AddBook.tsx

```tsx
import { useState } from "react";
import { useNavigate } from "react-router-dom";
import api, { type Book } from "../api";

  return (
    <div
      className="card shadow-sm border-0 p-4 mx-auto"
      style={{ maxWidth: "700px" }}
    >
      <h3 className="mb-4 fw-bold">Add Book</h3>
      <form onSubmit={handleSubmit}>
        <div className="mb-3">
          <label className="form-label small fw-bold">Title</label>
          <input
            className="form-control bg-light border-0"
            value={book.title}
            onChange={(e) => setBook({ ...book, title: e.target.value })}
          />
        </div>
        <div className="mb-3">
          <label className="form-label small fw-bold">Author</label>
          <input
            className="form-control bg-light border-0"
            value={book.author}
            onChange={(e) => setBook({ ...book, author: e.target.value })}
          />
        </div>
        <div className="mb-3">
          <label className="form-label small fw-bold">Publication Year</label>
          <input
            type="number"
            className="form-control bg-light border-0"
            value={book.publicationYear}
```

```jsx
              onChange={(e) =>
                setBook({ ...book, publicationYear:
parseInt(e.target.value) })
              }
            />
        </div>
        <div className="mb-3">
          <label className="form-label small fw-bold">Genre</label>
          <input
            className="form-control bg-light border-0"
            value={book.genre}
            onChange={(e) => setBook({ ...book, genre: e.target.value
})}
          />
        </div>
        <div className="mb-4">
          <label className="form-label small fw-bold">Copies
Available</label>
          <input
            type="number"
            className="form-control bg-light border-0"
            value={book.copiesAvailable}
            onChange={(e) =>
              setBook({ ...book, copiesAvailable:
parseInt(e.target.value) })
            }
          />
        </div>
        <button type="submit" className="btn btn-primary me-2">
          Save Book
        </button>
        <button
          type="button"
          onClick={() => navigate("/")}
          className="btn btn-outline-secondary border-0"
        >
          Cancel
        </button>
```

```
      </form>
    </div>
  );
};


export default AddBook;
```

BookList.tsx

```tsx
import { useEffect, useState } from "react";
import { Link } from "react-router-dom";
import api, { type Book } from "../api";

const BookList = () => {
  const [books, setBooks] = useState<Book[]>([
    {
      id: "1",
      title: "Modern Computing",
      author: "Gamika Jayawardhana",
      publicationYear: 2024,
      genre: "Education",
      copiesAvailable: 5,
      shelfLocation: "A-1",
    },
    {
      id: "2",
      title: "Introduction to Algorithms",
      author: "Thomas H. Cormen",
      publicationYear: 2009,
      genre: "Cyber Security",
      copiesAvailable: 1,
      shelfLocation: "A-3",
    },
  ]);

  useEffect(() => {
    const fetchBooks = async () => {
```

```
    try {
      const response = await api.get("/books");
      setBooks(response.data);
    } catch (err) {
      console.error(err);
    }
  };
  fetchBooks();
}, []);

const deleteBook = async (id: string) => {
  try {
    await api.delete(`/books/${id}`);
    setBooks(books.filter((book) => book.id !== id));
  } catch (err) {
    console.error(err);
  }
};

return (
  <div className="card shadow-sm border-0 p-4">
    <h3 className="mb-4 fw-bold">Library — Book List</h3>
    <table className="table align-middle">
      <thead>
        <tr>
          <th>Title</th>
          <th>Author</th>
          <th>Year</th>
          <th>Genre</th>
          <th>Shelf</th>
          <th>Actions</th>
        </tr>
      </thead>
      <tbody>
        {books.map((book) => (
          <tr key={book.id}>
            <td>{book.title}</td>
            <td>{book.author}</td>
```

```tsx
              <td>{book.publicationYear}</td>
              <td>{book.genre}</td>
              <td>{book.shelfLocation || "-"}</td>
              <td>
                <Link
                  to={`/edit/${book.id}`}
                  className="btn btn-outline-secondary btn-sm me-2"
                >
                  Edit
                </Link>
                <button
                  onClick={() => deleteBook(book.id!)}
                  className="btn btn-danger btn-sm text-white"
                >
                  Delete
                </button>
              </td>
            </tr>
          ))}
        </tbody>
      </table>
    </div>
  );
};

export default BookList;
```

EditBook.tsx

```tsx
import { useEffect, useState } from "react";
import { useParams, useNavigate } from "react-router-dom";
import api, { type Book } from "../api";

const EditBook = () => {
  const { id } = useParams();
  const navigate = useNavigate();
  const [book, setBook] = useState<Book>({
```

```jsx
    title: "",
    author: "",
    publicationYear: 0,
    genre: "",
    copiesAvailable: 0,
    shelfLocation: "",
  });

  useEffect(() => {
    const fetchBook = async () => {
      try {
        const response = await api.get(`/books/${id}`);
        setBook(response.data);
      } catch (err) {
        console.error(err);
      }
    };
    fetchBook();
  }, [id]);

  const handleUpdate = async (e: React.FormEvent) => {
    e.preventDefault();
    try {
      await api.put(`/books/${id}`, book);
      navigate("/");
    } catch (err) {
      console.error(err);
    }
  };

  return (
    <div
      className="card shadow-sm border-0 p-4 mx-auto"
      style={{ maxWidth: "700px" }}
    >
      <h3 className="mb-4 fw-bold">Edit Book</h3>
      <form onSubmit={handleUpdate}>
        <div className="mb-3">
```

```jsx
        <label className="form-label small fw-bold">Title</label>
        <input
          className="form-control bg-light border-0"
          value={book.title}
          onChange={(e) => setBook({ ...book, title: e.target.value
})}
        />
      </div>
      <div className="mb-3">
        <label className="form-label small fw-bold">Author</label>
        <input
          className="form-control bg-light border-0"
          value={book.author}
          onChange={(e) => setBook({ ...book, author: e.target.value
})}
        />
      </div>
      <div className="mb-3">
        <label className="form-label small fw-bold">Publication
Year</label>
        <input
          type="number"
          className="form-control bg-light border-0"
          value={book.publicationYear}
          onChange={(e) =>
            setBook({ ...book, publicationYear:
parseInt(e.target.value) })
          }
        />
      </div>
      <div className="mb-3">
        <label className="form-label small fw-bold">Genre</label>
        <input
          className="form-control bg-light border-0"
          value={book.genre}
          onChange={(e) => setBook({ ...book, genre: e.target.value
})}
        />
```

```
          </div>
          <div className="mb-3">
            <label className="form-label small fw-bold">Copies</label>
            <input
              type="number"
              className="form-control bg-light border-0"
              value={book.copiesAvailable}
              onChange={(e) =>
                setBook({ ...book, copiesAvailable:
parseInt(e.target.value) })
              }
            />
          </div>
          <div className="mb-4">
            <label className="form-label small fw-bold">Shelf
Location</label>
            <input
              className="form-control bg-light border-0"
              value={book.shelfLocation || ""}
              onChange={(e) =>
                setBook({ ...book, shelfLocation: e.target.value })
              }
            />
          </div>
          <button type="submit" className="btn btn-info text-white me-
2">
            Update
          </button>
          <button
            type="button"
            onClick={() => navigate("/")}
            className="btn btn-outline-secondary border-0"
          >
            Cancel
          </button>
        </form>
      </div>
    );
```

```
};

export default EditBook;
```

Api.ts

```ts
import axios from 'axios';

export interface Book {
  id?: string;
  title: string;
  author: string;
  publicationYear: number;
  genre: string;
  copiesAvailable: number;
  shelfLocation?: string;
}

const api = axios.create({
  baseURL: 'http://localhost:5000/api'
});

export default api;
```

App.tsx

```tsx
import { BrowserRouter as Router, Routes, Route, Link } from "react-router-dom";
import BookList from "./components/BookList";
import AddBook from "./components/AddBook";
import EditBook from "./components/EditBook";
import "bootstrap/dist/css/bootstrap.min.css";

function App() {
  return (
    <Router>
```

```jsx
      <nav className="navbar navbar-expand-lg navbar-light bg-light
shadow-sm mb-4">
        <div className="container">
          <Link
            className="navbar-brand fw-bold text-primary d-flex align-
items-center"
            to="/"
          >
            <div
              className="bg-primary text-white rounded p-1 me-2"
              style={{ width: "35px", textAlign: "center" }}
            >
              LB
            </div>
            Library Manager
          </Link>
          <div className="navbar-nav ms-auto">
            <Link className="nav-link" to="/">
              Books
            </Link>
            <Link className="nav-link text-primary ms-3" to="/add">
              Add Book
            </Link>
          </div>
        </div>
      </nav>
      <div className="container">
        <Routes>
          <Route path="/" element={<BookList />} />
          <Route path="/add" element={<AddBook />} />
          <Route path="/edit/:id" element={<EditBook />} />
        </Routes>
      </div>
    </Router>
  );
}

export default App;
```

W.K.G.K JAYAWARDHANA

Main.tsx

```tsx
import { StrictMode } from 'react'
import { createRoot } from 'react-dom/client'
import './index.css'
import App from './App.tsx'
import "bootstrap/dist/css/bootstrap.min.css";
import "bootstrap-icons/font/bootstrap-icons.css";

createRoot(document.getElementById('root')!).render(
  <StrictMode>
    <App />
  </StrictMode>,
)
```