



React Unit Testing Mock Test (Vitest + React Testing Library)

Instructions: Answer the following 20 questions based on your understanding of unit testing with Vitest and React Testing Library.

Website Used : <https://robinwieruch.de/react-testing-library/>

1. Which test runner does Robin recommend using with Vite?
2. What environment must be specified in Vite's config to enable DOM testing?
3. Name two libraries you need to install alongside Vitest for React component testing.
4. In Vitest (or Jest), what's the purpose of `describe(...)` and `it(...)` blocks?
5. What Vitest function is used to check if a value meets certain conditions (e.g. equality)?
6. Which React Testing Library function is used to render a component in tests?
7. How can you inspect the rendered DOM output during a test for debugging?
8. Which screen method do you use to select an element by its visible text?
9. Which method selects elements by their accessibility role (e.g., "button", "textbox")?
10. Name two other query methods besides `getByText` and ` getByRole`.
11. What's the key difference between `getBy`, `queryBy`, and `findBy` variants?
12. Which variant would you use to assert that *no* element is present?
13. Which variant is appropriate for elements that appear asynchronously?
14. After selecting an element, what assertion should you use to check it's in the DOM?
15. What's the recommended React Testing Library API for simulating typing or clicks?
16. Which lower-level API does `userEvent` wrap or improve upon?
17. How do you verify a callback handler (e.g. `onChange`) was called using Vitest?
18. If you type ten characters with `userEvent.type`, how many times does `onChange` fire?
19. When mocking `axios.get` to return data, which method lets you wait for DOM updates?
20. How do you test an error state if the API request fails (e.g. show error message)?

Attempt #1 - 67.5%.

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Instructions: Answer the following 20 questions based on your understanding of unit testing with Vitest and React Testing Library.

- 1 1. Which test runner does Robin recommend using with Vite?
Vite by itself - it's a better version of Jest
- 1 2. What environment must be specified in Vite's config to enable DOM testing?
- 1 3. Name two libraries you need to install alongside Vitest for React component testing.
React testing library, Jest?
4. In Vitest (or Jest), what's the purpose of `describe(...)` and `it(...)` blocks?
disc - testing suite - Paxbox multiple test cases into one group, it - individual test case
5. What Vitest function is used to check if a value meets certain conditions (e.g. equality)?
.expect()
6. Which React Testing Library function is used to render a component in tests?
render(Component />)
7. How can you inspect the rendered DOM output during a test for debugging?
Screen.debug()
8. Which screen method do you use to select an element by its visible text?
.getByText()
9. Which method selects elements by their accessibility role (e.g., "button", "textbox")?
.getByRole()
- 0.5 10. Name two other query methods besides `getByText` and ` getByRole`.
getById, getByLabel
- 0.5 11. What's the key difference between `getBy`, `queryBy`, and `findBy` variants?
query - check if something is fit there, find - will be done (async), getBy - default
12. Which variant would you use to assert that *no* element is present?
query
13. Which variant is appropriate for elements that appear asynchronously?
Find
- 0.5 14. After selecting an element, what assertion should you use to check it's in the DOM?
.expect .toBeInTheDocument()
15. What's the recommended React Testing Library API for simulating typing or clicks?
userEvent
16. Which lower-level API does `userEvent` wrap or improve upon?
LiveEvent
- 1 17. How do you verify a callback handler (e.g. `onChange`) was called using Vitest?
waitFor
18. If you type ten characters with `userEvent.type`, how many times does `onChange` fire?
10 times
19. When mocking `axios.get` to return data, which method lets you wait for DOM updates?
waitFor
- 1 20. How do you test an error state if the API request fails (e.g. show error message)?
new Error()

$$-5 + -1.5 = -6.5 + 10 = 13.5 / 20 = 67.5\%.$$

fr

Reflection

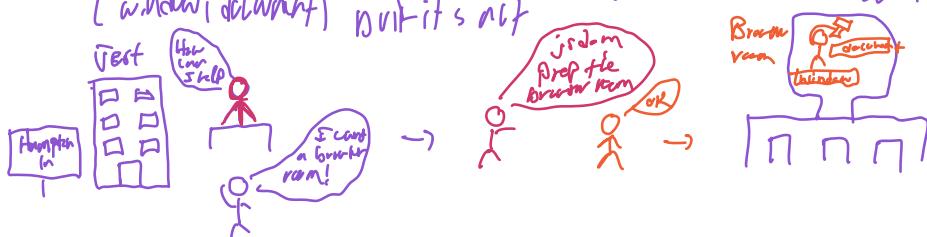
JS DOM - a library & testing environment

- automatically downloaded with jest

- Test depends on it

- Simulates the DOM in browser with code for representing items like document, window

- just is like a hotel that checks you in & asks for your room preferences. If the preference is for a browser-like env, just will ask an employee (jsdom) specialized in setting up browser-like environment behind the scenes. When you walk into the room, it will feel like a browser-room (`window, document`) but it's not



vii - `vitest` global mock object, help simulate functions & other behaviors for testing

vii.`fn()` - creates a mock function

mock function - fake function that typically has no real code

used for Control, observation, isolation

- can force a function to return specific values (control, isolation)

- can track context about the function calls, ie how many times does it return

- can simulate behavior

Attempt #2 - 85%. Pass but we can do better!

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1. Which test runner does Robin recommend using with Vite?

Vitest

2. What environment must be specified in Vite's config to enable DOM testing?

TSDom

- 0.5 ✓ 3. Name two libraries you need to install alongside Vitest for React component testing.

@testing-library/react @react/jest

4. In Vitest (or Jest), what's the purpose of `describe(...)` and `it(...)` blocks?

describe collects test cases it = individual test calls

5. What Vitest function is used to check if a value meets certain conditions (e.g. equality)?

.expect

6. Which React Testing Library function is used to render a component in tests?

render()

7. How can you inspect the rendered DOM output during a test for debugging?

Screen.debug()

8. Which screen method do you use to select an element by its visible text?

, getByText

9. Which method selects elements by their accessibility role (e.g., "button", "textbox")?

, getByRole

10. Name two other query methods besides `getByText` and ` getByRole`.

, getByLabelText getBy id

11. What's the key difference between `getBy`, `queryBy`, and `findBy` variants?

. getBy returns an error if not found, query returns null, & findBy

12. Which variant would you use to assert that *no* element is present?

queryBy

requires asynch function,

13. Which variant is appropriate for elements that appear asynchronously?

findBy

- 0.5 ✓ 14. After selecting an element, what assertion should you use to check it's in the DOM?

, toBeInTheDocument

15. What's the recommended React Testing Library API for simulating typing or clicks?

useEvent

- 0.5 ✓ 16. Which lower-level API does `useEvent` wrap or improve upon?

fireEvent

- ✓ 17. How do you verify a callback handler (e.g. `onChange`) was called using Vitest?

18. If you type ten characters with `userEvent.type`, how many times does `onChange` fire?

10

19. When mocking `axios.get` to return data, which method lets you wait for DOM updates?

findBy, waitFor

- 0.5 ✓ 20. How do you test an error state if the API request fails (e.g. show error message)?

match answer, render error

$$-2-1-1 = 17/20 = 85\%.$$

- just-dom is entirely different from jdom,
it just adds functionality to assertion functions
provided by Vitest
- to spot for an error, you should mock the error &
function an assertion to see if the expected results
matches the observed behavior
- toBeInTheDialect is provided by @testing-library/jest-dom
- the naming format '@ Parent-Package/child-package'
is for scoped packages
 - helps indicate that an entire org is maintaining ^{all powers} child packages
 - Encapsulate parent is built on child package
 - have to install child package separately,
the formatting just indicates dependency of ownership
- for testing a function
 - create a mock func vi.fn()
 - pass func as prop to component being tested
& assign to `_onChange` func that fires when
the component's value changes
 - Create an event `fireEvent` (component obj,
to change component's value ^{target obj})
 - Use an assertor & leverage vitest's mock
function object to collect data on its # of callbacks,
so if the assertion fails or passes

Attempt #3 → 100% Pass

✍ React Unit Testing Mock Test (Vitest + React Testing Library)

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1. Which test runner does Robin recommend using with Vite?

Vitest

2. What environment must be specified in Vite's config to enable DOM testing?

jsdom

3. Name two libraries you need to install alongside Vitest for React component testing.

@testing-library/react

@testing-library/jest-dom

4. In Vitest (or Jest), what's the purpose of `describe(...)` and `it(...)` blocks?

organize & collect tests, it - individual test cases

5. What Vitest function is used to check if a value meets certain conditions (e.g. equality)?

expect

6. Which React Testing Library function is used to render a component in tests?

render

7. How can you inspect the rendered DOM output during a test for debugging?

screen.debug()

8. Which screen method do you use to select an element by its visible text?

getByText

9. Which method selects elements by their accessibility role (e.g., "button", "textbox")?

getByRole

10. Name two other query methods besides `getByText` and ` getByRole`.

getByValue getByLabelText

11. What's the key difference between `getBy`, `queryBy`, and `findBy` variants?

findBy - returns error if not found, query - return null, findBy - waits on async

12. Which variant would you use to assert that *no* element is present?

query

13. Which variant is appropriate for elements that appear asynchronously?

find

14. After selecting an element, what assertion should you use to check it's in the DOM?

toBeInTheDocument

15. What's the recommended React Testing Library API for simulating typing or clicks?

useEvent

16. Which lower-level API does `useEvent` wrap or improve upon?

fireEvent

17. How do you verify a callback handler (e.g. `onChange`) was called using Vitest?

• Use vi.fn(), pass onChange or props to component via onChange prop, simulate event.

18. If you type ten characters with `useEvent.type`, how many times does `onChange` fire?

10

19. When mocking `axios.get` to return data, which method lets you wait for DOM updates?

waitFor, findBy

20. How do you test an error state if the API request fails (e.g. show error message)?

mock an error, use assertions for testing the response behavior

Answer Key

1. Vitest
2. jsdom
3. @testing-library/react and @testing-library/jest-dom
4. Grouping and organizing tests and individual test cases
5. expect(...)
6. render(...)
7. screen.debug()
8. getByText(...)
9. getByRole(...)
10. getByLabelText, getByPlaceholderText
11. getBy throws an error if not found, queryBy returns null, findBy waits for async
12. queryBy
13. findBy
14. toBeInTheDocument()
15. userEvent
16. fireEvent
17. Use vi.fn() and assert it was called
18. 10 times
19. findBy or waitFor
20. Mock an error and assert error message is shown in the DOM