

Front-end unit tests

—

Agenda

1. What is test
2. The Type of Tests
3. Why test ?
4. Demo
5. Summary

What is testing?

Testing is code that checks the code you write in your app works as expected.

About unit test?

Unit test is the test that tests the unit of code, whether they be functions, modules, or classes.

The Types of Tests (Test Pyramid)

E2E Test: Longer running time, high value cost

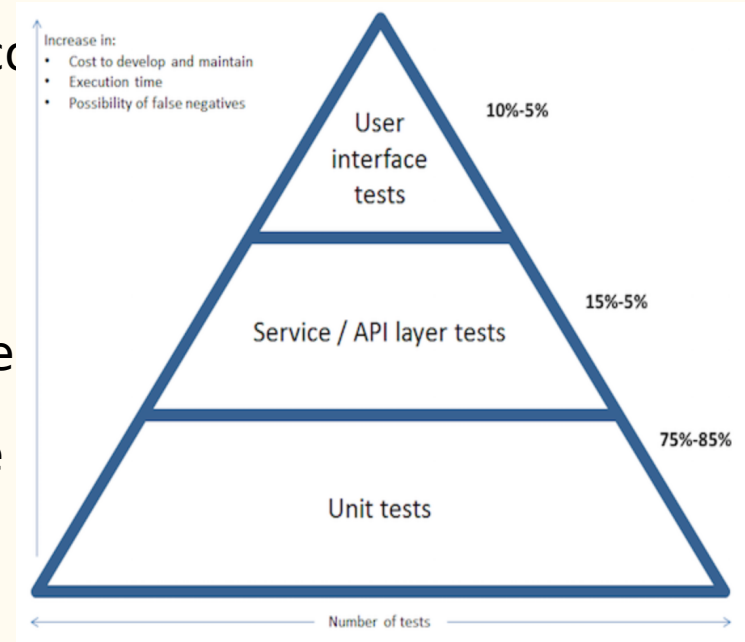
And higher maintenance cost

Integration Test (Feature test):

Running time and value in between

Unit Test: shorter running time, lower value

And lower maintenance cost



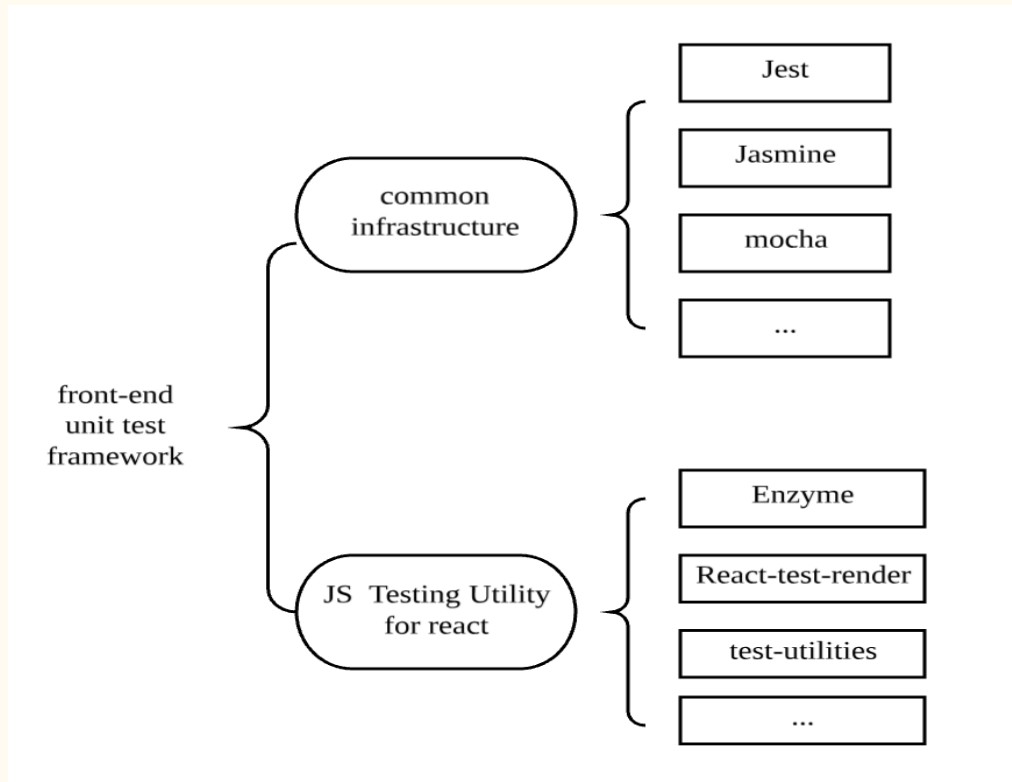
Why Test?

1. When we develop a new feature, writing tests can help us :
 - organize our ideas
 - think of some boundary anomalies
 - ensure the quality of the code
 - increase our code confidence.

Why Test?

2. When we want to modify existing code, such as: bug or refactoring, unit testing can ensure that we do not destroy existing features.

Test framework for front-end



Learning from the demo

Here is a story:

My name is Json, I am a front-end developer. Yesterday I got a story card from our BA. I have finished the development of the features of this card. Now I need to add the tests to verify the correctness of the code.

This is my code:

GitHub : git@github.com:MHwishes/react-unit-test-demo.git

Story AC:

AC1 : When user input a new todo-item, and the press enter, we can see the new todo item in the list.

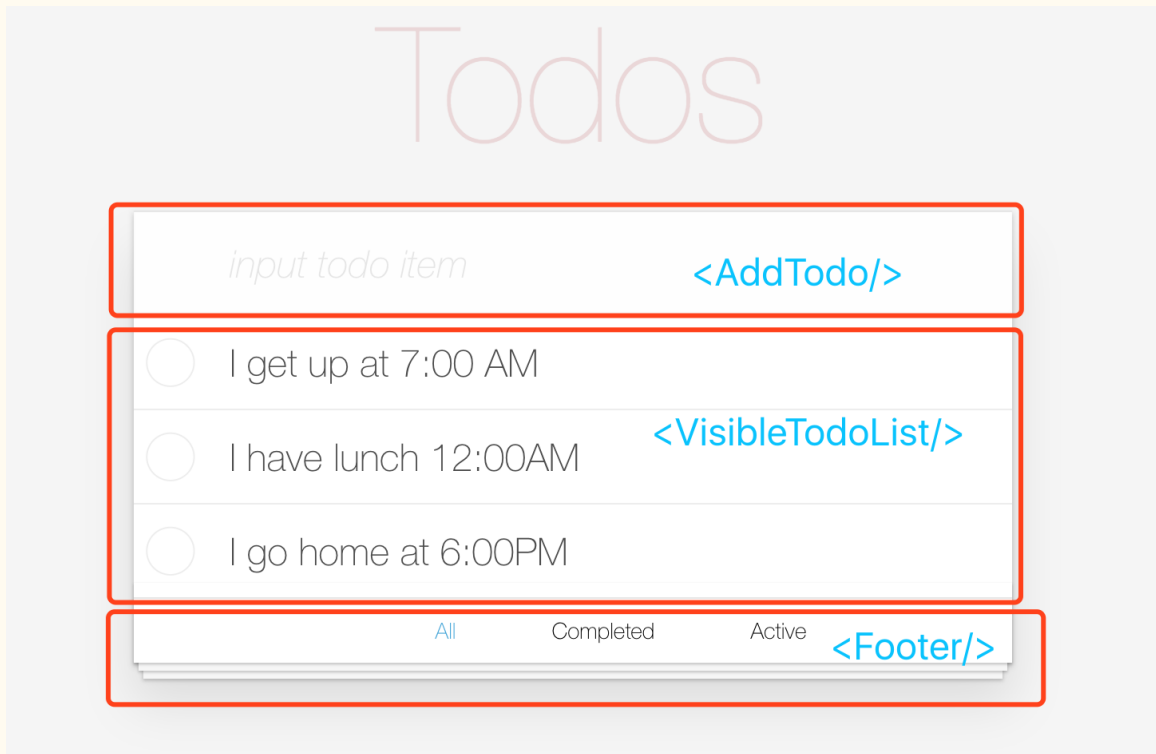
AC2: When user finish this todo-item, Click this todo-item, the item is marked as completed.

AC3: When user click footer `All` button, all the items should be show.

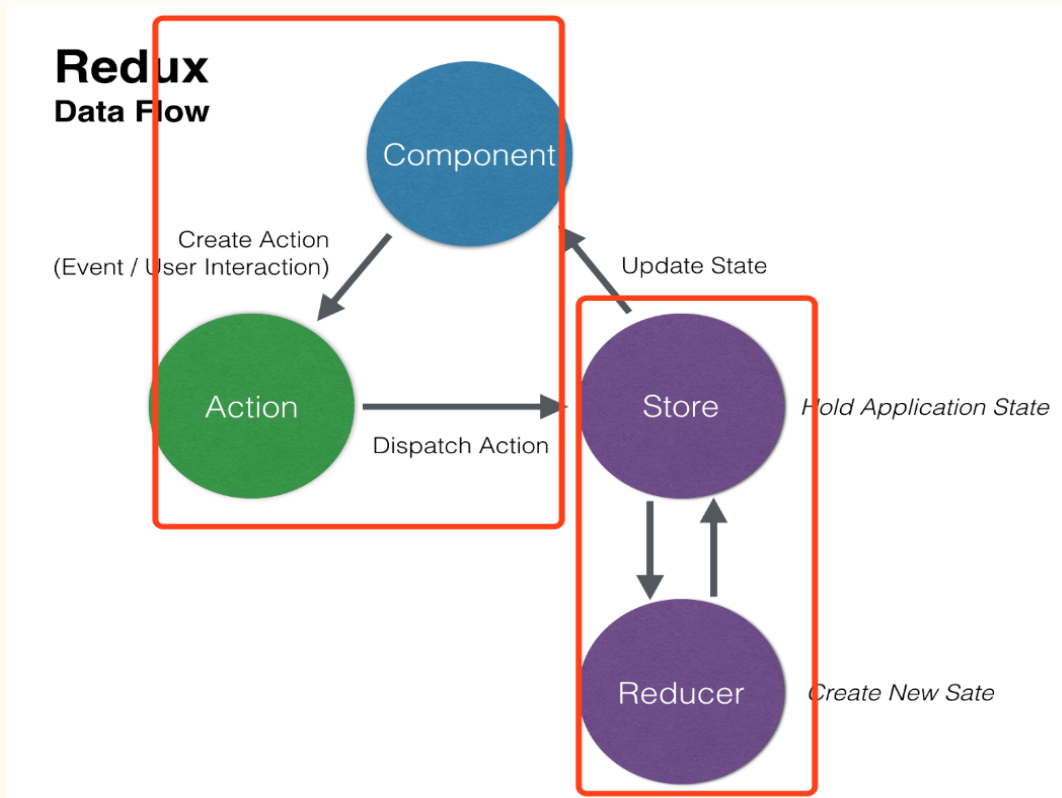
AC4: When user click footer `Completed` button, all the completed items should be show.

AC5: When user click footer `Active` button, all the unfinished items should be show.

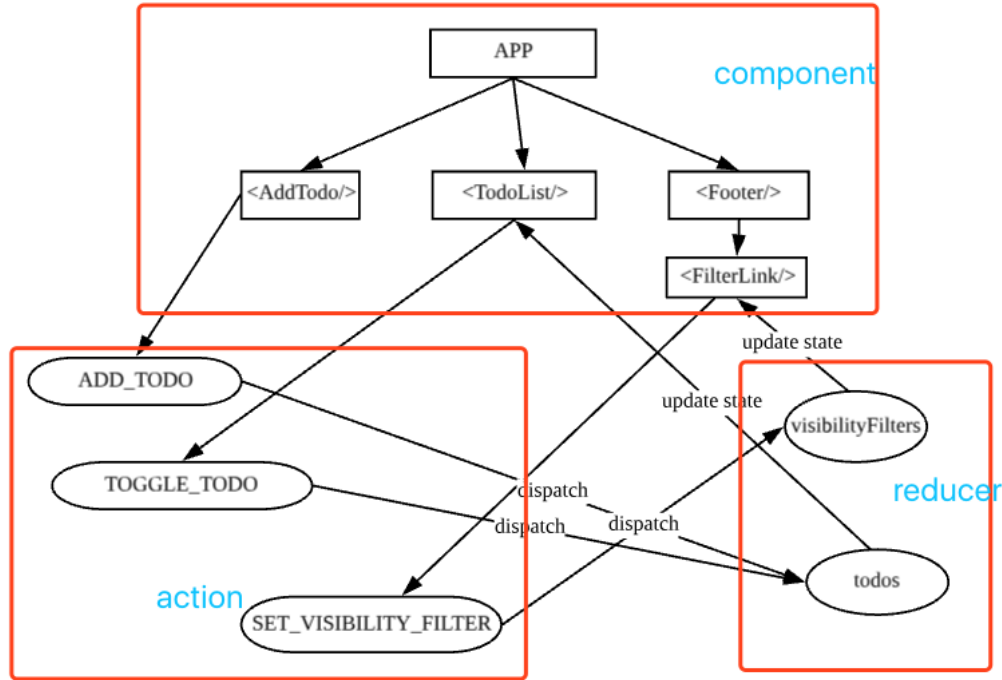
Demo components



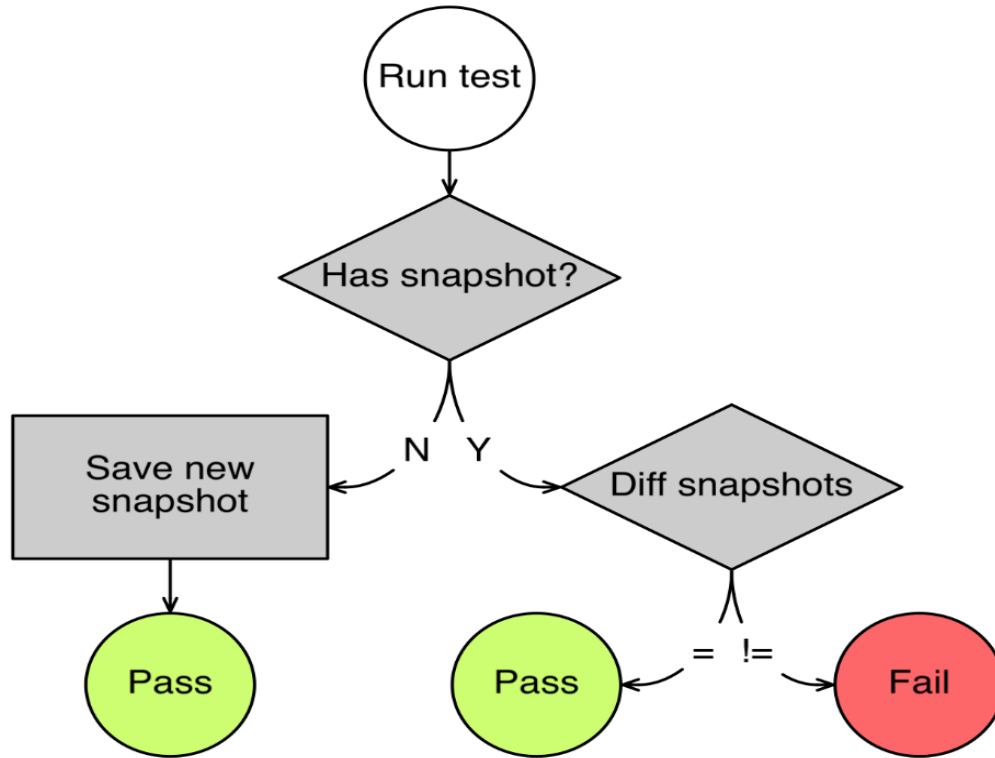
How to split to write test?



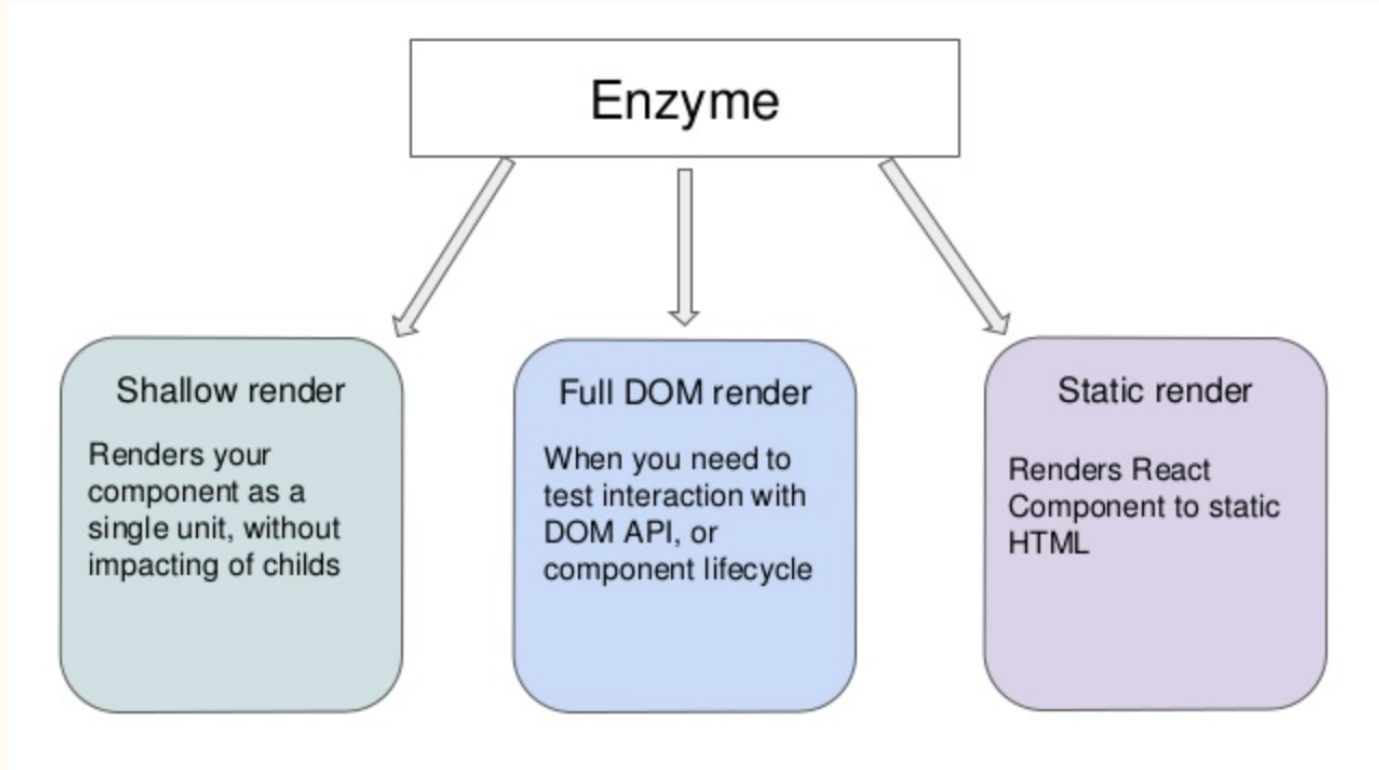
Todo-list demo structure



Snapshot flow



The three rendering way of Enzyme



Summary

What does the front-end need to test?

- Function , such as ordinary logic test
- Interface & Interactive Testing

Summary

Reference document:

1. Snapshot Test : <https://jestjs.io/docs/en/snapshot-testing>
2. Enzyme : <https://airbnb.io/enzyme/>
3. Demo : <https://github.com/MHwishes/react-unit-test-demo>
4. <https://medium.com/codeclan/testing-react-with-jest-and-enzyme-20505fec4675>

Thank you