# Testing techniques

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# Agenda

- Recap
- More practice
- Theory
- Testing asynchronous actions

# Unit Test - life cycle

- **A**rrange - Setup object
- **A**ct - Call method under test
- **A**ssert - Compare current results with expected

# Unit Test - types

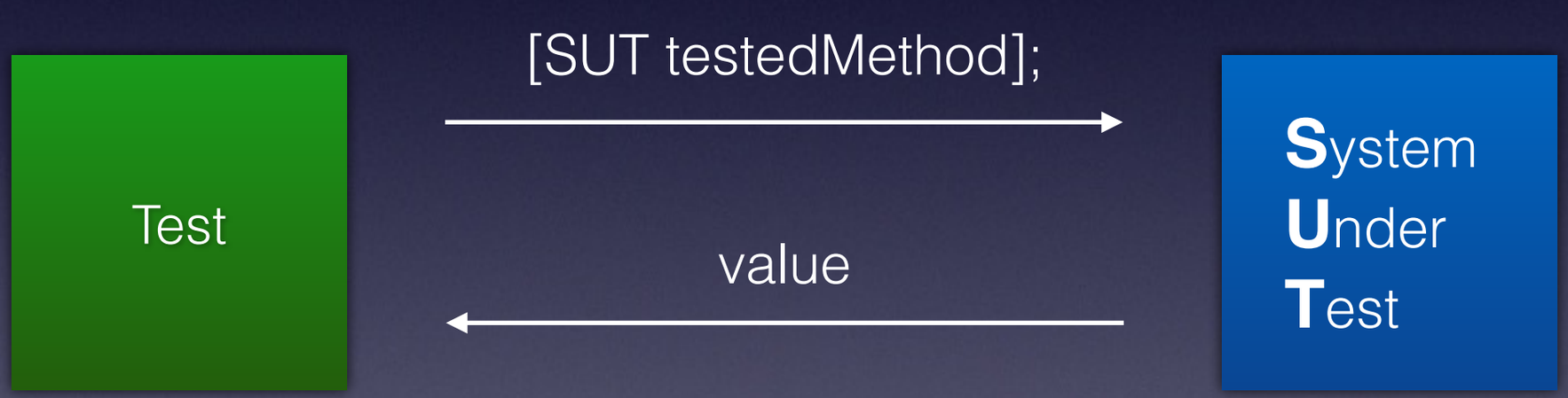
- Return Value Test
- State Test
- Interaction Test

# Hands on

# Return Value Test (AAA)

- **A**rrange - Setup object
- **A**ct - Call method under test
- **A**ssert - Compare returned value with expectations

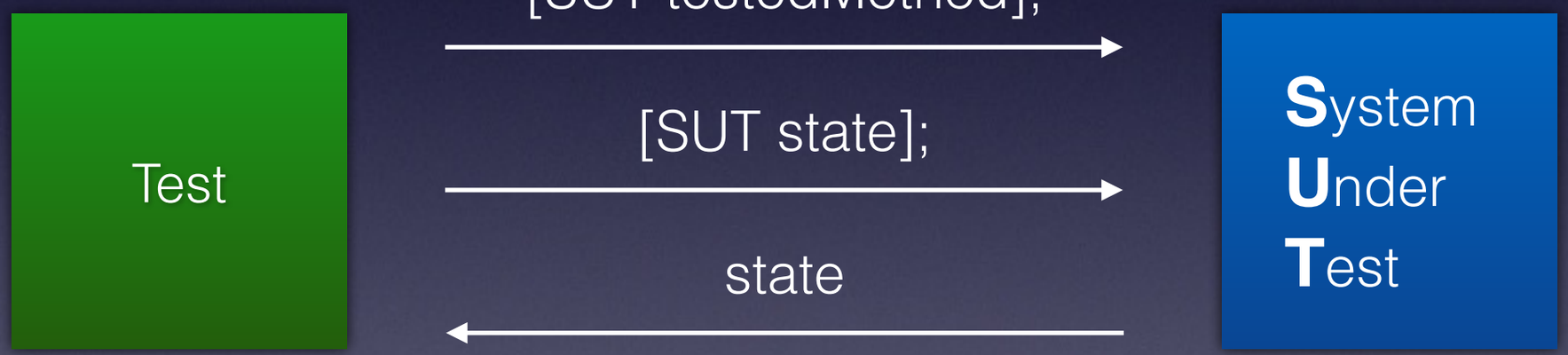
# Return Value Test



# State Test (AAA)

- **A**rrange - Setup object
- **A**ct - Call method under test
- **A**ssert - Compare object's state with expectations

# State Test



# Interaction Test (AAA)

- **A**rrange - Setup object
- **A**ct - Call method under test
- **S**imulate - simulate behaviour
- **A**ssert - Verify integration

# Interaction Test

processOrder

getDishes

I'm a cook

Fake cook

Table

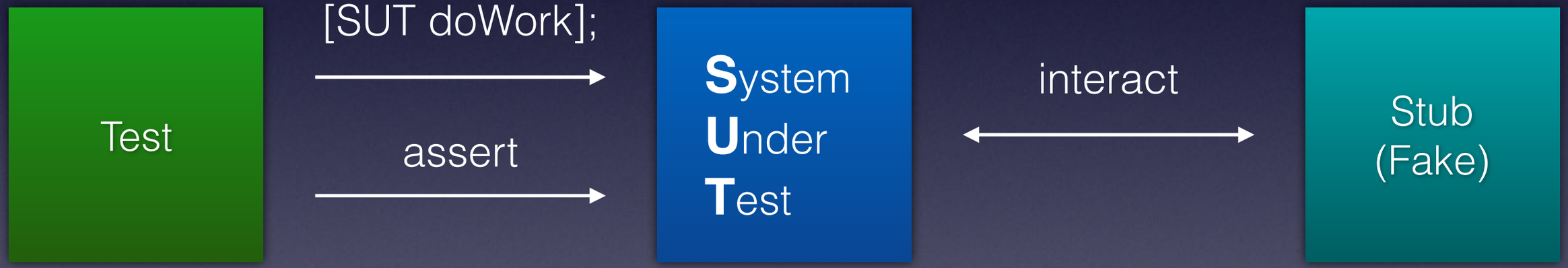
Waiter

Cook

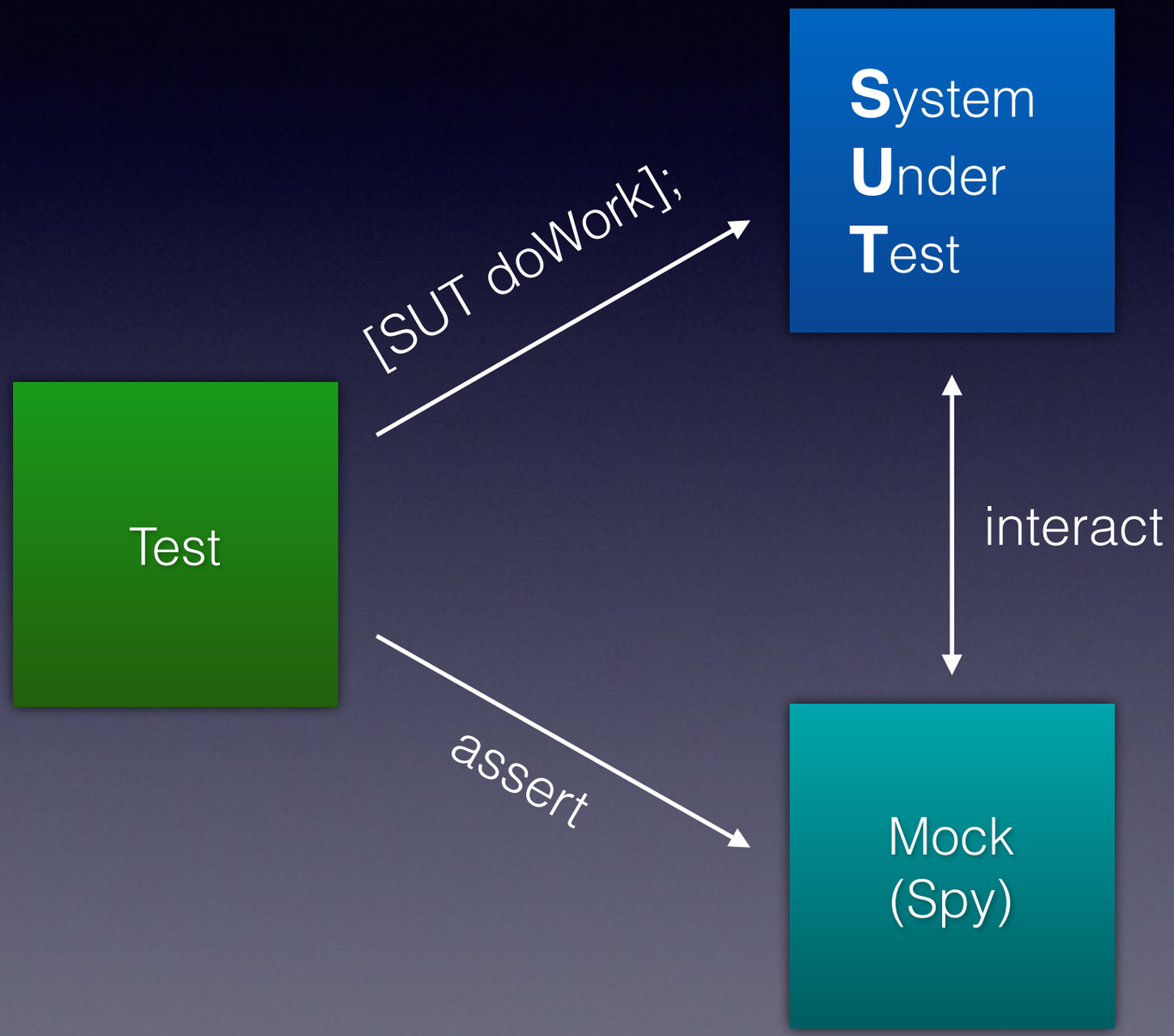
# Test doubles - basics

- **Mock** - verify if SUT uses dependency correctly
- **Spy** - indirect access to SUT output
- **Stub** - indirect input to SUT
- **Fake** - simulated, lighter implementation

# Interaction Test (1)



# Interaction Test (2)



# Hands on

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