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

**Business Scenario:**

Enhance the book management endpoints to handle dynamic URLs and query parameters.

**Instructions:**

1. **Path Variables:**
   * Implement an endpoint to fetch a book by its ID using a path variable.
2. **Query Parameters:**
   * Implement an endpoint to filter books based on query parameters like title and author.

SOLUTION

**1. Path Variables**

need to enhance the BookController to allow fetching a book by its ID using a path variable.

Implementation:

Update the BookController to include an endpoint that uses a path variable to fetch a book by its ID.

@GetMapping("/{id}")

public Optional<Book> getBookById(@PathVariable Long id) {

return bookService.getBookById(id);

}

**2. Query Parameters**

Implement an endpoint to filter books based on query parameters such as title and author. This allows clients to request a list of books matching specific criteria.

**Implementation:**

* Add a new endpoint in BookController to handle filtering based on query parameters.

@GetMapping("/search")

public List<Book> searchBooks(

@RequestParam(required = false) String title,

@RequestParam(required = false) String author

) {

if (title != null && author != null) {

return bookService.findByTitleAndAuthor(title, author);

} else if (title != null) {

return bookService.findByTitle(title);

} else if (author != null) {

return bookService.findByAuthor(author);

} else {

return bookService.getAllBooks();

}

}