**Exercise 3: Online Bookstore - Handling Path Variables and Query Parameters**

**BookController**

package com.bookstore.api.controllers;

import com.bookstore.api.entities.Book;

import org.springframework.web.bind.annotation.\*;

import java.util.ArrayList;

import java.util.List;

@RestController

@RequestMapping("/books")

public class BookController {

private List<Book> books = new ArrayList<>();

// ...

@GetMapping("/{id}")

public Book getBookById(@PathVariable Long id) {

return books.stream()

.filter(book -> book.getId().equals(id))

.findFirst()

.orElse(null);

}

@GetMapping("/search")

public List<Book> searchBooks(@RequestParam(required = false) String title,

@RequestParam(required = false) String author) {

return books.stream()

.filter(book -> (title == null || book.getTitle().contains(title))

&& (author == null || book.getAuthor().contains(author)))

.toList();

}

}

In the above code, i have enhanced the BookController to handle dynamic URLs and query parameters.

- i have implemented an endpoint GET /books/{id} to fetch a book by its ID using a path variable.

- i have implemented an endpoint GET /books/search to filter books based on query parameters like title and author.

Note that i have used @PathVariable to inject the path variable id into the getBookById method, and @RequestParam to inject the query parameters title and author into the searchBooks method.