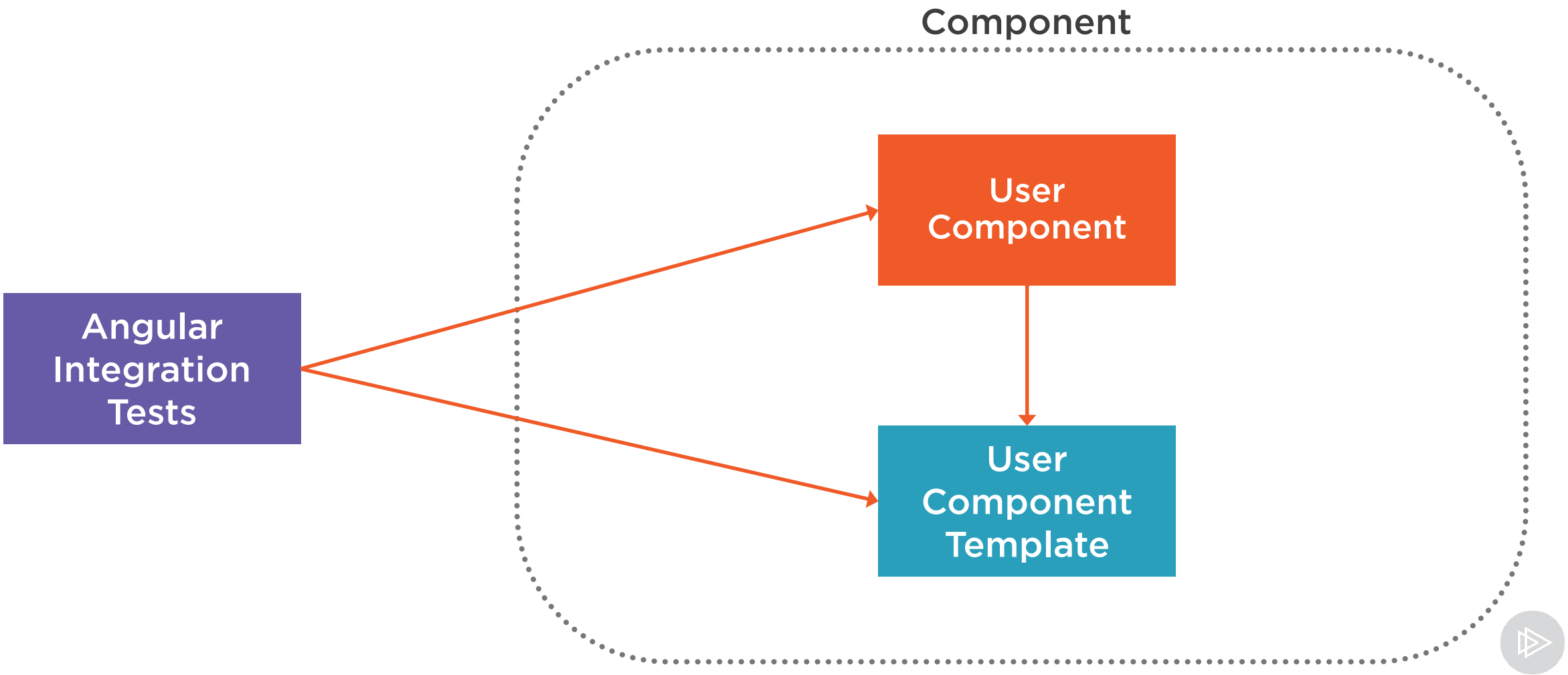
Integration and Functional Testing



Unit Testing

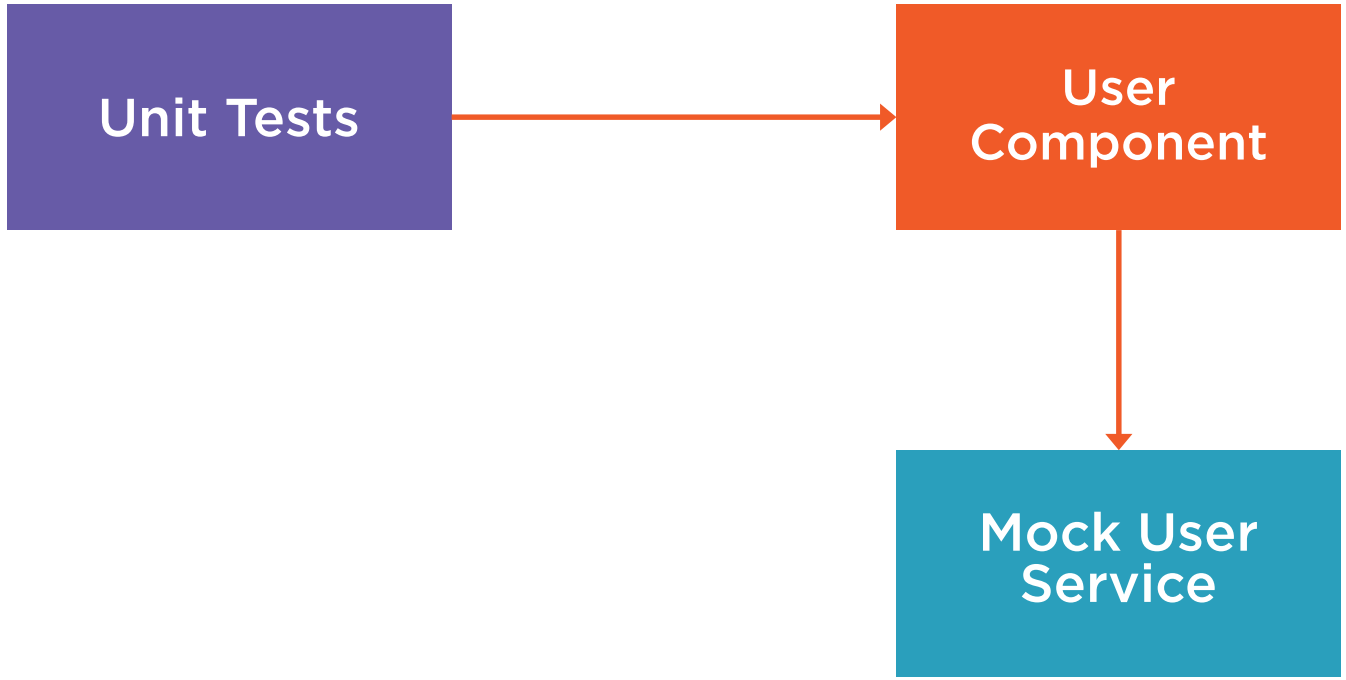


Angular Integration Testing



Mocking

Mocking



Types of Mocks

Dummies

Stubs

Spies

True mocks

Unit Tests in Angular

Types of Unit Tests in Angular

Isolated

Integration

- Shallow
- Deep

Tools of Unit Testing with Angular

Tools We Will Use

Karma

Jasmine

Other Unit Testing Tools

Jest

Mocha/Chai/etc

Sinon

TestDouble

Wallaby

Cypress

End to end tools

Writing Good Unit Tests

Structuring Tests

Arrange all necessary preconditions and inputs

Act on the object or class under test

Assert that the expected results have occurred

DAMP vs. DRY

DRY (don't repeat yourself)

- Remove duplication

DAMP

- Repeat yourself if necessary

Tell the Story

A test should be a complete story, all within the it()

You shouldn't need to look around much to understand the test

Techniques

- Move less interesting setup into beforeEach()
- Keep critical setup within the it()
- Include Arrange, Act, and Assert inside the it()

Summary

Demo application

- Tour of heroes

Testing

- Unit testing
- Isolated, integration, shallow and deep

Karma and Jasmine

Telling the story