

Ch 3 

## Validation

- formal methods
- code review
- testing

## Test-first programming

- ① write a specification
- ② write tests for specific cases
- ③ write code

## Black box testing

- choosing test cases only from the spec

## Whitebox testing

- choosing test cases from implementation

## Coverage

- ↳ statement → is every statement covered?
- ↳ branch → every *if/while* for every *true/false*
- ↳ path → every combination of branches

## Unit Test

- positive test of individual module

## Integration Test

- positive test of combination of modules

## Automated Regression Testing

- automated full suite of tests after every change