

# Phone Book

Time limit: 3.5 hours

The backend server provided to you maintains the list of contacts and provides a REST API for fetching, creating, updating and deleting contacts. A contact consists of a name and a (single) phone number.

## First, start the backend

Install the packages in the backend first, and start it. The API endpoint is <http://localhost:4000/contacts> and it supports GET, POST, PUT, DELETE methods for CRUD operations.

## Next, build the Angular frontend app

Create the Angular app to build a phone book, that lets the user manage a list of contacts, and serves as a frontend for the supplied backend application.

## Feature 1: List contacts

When the app first loads, it shows the following form to add a contact (texts shown in inputs are placeholders). This is rendered by an **AddContact** component. Additionally, the initial set of contacts are fetched from the backend and shown. The list is rendered by a **ContactsList** component, the individual contact by **ContactListItem**.

### Phone Book

Name

John Doe

Phone number

+001-1234567890

Add

John Doe  
+001-1234567890

Jane Doe  
+001-2345678901

## Feature 2: Add contact

When the user enters contact details (name and phone number), and clicks the Add button, the contact is added. After a few contacts have been added it looks like this.

Phone Book

Name

John Doe

Phone number

+001-1234567890

Add

John Doe  
+001-1234567890

Jane Doe  
+001-2345678901

Mark Smith  
+001-3456789012

Mary Smith  
+001-4567890123

Tom Cat  
+001-5678901234

Jerry Mouse  
+001-6789012345

## Feature 3, 4: Edit contact, Delete contact (buttons)

When hovering over contact (say, Jane Doe), the **Edit** and **Delete** buttons appear (if that is not possible, you may make these appear on every card even when not hovering).

The Phone Book interface includes a form at the top with 'Name' and 'Phone number' fields and an 'Add' button. Below is a grid of contact cards. Each card displays a name and a phone number. The card for 'Jane Doe' (+001-2345678901) is highlighted with a yellow border, and it features 'Edit' and 'Delete' buttons. Other contacts include John Doe, Mark Smith, Mary Smith, Tom Cat, and Jerry Mouse.

## Feature 3: Edit contact

This screenshot shows the 'Edit' form for Jane Doe. The form is open within her card, showing input fields for 'Name' (Jane Doe) and 'Phone number' (+001-2345678901), along with a 'Save' button. The other contact cards remain visible in the background.

**Figure 4 (Edit contact):** 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 'Save' form for Jane Doe. The form is open within her card, showing input fields for 'Name' (Jane Doe) and 'Phone number' (+001-2345678901), along with a 'Save' button. The other contact cards remain visible in the background.

**Figure 5 (Edit contact):** Clicking **Save** updates the contact and shows the lists of contacts again (here Jane Doe has been updated to Janette Doe)

**Hint for Editing feature:** Maintain an **isEditing** boolean variable in the **ContactListItem** component. Set its value to true when the Edit button is clicked. Conditionally render either the contact details, or the form based on the **isEditing** variable's value. Send the edited name, phone number using an **@Output** event to **ContactList** when the Save button is clicked.

## Feature 4: Delete contact

This screenshot shows the 'Delete' button highlighted for Mark Smith. The button is red and labeled 'Delete'. The other contact cards remain visible in the background.

**Figure 6.1 (Delete contact):** Clicking the **Delete** button deletes the contact (screenshot is from **before** deleting Mark Smith)

This screenshot shows the 'Delete' button highlighted for Mark Smith. The button is red and labeled 'Delete'. The other contact cards remain visible in the background.

**Figure 6.2 (Delete contact):** Clicking the **Delete** button deletes the contact (screenshot is from **after** deleting Mark Smith)