Test Doubles

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Commands and Queries

- A command is a method call that changes the state of the system

- A query is a method call that returns data and shouldn't have any effect on the state of the object

To test these before they are packaged we need to mock their behaviour…

How to Test Commands and Queries

- **Mocks for commands**

- **Stubs for queries**

- Dummy – needed to fake the parameter list of a method but is never actually used. Shouldn't be used in well-designed system

Mock Commands

- Mock - set up with expectations of the calls they are expected to receive. Provide a way of verify that a behaviour has been triggered correctly.

- Instead of a mock we can use a spy, which is a hand made mock.
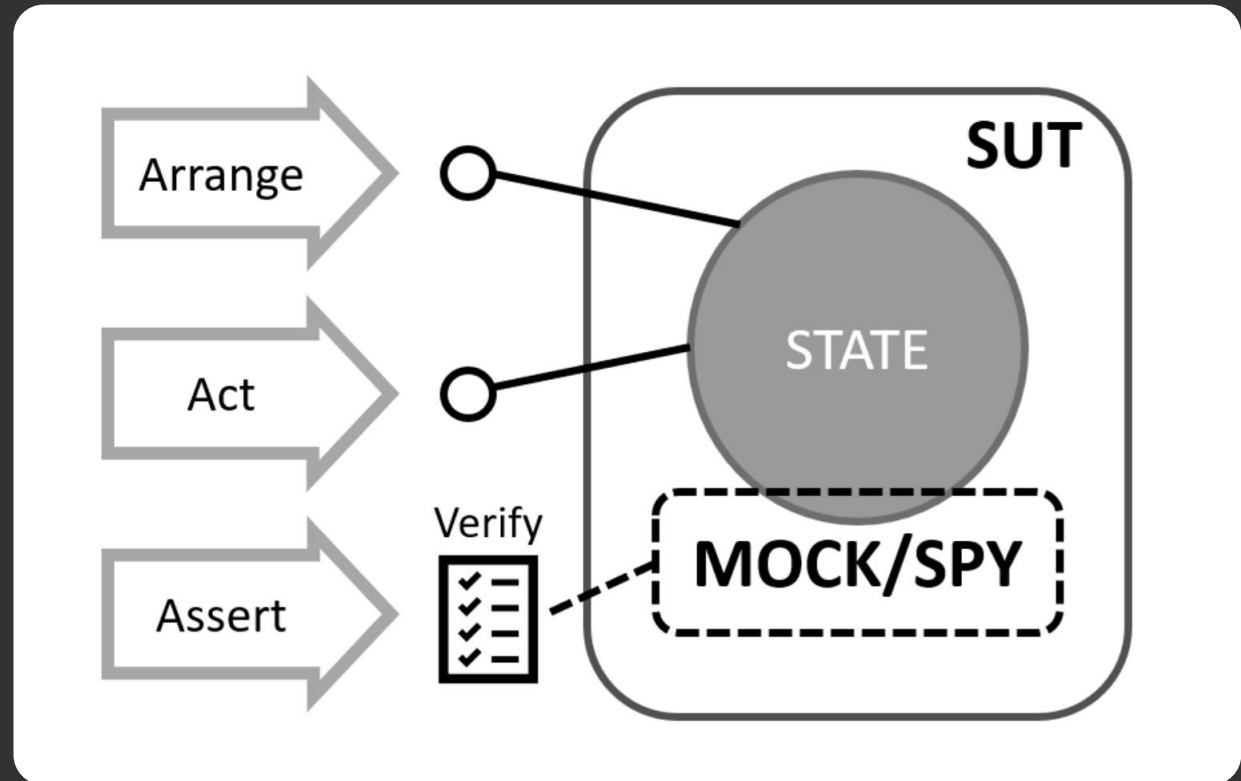
Stub Queries

- Stub - responds to calls with some pre-programmed output. They need to be specifically setup for every test

- Instead of a stub we can use a fake, which is a hand made stub.
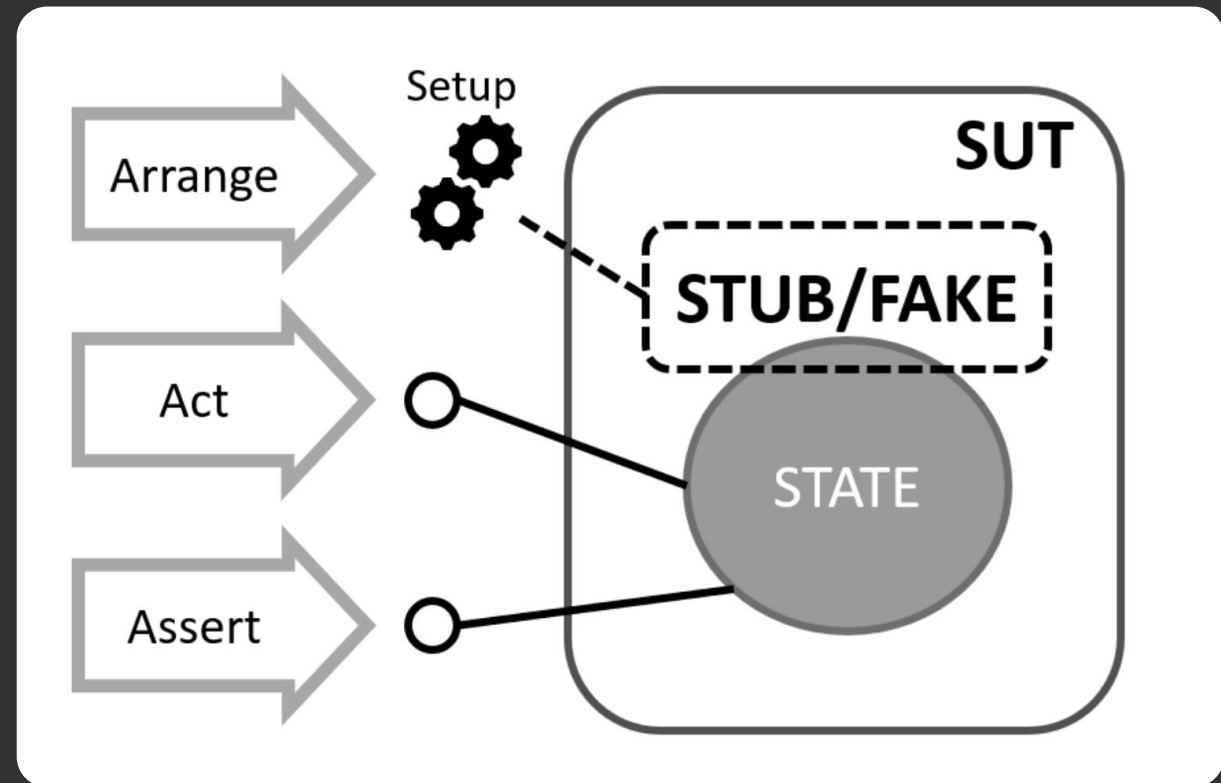
Behaviour that cannot be tested directly should be substituted with a mock/spy or a stub/fake

Implement an interface functional to the design of the system

Substitute a class we own with a Test Double

Things to Note When Using Test Doubles

Verify as little as possible in a test

Don't use test doubles for isolated objects

Don't add behaviour inside test doubles

Only use Test Doubles for immediate neighbours