Here’s how you can structure your React project for the "Book Hub" application, including components and CRUD operations for both users and books.

**1. Project Structure**

Create a basic project structure:

Css

BookHub/

│

├── public/

│ └── index.html

│

├── src/

│ ├── components/

│ │ ├── Navbar.js

│ │ ├── Footer.js

│ │ ├── Users/

│ │ │ ├── UserList.js

│ │ │ ├── AddUser.js

│ │ │ ├── EditUser.js

│ │ │ ├── SearchUser.js

│ │ │ └── UserItem.js

│ │ ├── Books/

│ │ │ ├── BookList.js

│ │ │ ├── AddBook.js

│ │ │ ├── EditBook.js

│ │ │ ├── SearchBook.js

│ │ │ └── BookItem.js

│ ├── App.js

│ ├── index.js

│ └── styles/

│ └── App.css

│

├── package.json

└── README.md

**2. Dependencies**

Install necessary dependencies:

npm install react-router-dom axios

**3. Components Overview**

**3.1 Navbar Component**

javascript

Copy code

// src/components/Navbar.js

import React from 'react';

import { Link } from 'react-router-dom';

function Navbar() {

return (

<nav>

<ul>

<li><Link to="/">Home</Link></li>

<li><Link to="/users">Users</Link></li>

<li><Link to="/books">Books</Link></li>

</ul>

</nav>

);

}

export default Navbar;

**3.2 User Components**

* **UserList.js**

javascript

Copy code

// src/components/Users/UserList.js

import React, { useState, useEffect } from 'react';

import { Link } from 'react-router-dom';

import axios from 'axios';

function UserList() {

const [users, setUsers] = useState([]);

useEffect(() => {

fetchUsers();

}, []);

const fetchUsers = async () => {

const response = await axios.get('/api/users');

setUsers(response.data);

};

const deleteUser = async (id) => {

await axios.delete(`/api/users/${id}`);

fetchUsers();

};

return (

<div>

<h2>Users</h2>

<Link to="/users/add">Add User</Link>

<ul>

{users.map(user => (

<li key={user.id}>

{user.name}

<Link to={`/users/edit/${user.id}`}>Edit</Link>

<button onClick={() => deleteUser(user.id)}>Delete</button>

</li>

))}

</ul>

</div>

);

}

export default UserList;

* **AddUser.js**

javascript

Copy code

// src/components/Users/AddUser.js

import React, { useState } from 'react';

import axios from 'axios';

import { useHistory } from 'react-router-dom';

function AddUser() {

const [name, setName] = useState('');

const history = useHistory();

const handleSubmit = async (e) => {

e.preventDefault();

await axios.post('/api/users', { name });

history.push('/users');

};

return (

<form onSubmit={handleSubmit}>

<h2>Add User</h2>

<input

type="text"

value={name}

onChange={(e) => setName(e.target.value)}

placeholder="Enter user name"

/>

<button type="submit">Add</button>

</form>

);

}

export default AddUser;

* **EditUser.js**

javascript

Copy code

// src/components/Users/EditUser.js

import React, { useState, useEffect } from 'react';

import axios from 'axios';

import { useParams, useHistory } from 'react-router-dom';

function EditUser() {

const [name, setName] = useState('');

const { id } = useParams();

const history = useHistory();

useEffect(() => {

fetchUser();

}, []);

const fetchUser = async () => {

const response = await axios.get(`/api/users/${id}`);

setName(response.data.name);

};

const handleSubmit = async (e) => {

e.preventDefault();

await axios.put(`/api/users/${id}`, { name });

history.push('/users');

};

return (

<form onSubmit={handleSubmit}>

<h2>Edit User</h2>

<input

type="text"

value={name}

onChange={(e) => setName(e.target.value)}

placeholder="Enter user name"

/>

<button type="submit">Save</button>

</form>

);

}

export default EditUser;

* **SearchUser.js**

javascript

Copy code

// src/components/Users/SearchUser.js

import React, { useState } from 'react';

import axios from 'axios';

function SearchUser() {

const [query, setQuery] = useState('');

const [results, setResults] = useState([]);

const handleSearch = async (e) => {

e.preventDefault();

const response = await axios.get(`/api/users/search?name=${query}`);

setResults(response.data);

};

return (

<div>

<h2>Search Users</h2>

<form onSubmit={handleSearch}>

<input

type="text"

value={query}

onChange={(e) => setQuery(e.target.value)}

placeholder="Search users by name"

/>

<button type="submit">Search</button>

</form>

<ul>

{results.map(user => (

<li key={user.id}>{user.name}</li>

))}

</ul>

</div>

);

}

export default SearchUser;

**3.3 Book Components**

* **BookList.js**

javascript

Copy code

// src/components/Books/BookList.js

import React, { useState, useEffect } from 'react';

import { Link } from 'react-router-dom';

import axios from 'axios';

function BookList() {

const [books, setBooks] = useState([]);

useEffect(() => {

fetchBooks();

}, []);

const fetchBooks = async () => {

const response = await axios.get('/api/books');

setBooks(response.data);

};

const deleteBook = async (id) => {

await axios.delete(`/api/books/${id}`);

fetchBooks();

};

return (

<div>

<h2>Books</h2>

<Link to="/books/add">Add Book</Link>

<ul>

{books.map(book => (

<li key={book.id}>

{book.title} by {book.author}

<Link to={`/books/edit/${book.id}`}>Edit</Link>

<button onClick={() => deleteBook(book.id)}>Delete</button>

</li>

))}

</ul>

</div>

);

}

export default BookList;

* **AddBook.js**

javascript

Copy code

// src/components/Books/AddBook.js

import React, { useState } from 'react';

import axios from 'axios';

import { useHistory } from 'react-router-dom';

function AddBook() {

const [title, setTitle] = useState('');

const [author, setAuthor] = useState('');

const [isbn, setIsbn] = useState('');

const history = useHistory();

const handleSubmit = async (e) => {

e.preventDefault();

await axios.post('/api/books', { title, author, isbn });

history.push('/books');

};

return (

<form onSubmit={handleSubmit}>

<h2>Add Book</h2>

<input

type="text"

value={title}

onChange={(e) => setTitle(e.target.value)}

placeholder="Enter book title"

/>

<input

type="text"

value={author}

onChange={(e) => setAuthor(e.target.value)}

placeholder="Enter author name"

/>

<input

type="text"

value={isbn}

onChange={(e) => setIsbn(e.target.value)}

placeholder="Enter ISBN"

/>

<button type="submit">Add</button>

</form>

);

}

export default AddBook;

* **EditBook.js**

javascript

Copy code

// src/components/Books/EditBook.js

import React, { useState, useEffect } from 'react';

import axios from 'axios';

import { useParams, useHistory } from 'react-router-dom';

function EditBook() {

const [title, setTitle] = useState('');

const [author, setAuthor] = useState('');

const [isbn, setIsbn] = useState('');

const { id } = useParams();

const history = useHistory();

useEffect(() => {

fetchBook();

}, []);

const fetchBook = async () => {

const response = await axios.get(`/api/books/${id}`);

setTitle(response.data.title);

setAuthor(response