Assignment

**Problem 1:** Online Book Store Application

Objective:

To develop a simple Online Book Store application using Spring Boot, demonstrating RESTful web services, data persistence, and basic CRUD operations.

Assignment Overview:

You will create an application that allows users to manage a collection of books. The application will include functionality for adding, updating, deleting, and retrieving book information.

Requirements:

Project Setup:

Create a new Spring Boot project. Include dependencies for Spring Web, Spring Data JPA, and a database (e.g., MySQL).

Database Configuration:

Configure the database connection in application.properties (or application.yml if you prefer).

Entity Class:

Create a Book entity with the following fields:

id (Long): Primary key, auto-generated.

title (String): Title of the book.

author (String): Author of the book.

price (BigDecimal): Price of the book.

publishedDate (LocalDate): Date of publication.

Repository Layer:

Create a repository interface BookRepository that extends JpaRepository<Book, Long>.

Use Spring Data JPA to perform CRUD operations.

Service Layer:

Implement a service class BookService with methods to:

Add a new book.

Retrieve all books.

Retrieve a book by its ID.

Update an existing book.

Delete a book by its ID.

Controller Layer:

Create a BookController class to handle HTTP requests.

Implement the following endpoints:

POST /books: Add a new book.

GET /books: Retrieve all books.

GET /books/{id}: Retrieve a specific book by ID.

PUT /books/{id}: Update an existing book.

DELETE /books/{id}: Delete a book by ID.

Error Handling:

Implement global exception handling using @ControllerAdvice to manage exceptions and return meaningful error responses.

Submission:

Submit your project as a zip file.

Ensure that your code is well-structured, follows best practices, and is properly commented.