Snapshot Testing using React and Jest

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What is React?

The JavaScript package known as React.js is open-source, developed by Facebook and is used for the construction of user interfaces, more especially for single-page apps.

Its primary function is to manage the view layer in both online and mobile applications. Additionally, React enables us to construct UI components that may be reused.

React also makes use of a component-based architecture, a clearly defined lifecycle, and plain JavaScript. It is also possible to combine HTML and JavaScript thanks to React's use of a specialized syntax known as JSX.

What is Jest?

Jest is a open-source JavaScript testing framework that was developed to assure that the accuracy of any codebase written in JavaScript. It enables you to create tests using an accessible, well-known, and feature-rich API that provides you with results in a short amount of time.

Jest was first developed by Facebook with the express purpose of testing apps written in React. One of the most common approaches to testing React components is to use this tool. Since it was first made available, the tool has seen a significant increase in demand. As a result of its popularity, the JavaScript front-end and back-end apps that are being tested are now being tested using Jest.

What is Snapshot Testing?

Similar to debugging, testing using snapshots is a method that involves comparing two "snapshots" or values of an object in order to determine whether or not the content of the object has changed. It gives you the ability to test that the output you are using for a visual component is still functioning according to the design.

This is very promising because, as your code develops over time, there is a larger probability that these changes may result in behavior that was not anticipated. This means that there is a bigger potential for unexpected behavior. Snapshot testing tries to solve this issue by establishing comparisons to a previous state of the application.

Why Snapshot testing?

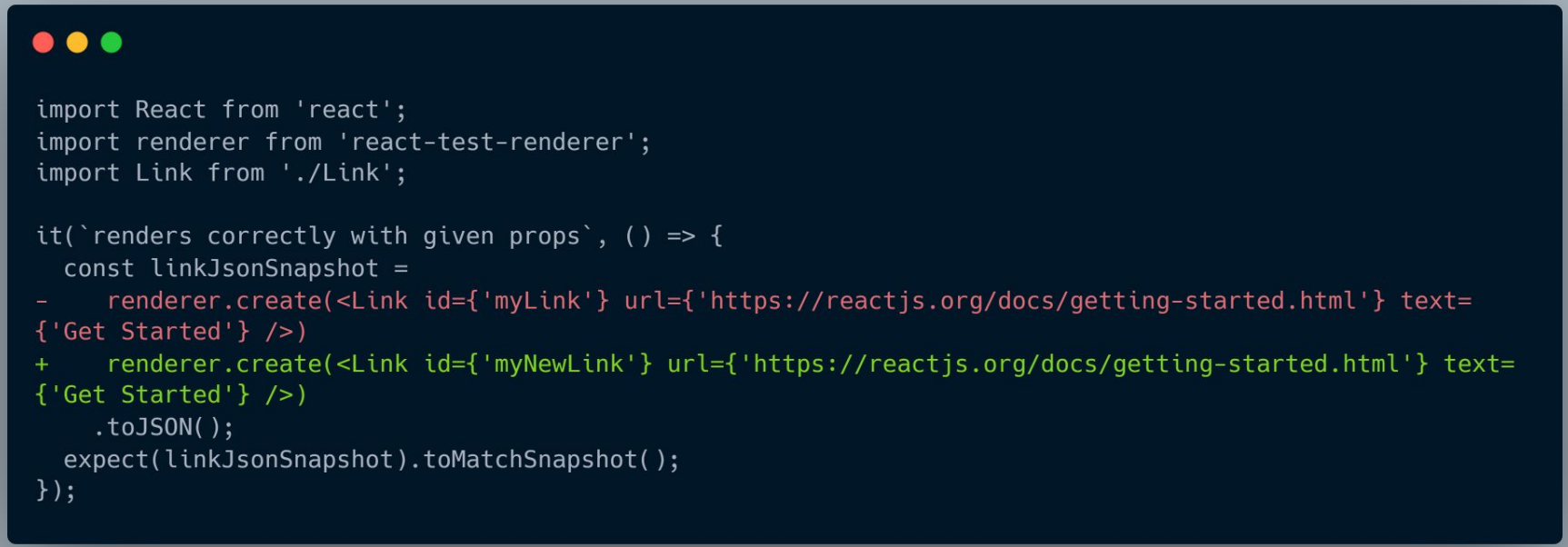
Because there was a need for a more straightforward approach to writing tests for components. According to a number of reports from React developers, they spend more time building tests than they do working on the actual component. As a result, snapshot testing enables developers working with React to rapidly write tests by using its straightforward syntax.

Just two lines of code are all that are required to generate a snapshot test. To begin, you must provide a component along with its individual characteristics that you want to validate. You may produce an output for your component by executing the toJSON() method. This output can then be compared at a later time in order to identify UI changes that were not intended. Following that, we can compare the freshly created output with the current snapshot by using the toMatchSnapshot() method and passing the output that was just generated to the expect() assertion.

Example

```
import React from 'react';
import renderer from 'react-test-renderer';
import Link from './Link';

it(`renders correctly with given props`, () => {
  const linkJsonSnapshot =
  renderer.create(<Link id={'myNewLink'} url={'https://reactjs.org/docs/getting-started.html'} text={'Get
Started'} />)
    .toJSON();
  expect(linkJsonSnapshot).toMatchSnapshot();
});
```

```
// Jest Snapshot v1, https://goo.gl/fbAQLP

exports[`renders correctly with given props 1`] = `
<a
  href="https://reactjs.org/docs/getting-started.html"
  id="myLink"
>

  Get Started

</a>
`;
```



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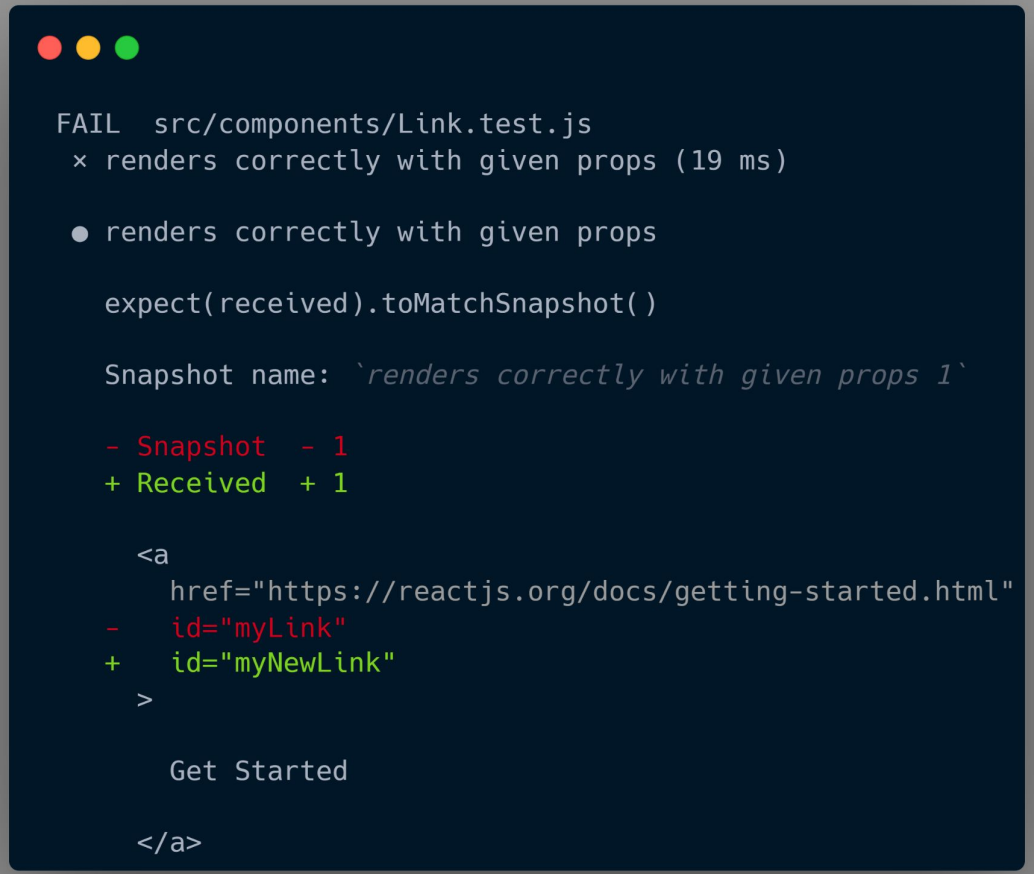
FAIL src/components/Link.test.js
× renders correctly with given props (19 ms)
● renders correctly with given props
expect(received).toMatchSnapshot()
Snapshot name: `renders correctly with given props 1`
- Snapshot - 1
+ Received + 1
<a
href="https://reactjs.org/docs/getting-started.html"
- id="myLink"
+ id="myNewLink"
>
Get Started

More Info

https://github.com/VictorGazzinelli/react-jest-snapshot-testing