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Test-Driven Development on Android

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Section Overview

- What is TDD and why is it important
- How does TDD work
- What are the different TDD styles
- Explore the starter project

What is TDD and why is it important

Up Next

What is TDD and why is it important

What is TDD and why is it important

- Testing strategy?
- Tool?
- Skill!

What is TDD and why is it important

- Maintaining Behaviour
- Minimize Regression
- End Users
- Test After?

How does TDD work

Up Next

How does TDD work

How does TDD work

- Workflow
  - Red
  - Green
  - Refactor

TDD styles

Up Next

TDD styles

TDD styles

- Chicago School of TDD
  - Classicist / Inside-Out
  - Design in the “Green”

- London School of TDD
  - Mockist / Outside-In
  - Design in the “Red”
  - Mocks

- Inclusive

Starter Project

Up Next

What did we cover

- ~~What is TDD and why is it important~~
- ~~How does TDD work~~
- ~~What are the different TDD styles~~
- ~~Explore the starter project~~

Using Test-Doubles

Up Next

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Using Test-Doubles

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Section Overview

- What are Test-Doubles
- What are the different kinds of Test-Doubles
- Practical (code) examples of the Test-Doubles

What are Test-Doubles

Up Next

What are Test-Doubles

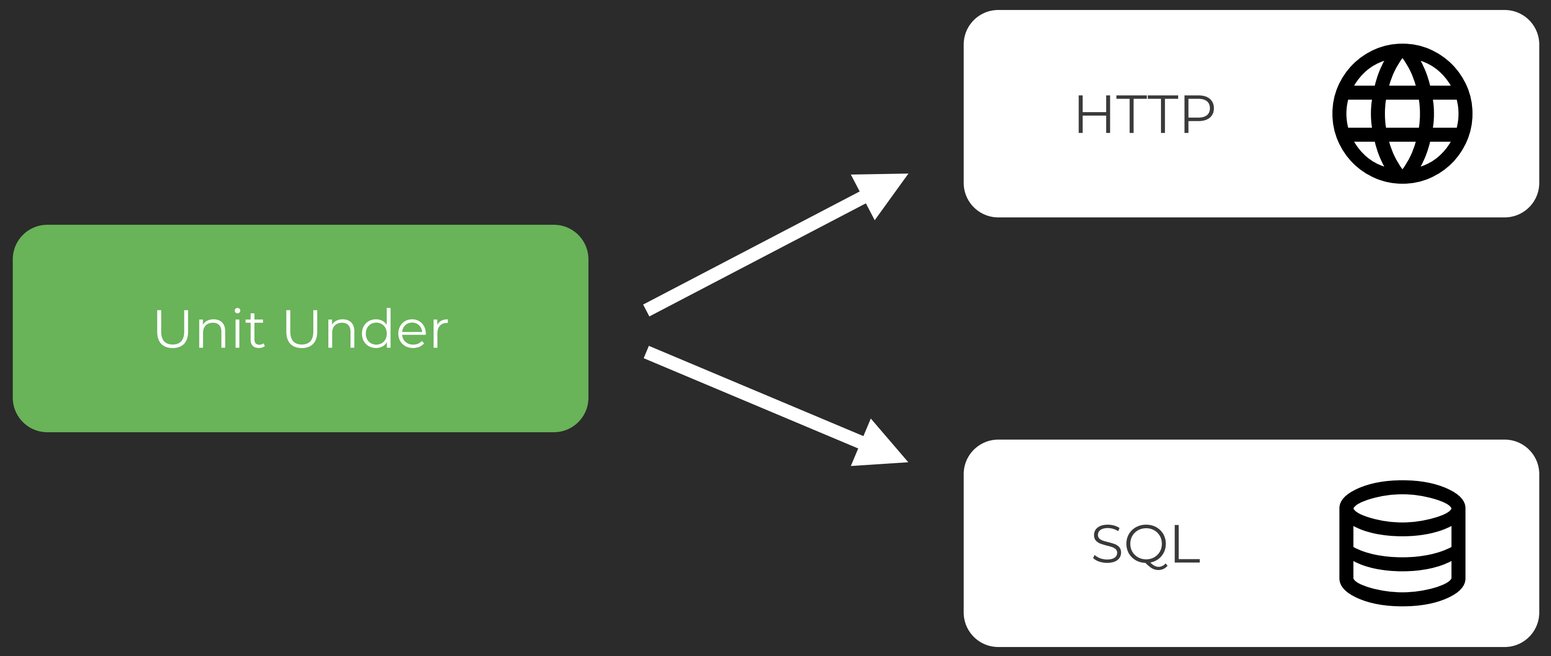
What are Test-Doubles

- Substitutes
- Controllable replacements for real components the unit under test interacts with

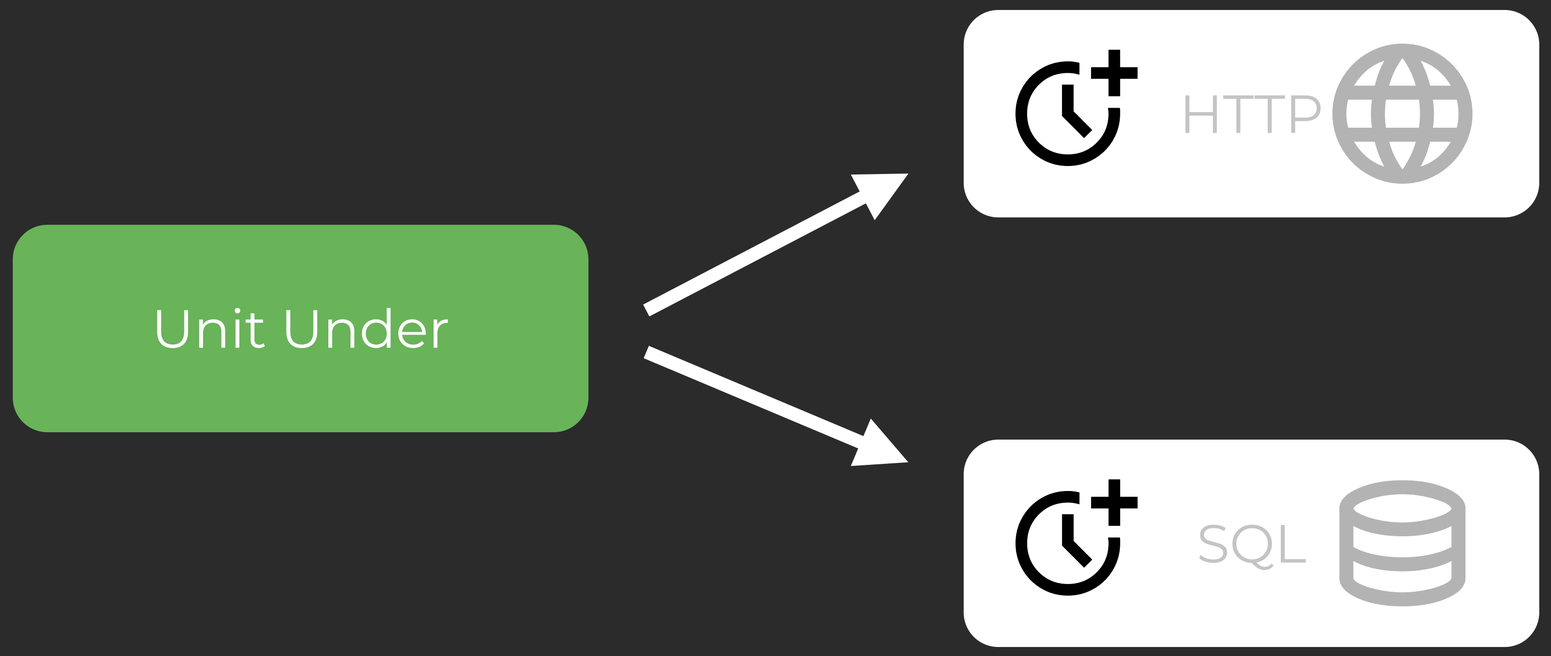
Problem 1

Unit Under

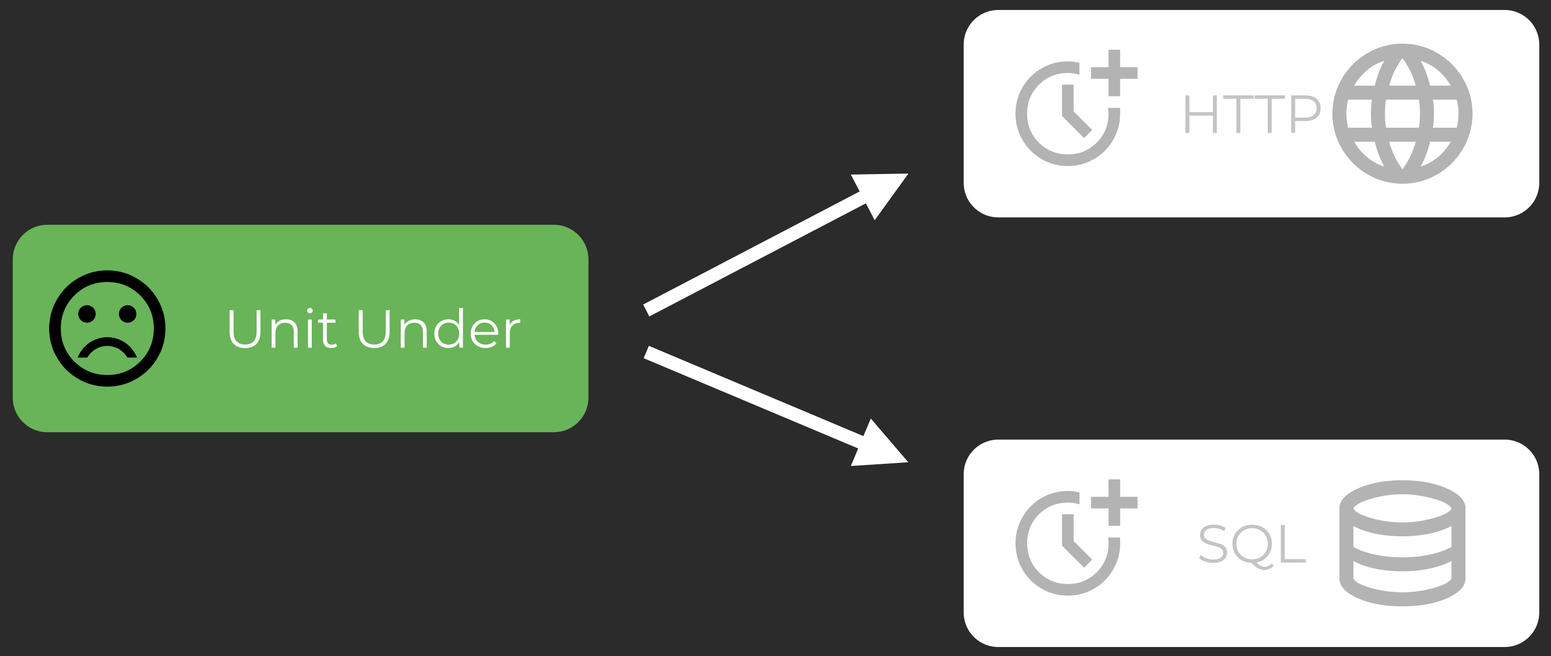
Problem 1



Problem 1



Problem 1



Problem 2

- Conditional Code
- Bypass Condition for Test

What did we cover

- ~~What are Test-Doubles and what's their role~~
- ~~What are the different kids of Test-Doubles~~
- We've seen code examples of each Test-Double kind.

Forecaster App - Loading Weather

Up Next

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Forecaster App - Loading Weather

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Section Overview

- First Failing Test
- Triangulation
- Test clarity + intention
- Primitive Obsession
- Code Improvement/Cleanup Indicators

Where to start?

- Red-Green-Refactor?
- Thinking Process
- TDD ZOMBIES
- Z - Zero
- O - One
- M - Many
- B - Boundaries
- I - Interface Definitions
- E - Exceptional Behaviours
- S - Simple Scenarios, Simple Solutions

Back to the Android Studio

Up Next

What did we cover

- ~~ZOMBIES~~
- ~~Triangulation~~
- ~~Primitive Obsession~~
- ~~Test Clarity & Intention~~
- Levels of Abstraction

Refactoring. Tips, Tricks and Techniques

Up Next

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Refactoring. Tips, Tricks and Techniques

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Section Overview

- Baby Steps
- Separating Reads & Writes
- Cohesion
- Data vs. Abstractions
- Leverage Duplication
- Leverage SOLID
- Automated Refactoring

Back to the Android Studio

Up Next

What did we cover

- ~~Baby Steps~~
- ~~Separating Reads & Writes~~
- ~~Cohesion~~
- ~~Data vs. Abstractions~~
- ~~Leverage Duplication~~
- ~~Leverage SOLID~~
- ~~Automated Refactoring~~
- ~~Continuous Test Execution~~
- ~~Small & Frequent Commits~~
- Parameterised Tests

Working with Coroutines

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Working with Coroutines

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Section Overview

- Introduce Coroutines
- Offloading the Main Thread
- Hook Into Test Execution

Back to the Android Studio

Up Next

What did we cover

- ~~Introduce Coroutines~~
- ~~Offloading the Main Thread~~
- Hook Into Test Execution

Working with Contract Tests

Up Next

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Working with Contract Tests

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Section Overview

- Extracting Contract Test
- Leverage Contract Test
- MockWebServer

Back to the Android Studio

Up Next

What did we cover

- ~~Extracting Contract Test~~
- ~~Leverage Contract Test~~
- ~~Kotlin Serialization~~
- ~~Parsing JSON fields with Custom Names~~
- MockWebServer

Testing Screen States and UI Testing

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Testing Screen States and UI Testing

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Section Overview

- Test Delivering State in Order
- Working With the Compose Test Rule
- Testing Composables & Interactions
- Composable Previews

Back to the Android Studio

Up Next

What did we cover

- ~~Test Delivering State in Order~~
- ~~Working With the Compose Test Rule~~
- ~~Testing Composables & Interactions~~
- ~~Composable Previews~~
- Delayed feedback

Final Thoughts

Up Next

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Final Thoughts

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Final Thoughts

- ~~Simplicity~~
- ~~Minimalistic~~
- ~~Fast Running Tests~~
- Confidence

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Thank YOU

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