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What is “Testing”?

Manual Testing

Write Code <> Preview & Test in Browser

Very important: You see what your users will see

Error-prone: It’s hard to test all possible combinations and scenarios

Automated Testing

Code that tests your code

You test the individual building blocks of your app

Very technical but allows you to test ALL building blocks at once

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Different Kinds Of Automated Tests

Unit Tests	Integration Tests	End-to-End (e2e) Tests
Test the **individual building blocks** (functions, components) **in isolation**	Test the **combination** of multiple building blocks	Test complete scenarios in your app as the user would experience them
Projects typically contain dozens or hundreds of unit tests	Projects typically contain a couple of integration tests	Projects typically contain only a few e2e tests
The most common / important kind of test	Also important, but focus on unit tests in most cases	Important but can also be done manually *(partially)*

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What To Test

What?

Test the different building blocks

Unit Tests: The smallest building blocks that make up your app

How?

Test success and error cases, also test rare (but possible) results

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Required Tools & Setup

We need a tool for running our tests and asserting the results

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We need a tool for “simulating” (rendering) our React app / components

Jest

React Testing Library

Both tools are already set up for you when using create-react-app

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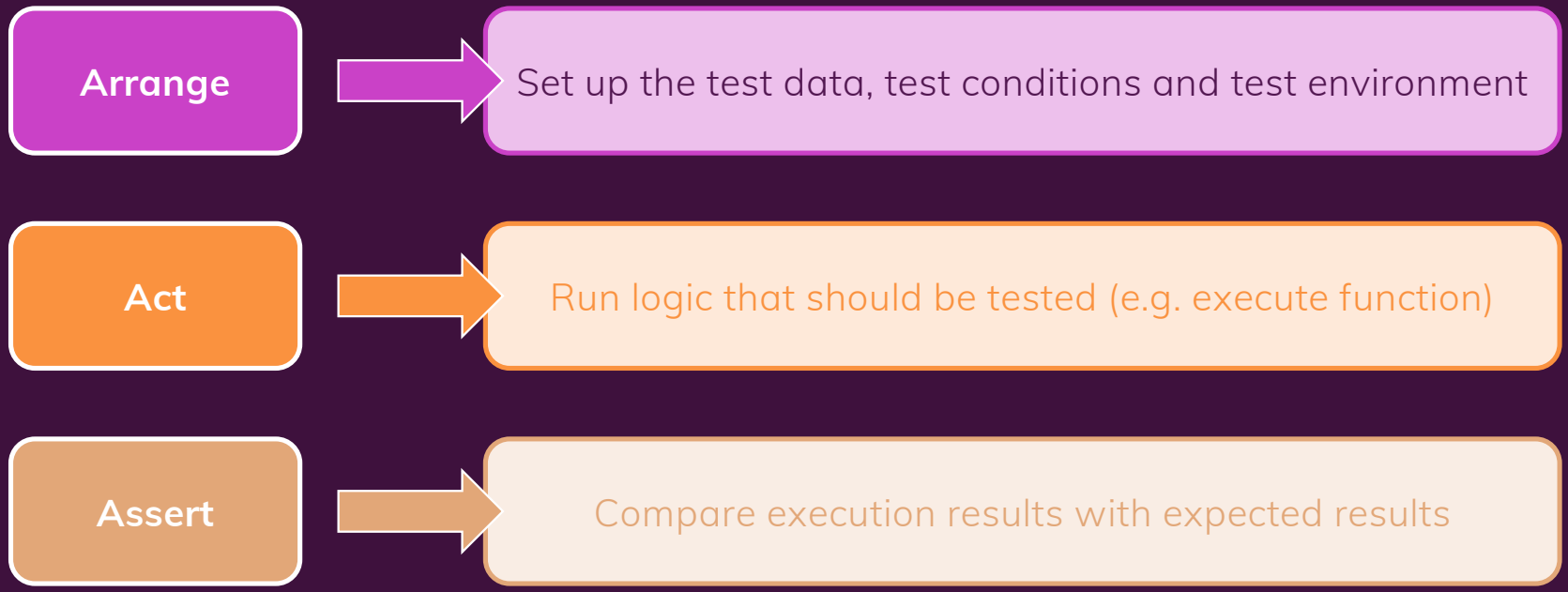
Writing Tests – The Three "A"s