



Curtin University

# Testing

ISYS5002, School of Marketing and Management

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I acknowledge the traditional custodians of the land on which I work and live, and recognise their continuing connection to land, water and community. I pay respect to elders past, present and emerging.

# You already doing tests!

- We check for features
- Experiment with input
- Exploratory testing

# 3 Ways of Thinking

- You users (Black box)
- The testers (grey Box)
- Developers (White Box)

# Black Box

- Functionality
- Input Validation
- Output Results
- Boundary cases

# Grey Box

- Same things a Black Box
- Logging
- Add System information

# White Box

- Test all branches of code
- Proper Error Handling
- Test input/outputs of functions
- Resource constraints

# Types of Testing

- Unit test
- Integration testing
- System testing

# Options in Python

- assert statement
- Frameworks
  - doctest
  - unittest
  - nose (or nose2)
  - pytest
  - testbook (notebooks)
  - ipython-unittest (notebooks)
  - many others

# Testing Everything

- Build up a suite of Tests
- Run all test with one command
- Regression testing
- Test Table