**WEEK 4&5**

**EXERCISE 6**

**Online Bookstore - Exception Handling in REST Controllers**

**Business Scenario**

The task is to implement a global exception handling mechanism for the bookstore RESTful services.

**Instructions**

**1. Global Exception Handler:**

**Task:** Create a GlobalExceptionHandler class using @ControllerAdvice.

**Implementation:**

* The @ControllerAdvice annotation allows you to handle exceptions globally across all controllers in your application.
* This centralizes exception handling logic and ensures consistent responses to clients.

**Code Example:**

import org.springframework.http.HttpStatus;

import org.springframework.http.ResponseEntity;

import org.springframework.web.bind.annotation.ControllerAdvice;

import org.springframework.web.bind.annotation.ExceptionHandler;

import org.springframework.web.bind.annotation.ResponseStatus;

@ControllerAdvice

public class GlobalExceptionHandler {

// Handle specific exceptions

@ExceptionHandler(BookNotFoundException.class)

@ResponseStatus(HttpStatus.NOT\_FOUND)

public ResponseEntity<String> handleBookNotFoundException(BookNotFoundException ex) {

return ResponseEntity.status(HttpStatus.NOT\_FOUND)

.body("Book not found: " + ex.getMessage());

}

// Handle generic exceptions

@ExceptionHandler(Exception.class)

@ResponseStatus(HttpStatus.INTERNAL\_SERVER\_ERROR)

public ResponseEntity<String> handleGenericException(Exception ex) {

return ResponseEntity.status(HttpStatus.INTERNAL\_SERVER\_ERROR)

.body("An error occurred: " + ex.getMessage());

}

}

**Explanation:**

* The GlobalExceptionHandler class is annotated with @ControllerAdvice, which makes it a global handler for exceptions in your application.
* **Specific Exception Handling:**
  + The handleBookNotFoundException method is annotated with @ExceptionHandler(BookNotFoundException.class), meaning it will handle all exceptions of type BookNotFoundException.
  + It returns a 404 Not Found status with a custom error message.
* **Generic Exception Handling:**
  + The handleGenericException method handles all other exceptions not specifically handled by other methods.
  + It returns a 500 Internal Server Error status with a generic error message.

**Conclusion:**

By implementing a global exception handler, we can ensure that all exceptions in your RESTful service are handled consistently, improving the reliability and user experience of your application.