■ RESTful Bookstore API – Project Report

Objective

The RESTful Bookstore API is a backend application built with Spring Boot that allows users to manage books and authors. The API follows REST principles and provides endpoints for creating, retrieving, updating, and deleting (CRUD) resources. It also supports filtering, sorting, and pagination.

■■ Tech Stack

- Java 17+
- Spring Boot (Web, JPA, H2 Database)
- H2 Database (in-memory testing)
- Swagger (Springdoc/OpenAPI)
- Postman

■ Features

- Author Management – CRUD operations for authors
- Book Management – CRUD operations for books
- Advanced Query Support – Pagination, Sorting, Filtering
- Database – H2 in-memory with console support
- API Documentation – Swagger UI for easy exploration
- Postman Collection for testing APIs

■ Deliverables

- Source Code (Spring Boot Project)
- application.properties for DB config
- Postman Collection
- Swagger UI link

■ Example Endpoints

- POST /api/authors → Add a new author
- GET /api/authors → Get all authors
- POST /api/books → Add a new book
- GET /api/books?page=0&size;=5&sort;=title,asc → Get books with pagination & sorting

■■ How to Run

1. Clone the repository 2. Run the project in IDE or use: mvn spring-boot:run 3. Open Swagger UI: http://localhost:8080/swagger-ui/index.html 4. Open H2 Console: http://localhost:8080/h2-console

This project provides a simple yet powerful backend system for managing books and authors, with full CRUD support, in-memory database, and well-documented API.