

## Lesson 03 Demo 01

### Implementing a Component That Renders as an Unordered List

**Objective:** To implement a component that renders a list of books as an unordered list

**Tools Required:** Node terminal, React app, and Visual Studio Code

**Prerequisites:** Knowledge of creating a React app and an understanding the folder structure

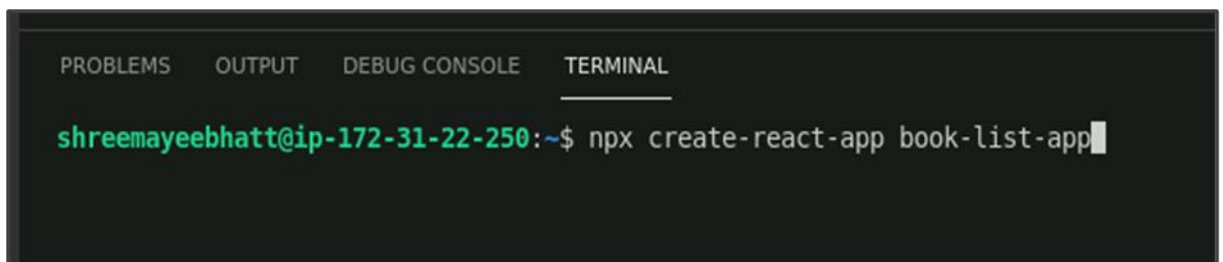
Steps to be followed:

1. Create a new React app and configure the App.js file within the project
2. Run the app to verify the functionality

#### Step 1: Create a new React app and configure the App.js file within the project

1.1 Open your terminal and run the following command to create a new **React** app:


**npx create-react-app book-list-app**

A screenshot of a terminal window with a dark background. At the top, there are tabs labeled 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL'. The 'TERMINAL' tab is active. The terminal shows a prompt 'shreemayeebhatt@ip-172-31-22-250:~\$' followed by the command 'npx create-react-app book-list-app' which has been executed, and a cursor is visible at the end of the command line.

**Note:** This will create a new **React** app in a directory named **book-list-app**.

- 1.2 Navigate into the newly created project directory by running the following command:

```
cd book-list-app
```

A terminal window with a black background and green text. The prompt is 'shreemayeebhatt@ip-172-31-22-250:~\$' and the command 'cd book-list-app/' is entered. A purple bar at the bottom of the terminal shows the number '0'.

- 1.3 Open the React project **book-list-app** in Visual Studio Code and navigate to **src/App.js**. Replace the existing code in **App.js** with the following code:

```
import React from 'react';
function BookList({ books }) {
  return (
    <ul>
      {books.map(book => (
        <li key={book.id}>
          <h3>{book.title}</h3>
          <p>by {book.author}</p>
        </li>
      ))}
    </ul>
  );
}
export default function App() {
  const books = [
    { id: 1, title: 'Book 1', author: 'Author 1' },
    { id: 2, title: 'Book 2', author: 'Author 2' },
    { id: 3, title: 'Book 3', author: 'Author 3' }
  ];
  return (
    <div>
      <h2>Book List</h2>
      <BookList books={books} />
    </div>
  );
}
```

```
src > js App.js > ...
1  import React from 'react';
2
3  function BookList({ books }) {
4    return (
5      <ul>
6        {books.map(book => (
7          <li key={book.id}>
8            <h3>{book.title}</h3>
9            <p>by {book.author}</p>
10          </li>
11        ))}
12      </ul>
13    );
14  }
15
16  export default function App() {
17    const books = [
18      { id: 1, title: 'Book 1', author: 'Author 1' },
19      { id: 2, title: 'Book 2', author: 'Author 2' },
20      { id: 3, title: 'Book 3', author: 'Author 3' }
21    ];
22
23    return (
24      <div>
25        <h2>Book List</h2>
26        <BookList books={books} />
27      </div>
28    );
29  }
```

**Note:** In this, a functional component named **BookList** is defined, which accepts an array of books as a prop and is rendered with the help of the **App** component.

## Step 2: Run the app to verify the functionality

- 2.1 Go to the terminal and execute the **npm start** command within the **book-list-app** project directory to run the app

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
shreemayeebhatt@ip-172-31-22-250:~/book-list-app$ npm start
```

2.2 Once the server starts successfully, open **http://localhost:3000** in your browser to view and check the functionality of the app



In the browser, you will see the **BookList** heading and a list of books with their titles and authors. This list is rendered by the **BookList** component based on the **books** array defined in the **App** component.

With this, you have successfully implemented a component that renders a list of books as an unordered list.