



Assessment for Week 5

Topics: React unit testing

Date of Assessment: Oct 11, 2021

Max score: 40 (for basic implementation) + 10 (bonus feature)

Time limit: 2 hours

Given the implementation of a PhoneBook that works in the way described below, write unit tests to test the following

1. It loads the initial set of contacts by making an API call
 - a. tests for the service fetching the data using axios (both positive case, and negative case)
 - b. test for testing if the UI shows the loading message when contacts are fetched
 - c. test for testing if the UI shows the contacts on load
 - d. test for testing if the UI shows the error message on failure to fetch
2. It allows you to add a contact by filling the form and clicking on the Add button. Make sure to test that the contact is not added if any of the fields is empty
3. It allows you to click on edit to edit the contacts (the edit form shows up, and that it re-renders the UI to show the updated contact details.
4. It allows you to click on delete to delete the contact

Extra credit

Also write tests to check the following functionality.

1. Edit and Delete buttons appears visually only on hovering over the contact card
2. Editing results in a correctly formed API call that saves the new contact details.

Instructions to run the app

Navigate to the server folder and run `npm install` followed by `npm start` to start the server app. Navigate to the client folder and run `npm install` followed by `npm start` to start the client app. Go to <http://localhost:3000> to view the running app. Play around with it to understand it (the features are also clearly described in the Appendix section for clarity).

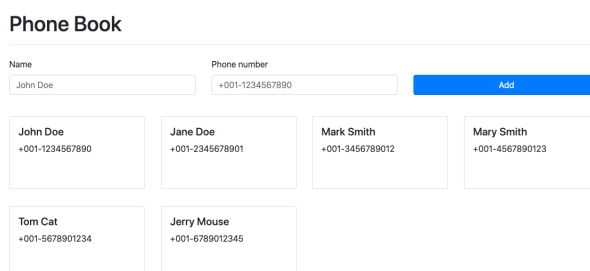
You need to write tests in the client project.

Appendix

Description of the app

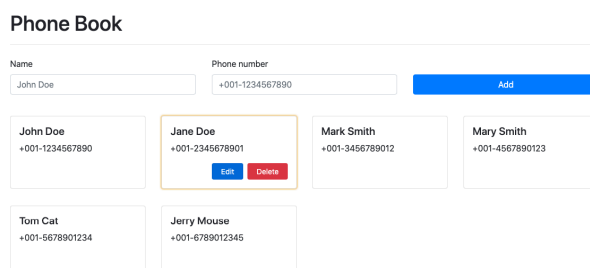
The PhoneBook app lets the user manage a list of contacts. A contact consists of a name and a (single) phone number.

Figure 1: When the app first loads, it fetches the list of contacts and shows the following form to add a contact. When the user enters contact details (name and phone number), and clicks the Add button, the contact is added.



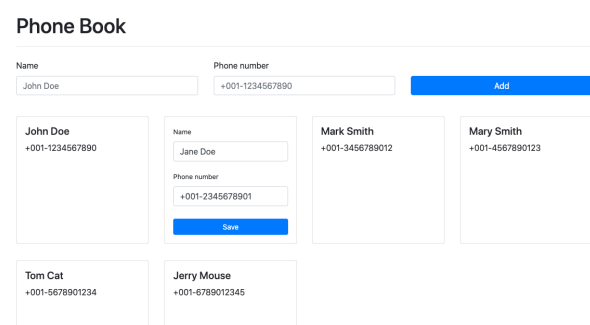
The screenshot shows the 'Phone Book' app interface. At the top, there is a form to add a new contact with two input fields: 'Name' (containing 'John Doe') and 'Phone number' (containing '+001-1234567890'). To the right of these fields is a blue 'Add' button. Below the form, there is a grid of contact cards. Each card displays a name and a phone number. The contacts listed are: John Doe (+001-1234567890), Jane Doe (+001-2345678901), Mark Smith (+001-3456789012), Mary Smith (+001-4567890123), Tom Cat (+001-5678901234), and Jerry Mouse (+001-6789012345).

Figure 2: When hovering over contact (say, Jane Doe), the **Edit** and **Delete** buttons appear.



This screenshot is similar to Figure 1, but the 'Jane Doe' contact card is highlighted with a yellow border. Below the name and phone number on this card, two small buttons have appeared: a blue 'Edit' button and a red 'Delete' button. The other contact cards and the 'Add' form remain the same.

Figure 3: Clicking the Edit button, opens up a form inside the clicked card, with details of the contact populated in the inputs.



This screenshot shows the 'Jane Doe' contact card with the 'Edit' button clicked. The card now contains an 'Edit' form. This form has two input fields: 'Name' (containing 'Jane Doe') and 'Phone number' (containing '+001-2345678901'). Below these fields is a blue 'Save' button. The other contact cards and the 'Add' form at the top are still visible and unchanged.

Figure 4: Clicking **Save** updates the contact and shows the lists of contacts again (here Jane Doe has been updated to Janette Doe)

Phone Book

Name

John Doe

Phone number

+001-1234567890

Add

John Doe
+001-1234567890

Janette Doe
+001-2345678901

Mark Smith
+001-3456789012

Mary Smith
+001-4567890123

Tom Cat
+001-5678901234

Jerry Mouse
+001-6789012345

Figure 5.1: Clicking the **Delete** button deletes the contact (**before** deleting Mark Smith)

Phone Book

Name

John Doe

Phone number

+001-1234567890

Add

John Doe
+001-1234567890

Jane Doe
+001-2345678901

Mark Smith
+001-3456789012

Edit Delete

Mary Smith
+001-4567890123

Tom Cat
+001-5678901234

Jerry Mouse
+001-6789012345

Figure 5.2: Clicking the **Delete** button deletes the contact (**after** deleting Mark Smith)

Phone Book

Name

John Doe

Phone number

+001-1234567890

Add

John Doe
+001-1234567890

Jane Doe
+001-2345678901

Mary Smith
+001-4567890123

Tom Cat
+001-5678901234

Jerry Mouse
+001-6789012345