**Creating Microservices for account and loan**

**1. Account Microservice**

**1.1 Navigating and Setting Up**

1. I created a folder with my employee ID on the D: drive and inside it, a microservices folder to store all projects.
2. I opened <https://start.spring.io/>.
3. Entered:
   * Group: com.cognizant
   * Artifact: account
4. Selected dependencies:
   * Spring Boot DevTools
   * Spring Web
5. Clicked **Generate** to download the zip.
6. Extracted the account folder into microservices.
7. Opened a command prompt in the account folder and ran: mvn clean package
8. Imported the project into Eclipse.

**1.2 Implementing the Controller**

I created the controller to return account details in the following way:

**Path:** src/main/java/com/cognizant/account/controller/AccountController.java

package com.cognizant.account.controller;

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

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

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

import java.util.Map;

@RestController

public class AccountController {

@GetMapping("/accounts/{number}")

public Map<String, Object> getAccountDetails(@PathVariable String number) {

return Map.of(

"number", number,

"type", "savings",

"balance", 234343

);

}

}

**1.3 Application Entry Point**

I verified the AccountApplication main class:

package com.cognizant.account;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class AccountApplication {

public static void main(String[] args) {

SpringApplication.run(AccountApplication.class, args);

}

}

**1.4 Testing**

I ran AccountApplication and tested:

http://localhost:8080/accounts/00987987973432

Received the following in the POSTMAN when the endpoint is being tested.  
{

"number": "00987987973432",

"type": "savings",

"balance": 234343

}

**2. Loan Microservice**

**2.1 Navigating and Setting Up**

1. Repeated the steps as above with:
   * Artifact: loan
2. Downloaded, extracted, and placed the loan folder inside microservices.
3. Then I ran: mvn clean package
4. Imported into Eclipse.

**2.2 Implementing the Controller**

Created the controller to return loan details is as following:

**Path:** src/main/java/com/cognizant/loan/controller/LoanController.java

package com.cognizant.loan.controller;

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

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

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

import java.util.Map;

@RestController

public class LoanController {

@GetMapping("/loans/{number}")

public Map<String, Object> getLoanDetails(@PathVariable String number) {

return Map.of(

"number", number,

"type", "car",

"loan", 400000,

"emi", 3258,

"tenure", 18

);

}

}

**2.3 Application Entry Point**

Verified the LoanApplication class:

package com.cognizant.loan;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class LoanApplication {

public static void main(String[] args) {

SpringApplication.run(LoanApplication.class, args);

}

}

**2.4 Configuring Port**

Since the account service was using port 8080, I configured the loan service to use port 8081.

**File:** src/main/resources/application.properties

server.port=8081

**2.5 Testing**

I ran LoanApplication while AccountApplication was still running.

Tested using:

http://localhost:8081/loans/H00987987972342

Received:

{

"number": "H00987987972342",

"type": "car",

"loan": 400000,

"emi": 3258,

"tenure": 18

}