**Create Microservices for account and loan**

**Project Overview:**

* Create two microservices: Account Service and Loan Service
* Use Spring Boot to build microservices
* Use Spring Cloud Gateway as the API Gateway
* Each service will expose REST APIs
* Gateway will route requests to appropriate services

**Step 1: Create account-service Microservice**

**Spring Initializer**

* Project: Maven
* Dependencies: Spring Web, Spring Boot DevTools

**Controller**

@RestController

@RequestMapping("/account")

public class AccountController {

@GetMapping

public String getAccountDetails() {

return "Account Service: Account details!";

}

}

**Application.properties**

server.port=8081

spring.application.name=account-service

**Step 2: Create loan-service Microservice**

1. **Spring Initializr**
   * Project: Maven
   * Dependencies: Spring Web, Spring Boot DevTools
2. **Controller**

@RestController

@RequestMapping("/loan")

public class LoanController {

@GetMapping

public String getLoanDetails() {

return "Loan Service: Loan details!";

}

}

1. **application.properties**

server.port=8082

spring.application.name=loan-service

**Step 3: Create api-gateway using Spring Cloud Gateway**

1. **Spring Initializr**
   * Project: Maven
   * Dependencies:
     + Spring Web
     + Spring Cloud Gateway
     + Spring Boot DevTools
2. **application.properties**

server.port=8080

spring.application.name=api-gateway

spring.cloud.gateway.routes[0].id=account-service

spring.cloud.gateway.routes[0].uri=http://localhost:8081

spring.cloud.gateway.routes[0].predicates[0]=Path=/account/\*\*

spring.cloud.gateway.routes[1].id=loan-service

spring.cloud.gateway.routes[1].uri=http://localhost:8082

spring.cloud.gateway.routes[1].predicates[0]=Path=/loan/\*\*

**Testing with cURL / Postman**

1. **Start All 3 Projects**

Run api-gateway (8080)

Run account-service (8081)

Run loan-service (8082)

1. **Test Routes via Gateway**

curl http://localhost:8080/account

→ Account Service: Account details!

curl http://localhost:8080/loan

→ Loan Service: Loan details!

**Points**

**Purpose**: Setup microservices for account and loan, and expose them through a common gateway.

**Microservices**: Independently deployed, responsible for domain-specific logic.

**API Gateway**: Routes all client requests to proper microservices.

**Port Management**:

* Account: 8081
* Loan: 8082
* Gateway: 8080

**Routing Logic**: Configured in application.properties using spring.cloud.gateway.routes.

**Testing**:

* Use curl or Postman to hit gateway endpoint.
* Gateway forwards to underlying services.