

# ■ Bookstore REST API - Project Report

## 1. Introduction

The Bookstore REST API project is designed to manage a bookstore's inventory using modern backend technologies. It provides endpoints to create, read, update, and delete books, along with search functionality. The API is lightweight, fast, and well-documented, making it suitable for small-scale applications and learning purposes.

## 2. Abstract

This project demonstrates the development of a RESTful API using FastAPI and SQLite. The API enables users to manage book data efficiently, supports CRUD operations, and includes search functionality. Documentation is automatically generated via Swagger UI, and Postman is used for API testing. The project highlights key skills in Python backend development and database management.

## 3. Tools & Technologies Used

- FastAPI: For building the REST API
- SQLite: Lightweight relational database
- SQLAlchemy: ORM for database operations
- Uvicorn: ASGI server for running FastAPI
- Postman: For testing API endpoints
- Python (pydantic, typing): Data validation and schema design

## 4. Steps Involved

1. Set up FastAPI project and virtual environment
2. Configure SQLite database and SQLAlchemy models
3. Implement CRUD endpoints (Create, Read, Update, Delete)
4. Add search functionality for books
5. Enable Swagger UI documentation
6. Test APIs using Postman and validate results
7. Push project to GitHub with README and Postman collection

## 5. Conclusion

The Bookstore REST API project successfully demonstrates backend development using FastAPI, SQLite, and SQLAlchemy. It provides essential CRUD operations, search features, and API documentation. This project not only fulfills the internship requirements but also strengthens knowledge of Python-based backend development and REST API best practices.