

Spring Boot Microservices Assessment Task

Overview

You are to build a simple Book Order system using Spring Boot microservices.

This will assess your understanding of microservices communication, REST APIs, and basic cloud components.

There will be 3 microservices in total.

Microservice 1: Book Service

Port: 8081

Endpoints:

- GET /books: List all books.
- GET /books/{id}: Get a specific book by ID.

Sample JSON Response:

```
{  
  
  "id": 1,  
  
  "title": "Spring in Action",  
  
  "author": "Craig Walls",  
  
  "price": 500  
  
}
```

Microservice 2: Order Service

Port: 8082

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Endpoints:

- POST /orders: Place an order for a book (requires bookId).
- GET /orders/{id}: View order details.

This service should communicate with the Book Service via RestTemplate or WebClient.

Stores order with fields: orderId, bookId, quantity, totalPrice.

Microservice 3: API Gateway

Port: 8080

Route forwarding:

- /api/books/** -> Book Service
- /api/orders/** -> Order Service

Use Spring Cloud Gateway or simple routing logic.

Optional Enhancements

- Add Eureka Server for service discovery.
- Use Spring Cloud Config Server for externalized configuration.
- Implement JWT-based security on /orders endpoints.

Assessment Goals

- REST Controller implementation.
- Service-to-service communication.

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- Spring Boot annotation usage.
- Config management (optional).
- Service discovery (optional).