

SE Internship Assignment – Setup Instructions

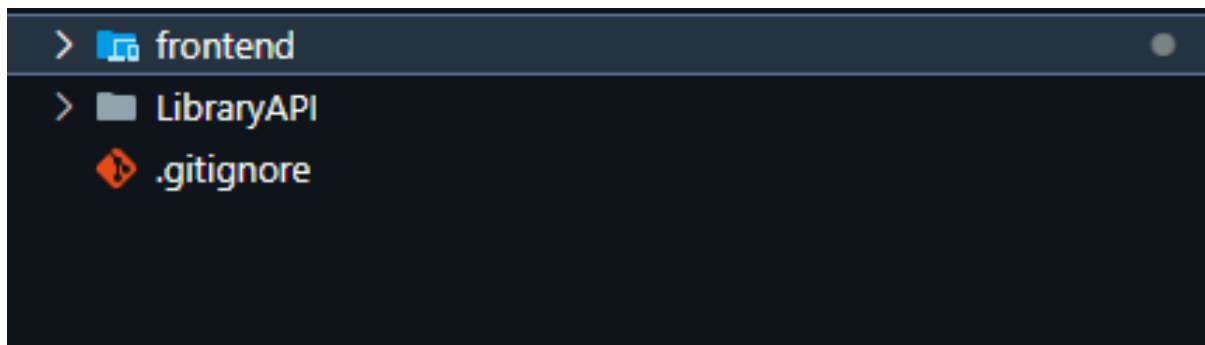
Prerequisites:

Tool	Version	Download Link
.NET SDK	8.0 or later	https://dotnet.microsoft.com
Node.js /npm	22.12 /11.2.0	https://nodejs.org
Visual Studio (Windows)	2022+ with ASP.NET + .NET 8	https://visualstudio.microsoft.com/
VS Code (optional for frontend)	Latest version	https://code.visualstudio.com/

Step 1: Clone the Repository

```
git clone https://github.com/raveenadhikari/Library-Management-System
cd Library-Management-System
```

Project Structure (After Cloning)



Here,

frontend : React + Typescript web app

LibraryAPI : .Net API

Step 2: Setup & Run the Backend (.NET API)

I. Open LibraryAPI folder in Visual Studio

II. Set LibraryAPI.csproj as the Startup Project

III. Press Ctrl + F5 to run (it should open: <http://localhost:5121/swagger>)

If your port is different you should change it in your front end it is mentioned later in this guide.

Now API is running with JWT Authentication and AQLite database (library.db is autocreated)

IV. If needed run migrations to create database.

```
cd LibraryAPI
dotnet ef database update
```

Step 3: Setup & Run the Frontend (React + TypeScript)

I. Open terminal and go to frontend folder:

```
cd frontend
```

II. Install dependencies:

```
npm install
```

III. Start the React app:

```
npm start
```

Now the app should open at : <http://localhost:3000>

Step 4: Test the App

1. Register a new user at /register
2. Login at /
3. Add, edit, delete books at /dashboard

JWT is stored securely in localStorage and sent in every API call.

Changing API Base URL (Optional)

If your API runs on a different port or is deployed:

1. Open frontend/src/services/api.ts
2. Change this line:

```
baseUrl: "http://localhost:5121/api",  
baseUrl: "http://localhost:your-port-number/api",
```

After these steps the app should be fully up and running