

Project Name: Book Catalog BackEnd

Create a RESTful API for managing a catalog of books. The data will initially be read from a file CSV, and you'll use LINQ to query and manipulate the data.

Project Description:

- Your API will provide endpoints to:
 - Get all books
 - Get books by filters (author, genre, year, etc.)
 - Add a new book
 - Update existing book details
 - Delete a book
 - The data source will be a file containing a list of books with fields like:
 - Book ID
 - Title
 - Author
 - Genre
 - Published Year
 - Price
 - The API will load the file data into memory on startup and use LINQ queries to filter or search through the books.
 - When a change is made (add/update/delete), the file should be updated accordingly.
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Key Features to Implement:

1. **File Reading and Writing**
 - Read the book list from a CSV file at startup.
 - Save changes back to the file after any modification.
2. **LINQ Queries**

- Use LINQ to filter books by author, genre, or published year.
- Implement sorting (e.g., sort by price or year).

3. REST API Endpoints

- GET /books - Get all books
- GET /books/{id} - Get book by ID
- GET /books?author=xxx&genre=yyy - Filtered book list
- POST /books - Add a new book
- PUT /books/{id} - Update a book
- DELETE /books/{id} - Delete a book

4. Validation

- Validate inputs for new and updated books.

5. Pagination

- Add pagination for the GET /books endpoint.

Tools/Technologies:

- .NET Core Web API
- LINQ for data querying
- CSV file for data storage (choose one)

Estimation: 2 Days

Time Deliver: 14/08/2025