# Microservices Architecture: Bank Application

## 1. Overview

This document outlines the microservices architecture implemented for a bank application. It includes services for accounts, loans, a Eureka Discovery Server, a Greet Service, and an API Gateway.

## 2. File Structure

microservices-ecosystem/  
├── account/  
│ ├── src/  
│ ├── pom.xml  
│ └── application.properties  
├── loan/  
│ ├── src/  
│ ├── pom.xml  
│ └── application.properties  
├── eureka-discovery-server/  
│ ├── src/  
│ ├── pom.xml  
│ └── application.properties  
├── greet-service/  
│ ├── src/  
│ ├── pom.xml  
│ └── application.properties  
└── api-gateway/  
 ├── src/  
 ├── pom.xml  
 └── application.properties

## 3. Service Port Details

|  |  |
| --- | --- |
| Service | Port |
| Account Service | 8080 |
| Loan Service | 8081 |
| Eureka Discovery Server | 8761 |
| Greet Service | 8082 |
| API Gateway | 9090 |

## 4. Service Endpoints

• Account Service: http://localhost:8080/accounts/00987987973432  
• Loan Service: http://localhost:8081/loans/ H00987987972342  
• Greet Service: http://localhost:8082/greet  
• API Gateway (via Discovery): http://localhost:9090/greet-service/greet

## 5. Dashboards and Monitoring

• Eureka Discovery Dashboard: http://localhost:8761  
• View registered services under 'Instances currently registered with Eureka'.  
• Use the Eclipse console monitor icon to switch between running services.

# 6. Microservices Summary (Detailed)

## 1. eureka-discovery-server

* Port: 8761
* Holds registry of services
* Access: http://localhost:8761

## 2. account-service

* Port: 8080
* Registers with Eureka
* Endpoint: GET /accounts/00987987973432

## 3. loan-service

* Port: 8081
* Registers with Eureka
* Endpoint: GET /loans/ H00987987972342

## 4. greet-service

* Port: Random (managed by Eureka)
* Returns "Hello World" on GET /greet
* Registers with Eureka

## 5. api-gateway

* Port: 9090
* Routes requests to services via Eureka
* Global request logging filter implemented
* Example endpoint: http://localhost:9090/greet-service/greet

# 7. Setup Instructions

1. Import all projects into Eclipse as Maven projects.

2. Stop all running apps, then start in this order:

1. eureka-discovery-server

2. account-service

3. loan-service

4. greet-service

5. api-gateway

3. Verify Eureka Dashboard: http://localhost:8761

4. Test Endpoints:

- http://localhost:8080/accounts/00987987973432

- http://localhost:8081/loans/H00987987972342

- http://localhost:9090/greet-service/greet