

UNIT & INTEGRATION TESTING WITH JEST

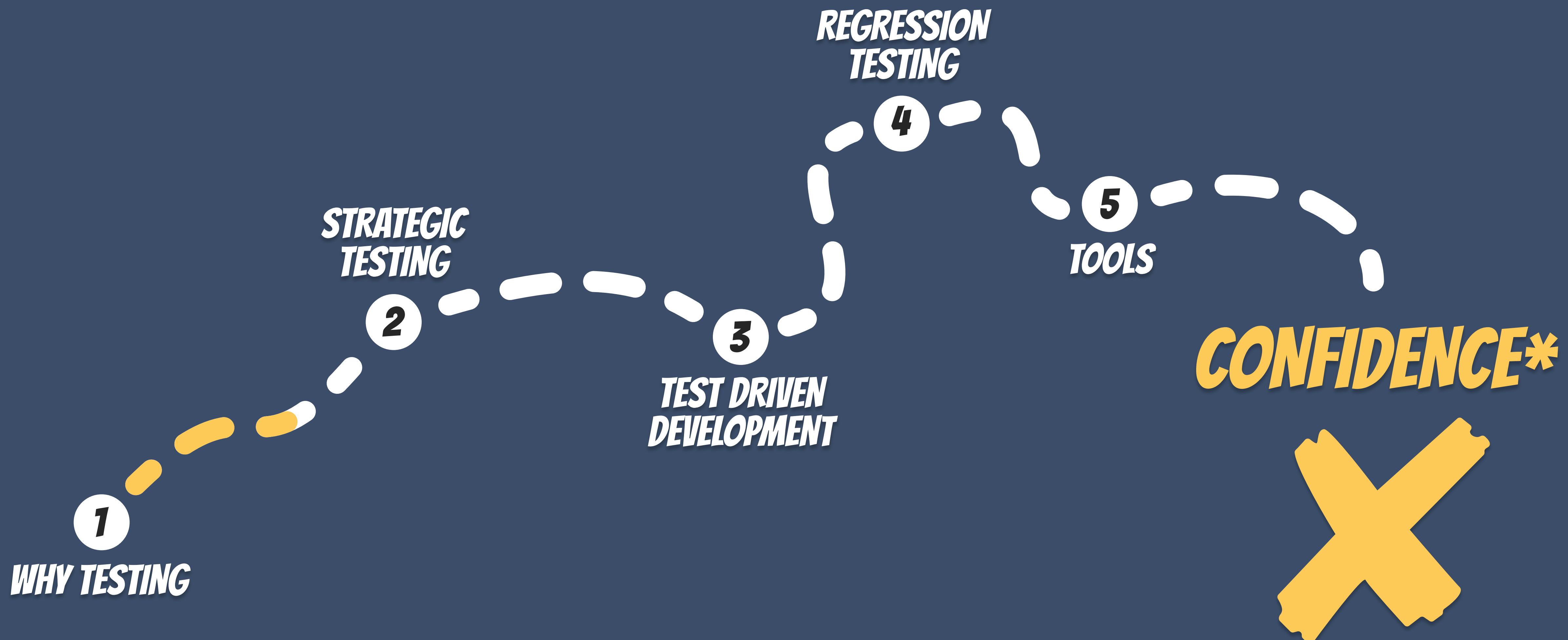
W8D1



WHY DO WE TEST?

**BECAUSE IT GIVES US
CONFIDENCE IN OUR CODE!**

OUR PATH TO **CONFIDENCE**



GUIDING PRINCIPLE

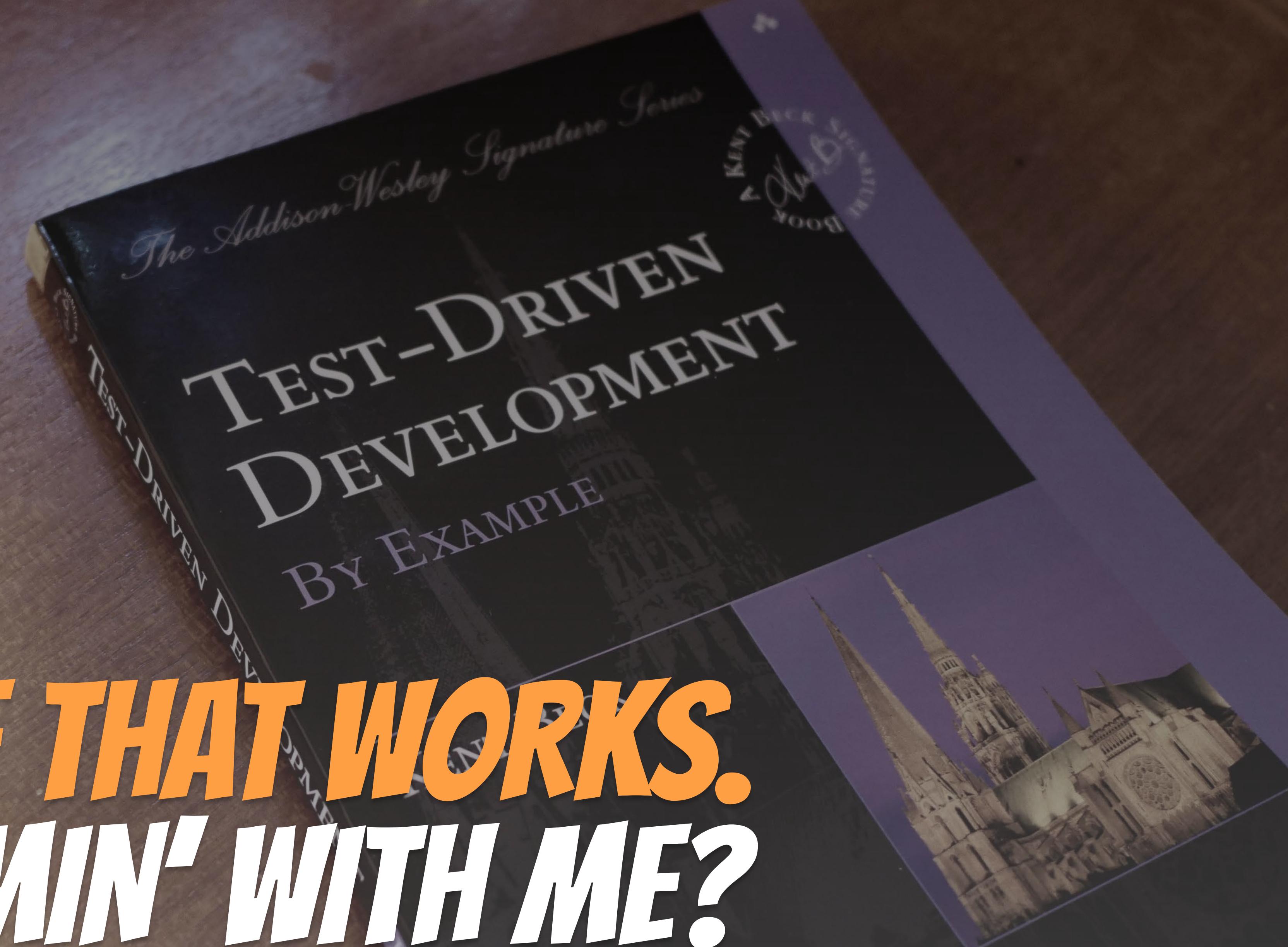
*THE MORE YOUR TESTS RESEMBLE
THE WAY YOUR SOFTWARE IS USED,
THE MORE CONFIDENCE
THEY CAN GIVE YOU.*

TOOLS vs. ***TESTING***

STRATEGIC TESTING



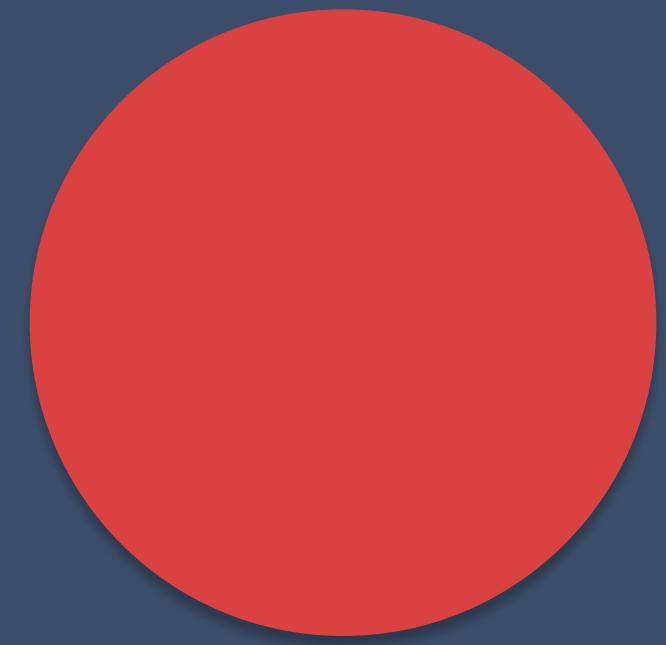
**CLEAN CODE THAT WORKS.
WHO'S COMIN' WITH ME?**



FOLLOW THE RULES

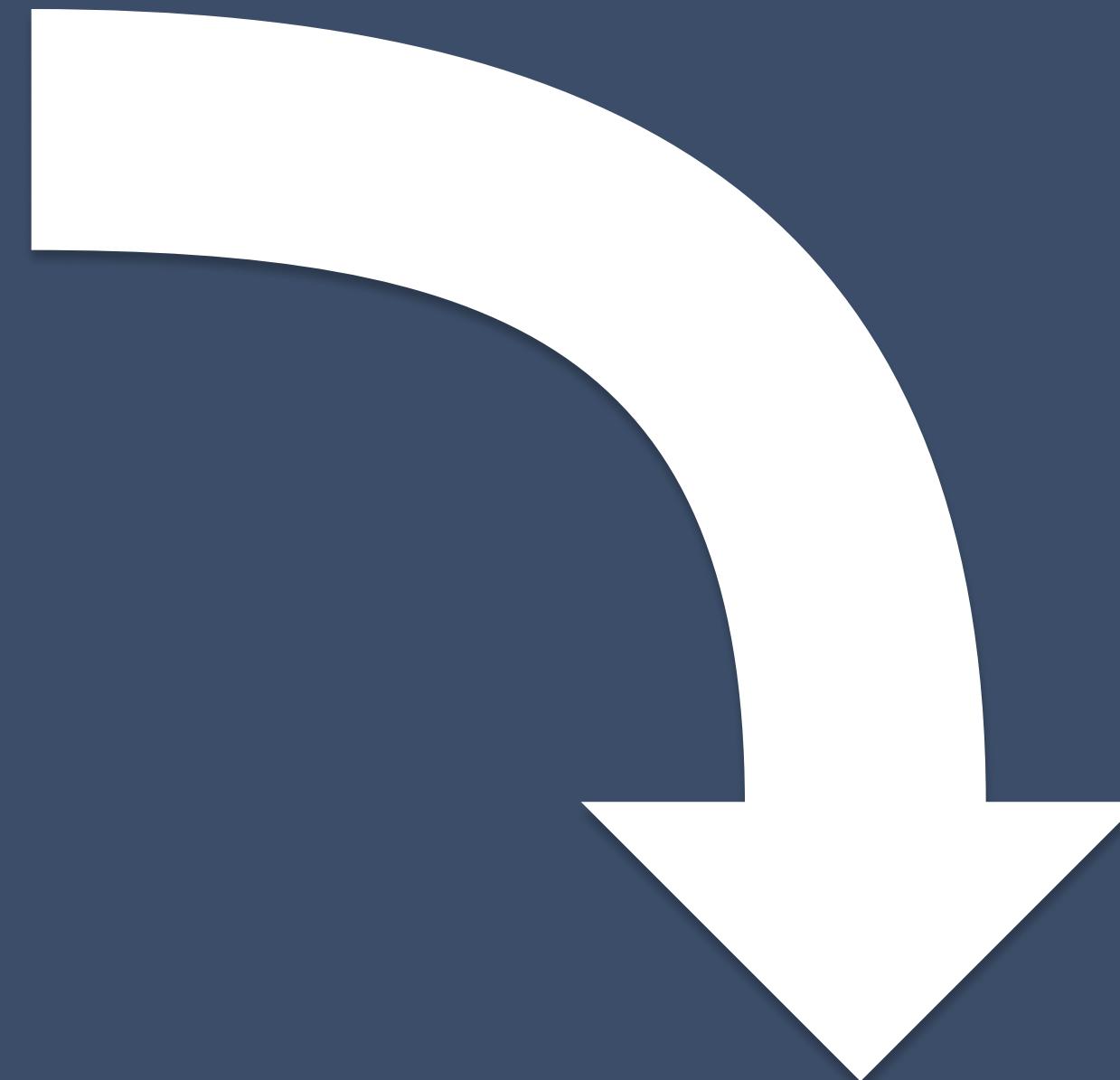
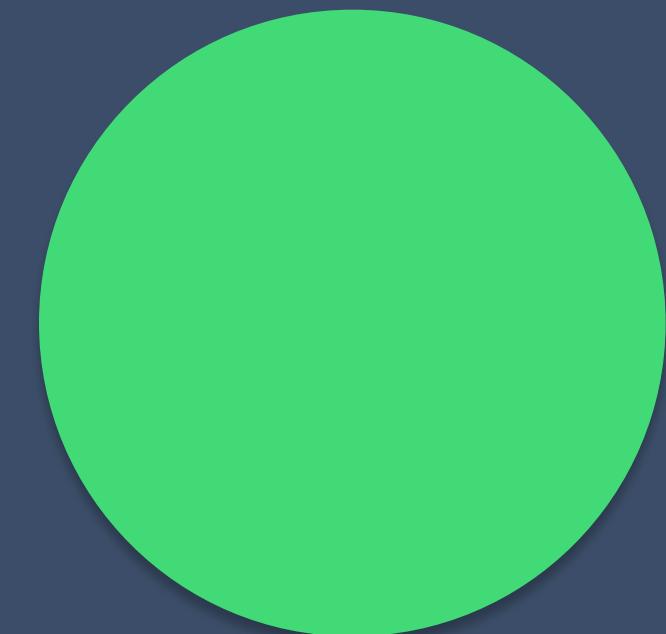
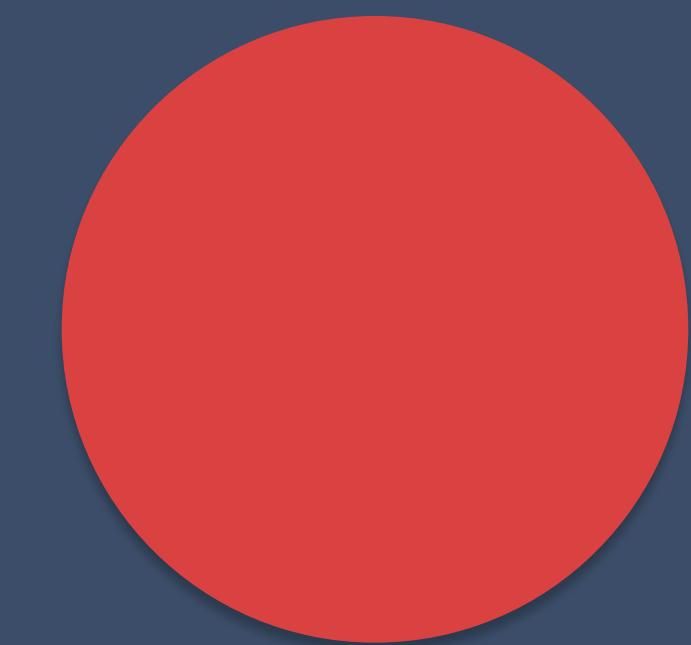
- 1) ONLY WRITE CODE IF A TEST FAILS***
- 2) ELIMINATE DUPLICATION**

**minimal code necessary to pass the test*

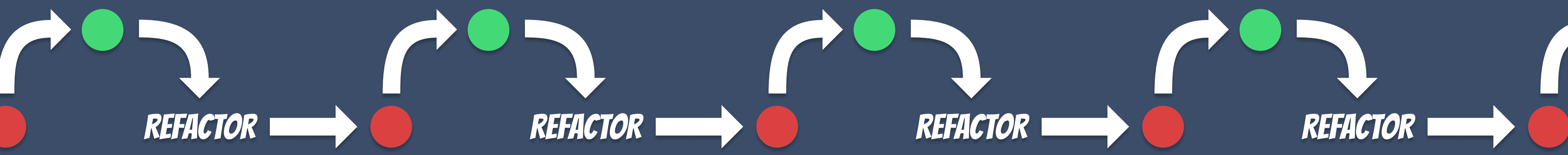


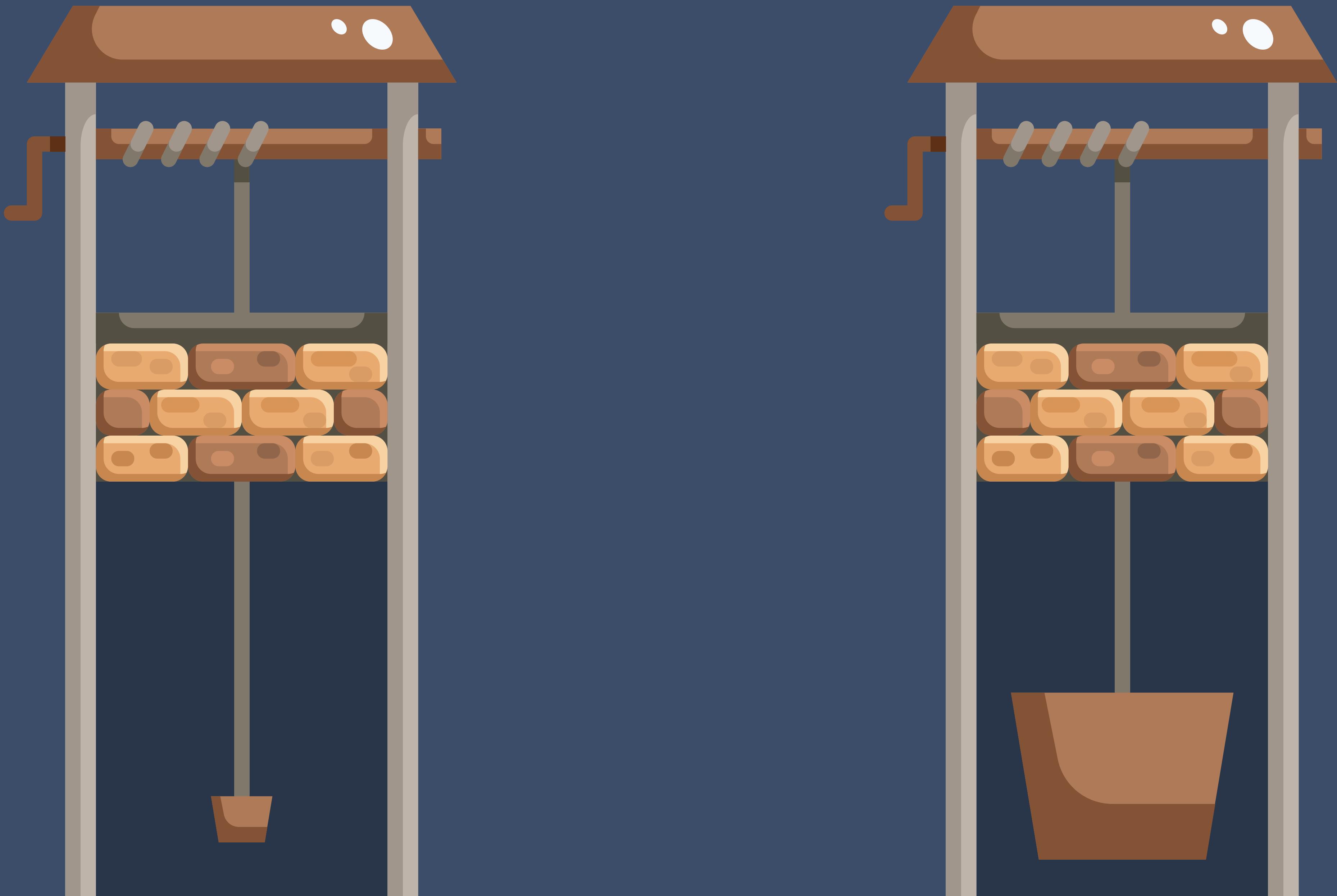
REFACTOR

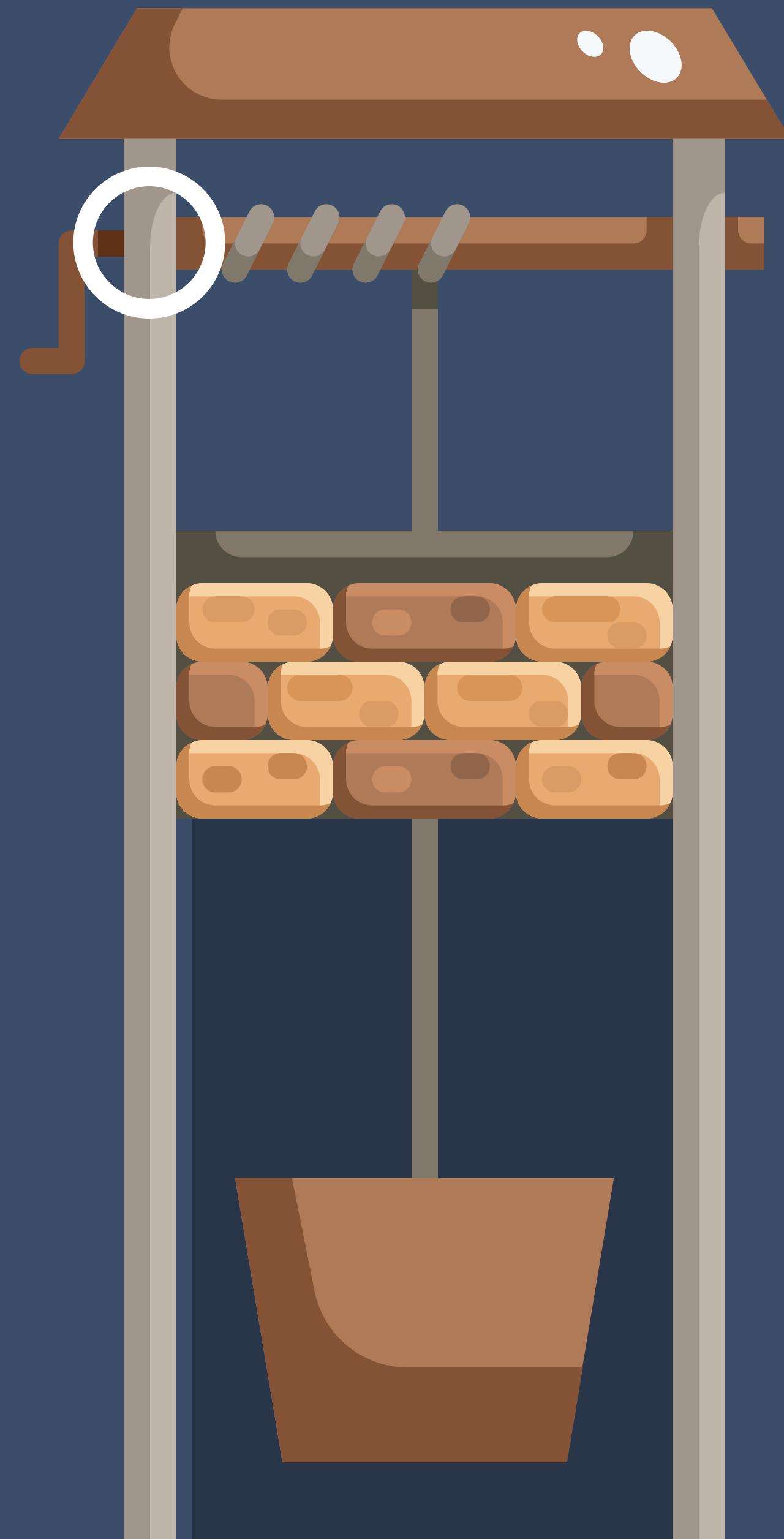
IS A PROCESS



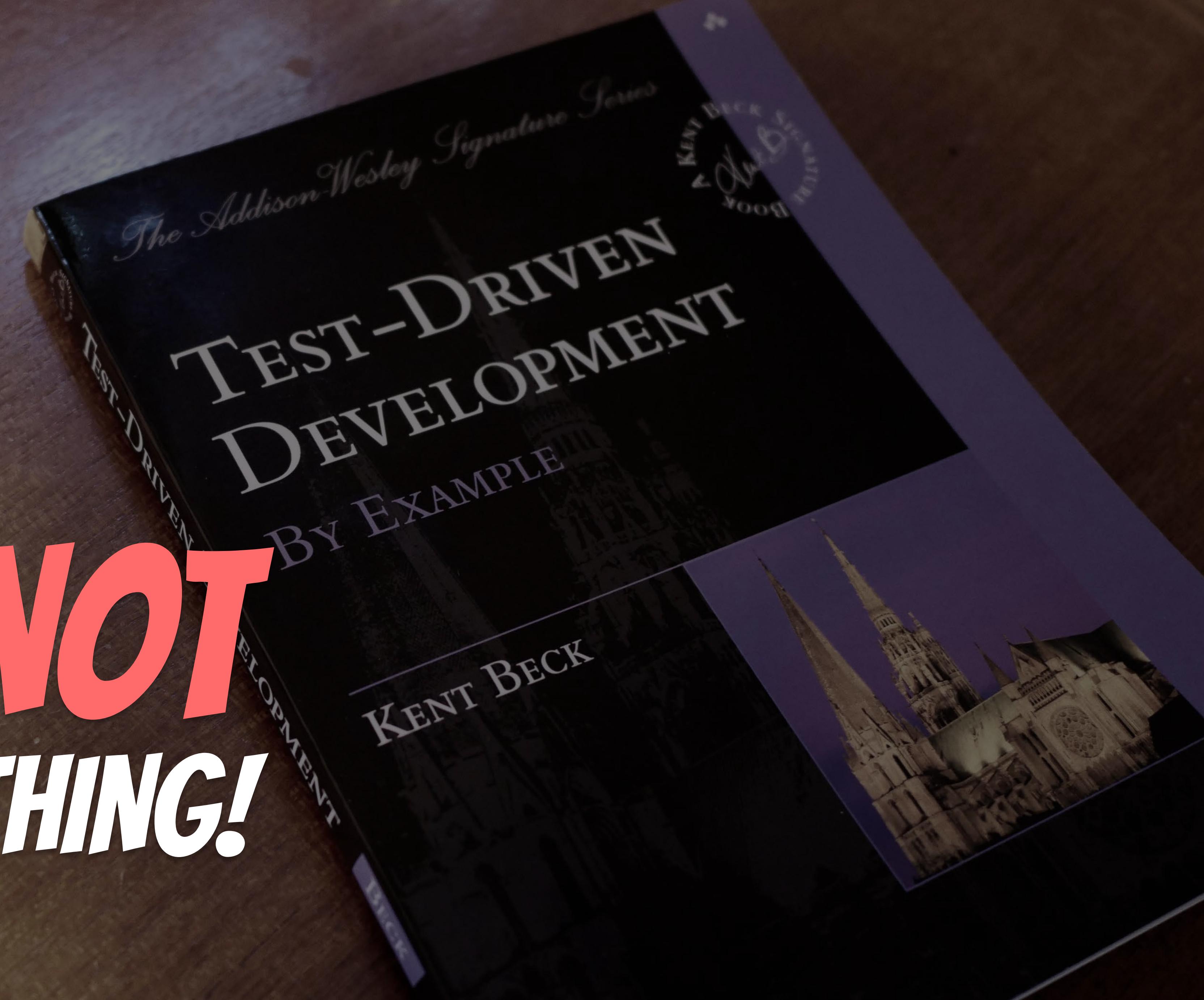
REFACTOR







**TDD IS NOT
ALL OR NOTHING!**



WHAT IS
REGRESSION
TESTING?

TOOLS
LIKE



TOOLS LIKE

@testing-library



/react



/react-hooks



/dom



/jest-dom

test runner 
matchers  
utilities   
mocking 
coverage 



test runner

```
  PASS packages/diff-sequences/src/__tests__/_index.test.js
  PASS packages/jest-diff/src/__tests__/_diff.test.js
  PASS packages/jest-mock/src/__tests__/_jest_mock.test.js
  PASS packages/jest-util/src/__tests__/_fakeTimers.test.js
  PASS packages/pretty-format/src/__tests__/_prettyFormat.test.js

  RUNS packages/jest-haste-map/src/__tests__/_index.test.js
  RUNS packages/pretty-format/src/__tests__/_DOMElement.test.js
  RUNS packages/jest-config/src/__tests__/_normalize.test.js
  RUNS packages/expect/src/__tests__/_matchers.test.js
  RUNS packages/pretty-format/src/__tests__/_Immutable.test.js
  RUNS packages/expect/src/__tests__/_spyMatchers.test.js
  RUNS packages/jest-cli/src/__tests__/_SearchSource.test.js
  RUNS packages/jest-runtime/src/__tests__/_script_transformer.test.js
  RUNS packages/jest-cli/src/__tests__/_watch.test.js
  RUNS packages/jest-haste-map/src/crawlers/__tests__/_watchman.test.js
  RUNS packages/pretty-format/src/__tests__/_react.test.js

Test Suites: 5 passed, 5 of 303 total
Tests:       332 passed, 332 total
Snapshots:   21 passed, 21 total
Time:        4s
```

```
describe("group of tests", () => {  
  it("should test something", () => {
```



```
});  
});
```

```
describe("group of tests", () => {  
 xit("should skip this test", () => {
```



```
});  
});
```

```
test("two plus two is four", () => {  
  expect(2 + 2).toBe(4);  
});
```

jest matchers



custom jest-dom matchers



toBeDisabled
toBeEnabled
toBeEmpty
toBeEmptyDOMElement
toBeInTheDocument
toBeInvalid
toBeRequired
toBeValid
toBeVisible
toContainElement
toContainHTML

toHaveAttribute
toHaveClass
toHaveFocus
toHaveFormValues
toHaveStyle
toHaveTextContent
toHaveValue
toHaveDisplayValue
toBeChecked
toBePartiallyChecked
toHaveDescription

/vue

/react



/angular



utilities

@testing-library



/react-hooks



/dom



/dom

API
@testing-library

get
getAll By Text
query
queryAll
find
findAll

LabelText
PlaceholderText
AltText
Title
DisplayValue
Role
TestId



/react

render
cleanup
act

```
test("mock is not called", () => {  
  const mock = jest.fn();  
  expect(mock).toHaveBeenCalledTimes(0);  
});
```



mocking



coverage

```
~/d/p/j/j/e/timer $ yarn jest --coverage
yarn run v1.12.3
$ /Users/ortatherox/dev/projects/jest/jest/examples/timer/node_modules/.bin/jest --coverage
PASS  __tests__/timer_game.test.js
PASS  __tests__/infinite_timer_game.test.js
-----|-----|-----|-----|-----|-----|
File      | %Stmts | %Branch | %Funcs | %Lines | Uncovered Line #s |
-----|-----|-----|-----|-----|-----|
All files |    87.5 |     100 |      80 |    87.5 |           |
infiniteTimerGame.js |     80 |     100 |  66.67 |     80 |      12 |
timerGame.js |    100 |     100 |     100 |    100 |           |
-----|-----|-----|-----|-----|-----|
Test Suites: 2 passed, 2 total
Tests:       4 passed, 4 total
Snapshots:   0 total
Time:        0.878s, estimated 1s
Ran all test suites.
```

→ **QUESTIONS?** ←