# Microservices with Spring Boot 3 and Spring Cloud

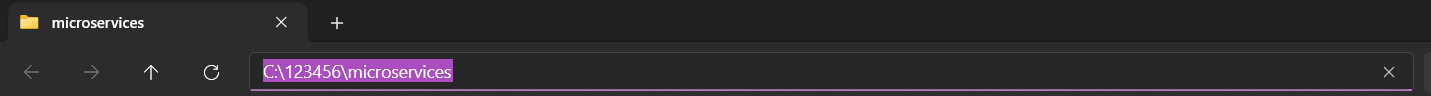
# Microservices with API gateway

# Mandatory HandsOn

**Creating Microservices for account and loan**

**Account Microservice:**

*  Create folder with employee id .(eg:123456)
*  Create folder named 'microservices' in the new folder created in previous step. This folder will contain all the sample projects that we will create for learning microservices.



**Open https://start.spring.io/ in browser** 

* Enter form field values as specified below:

**Group:** com.cognizant

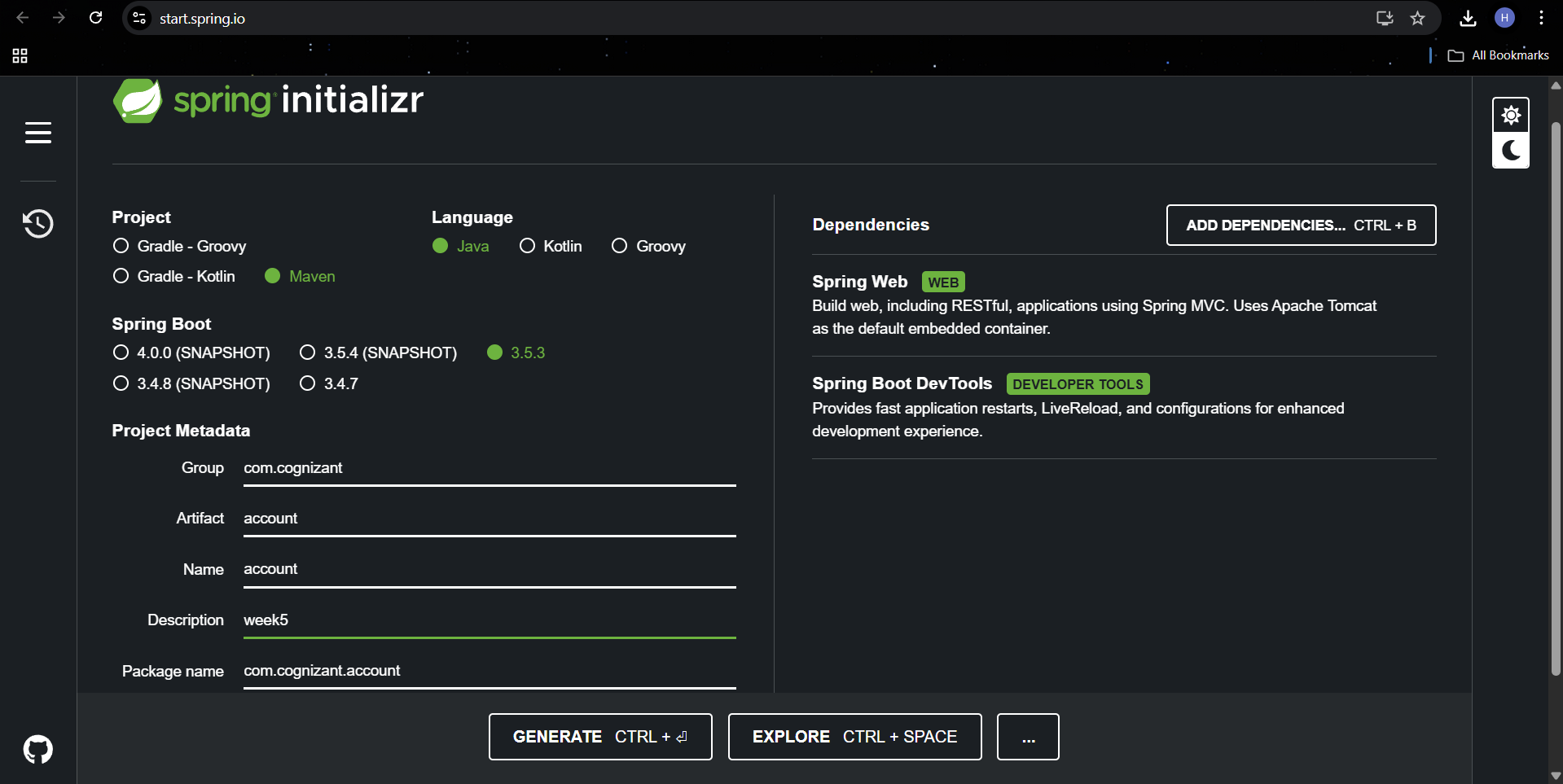
**Artifact:** account 

* Select the following modules :

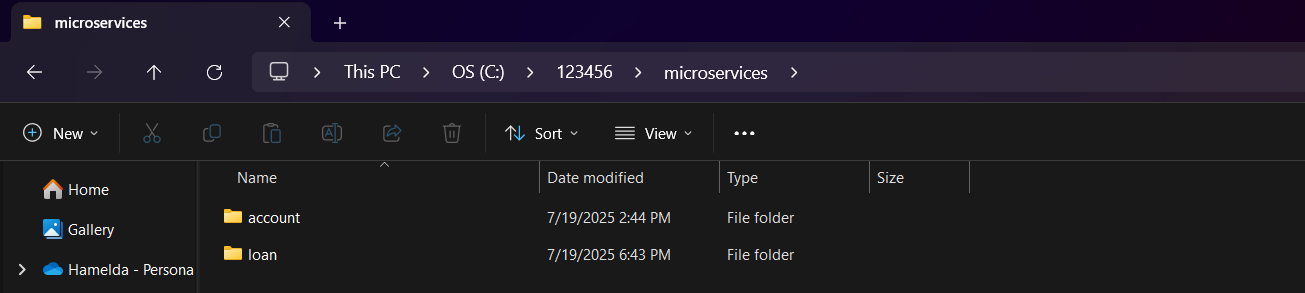
Developer Tools > Spring Boot DevTools

Web > Spring Web 

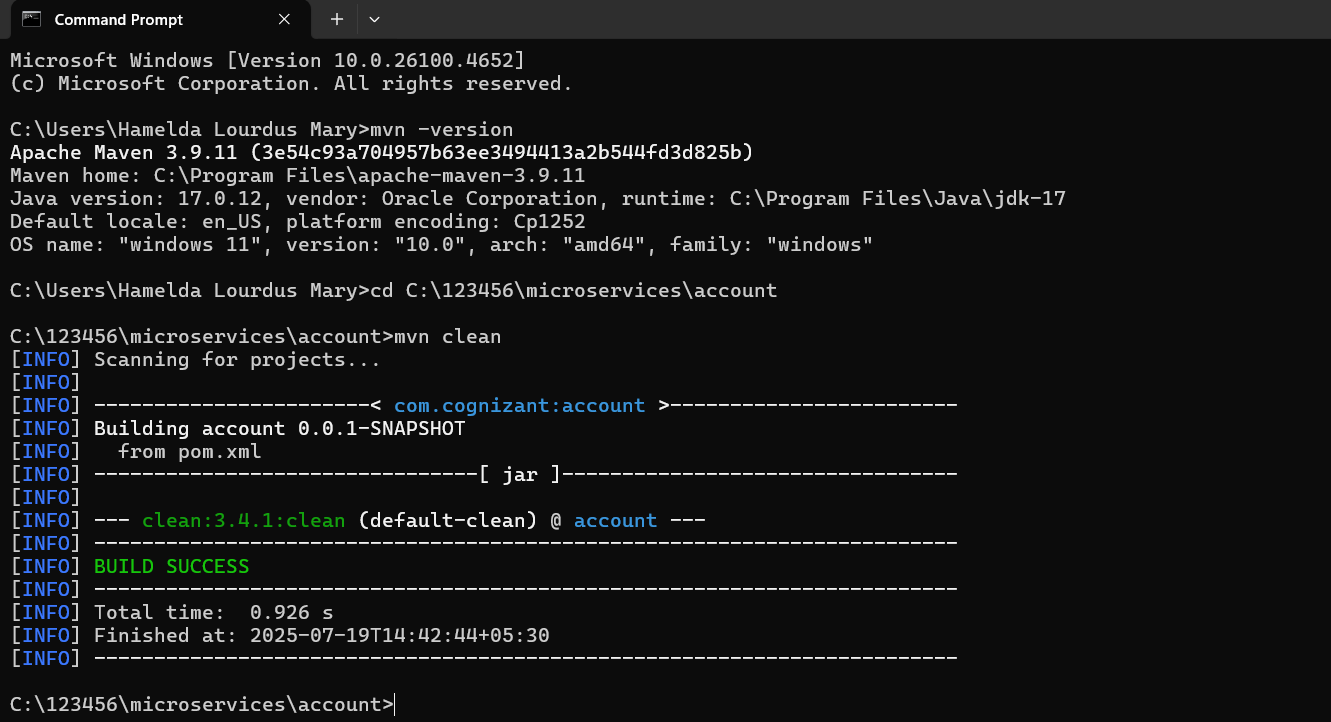
* Click generate and download the zip file



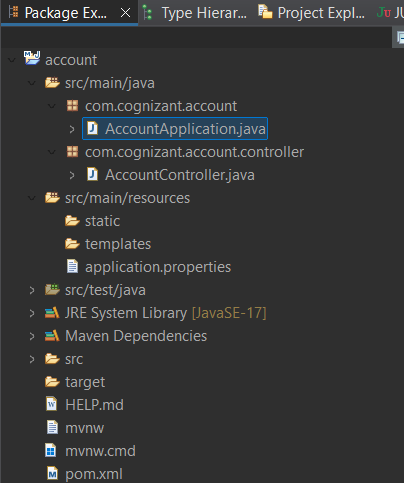
* Extract 'account' folder from the zip and place this folder in the 'microservices' folder created earlier



* Open command prompt in account folder and build using mvn clean package command



* Import this project in Eclipse and implement a controller method for getting account details based on account number



**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.HashMap;

import java.util.Map;

@RestController

public class AccountController {

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

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

Map<String, Object> response = new HashMap<>();

response.put("number", number);

response.put("type", "savings");

response.put("balance", 234343);

return response;

}

}

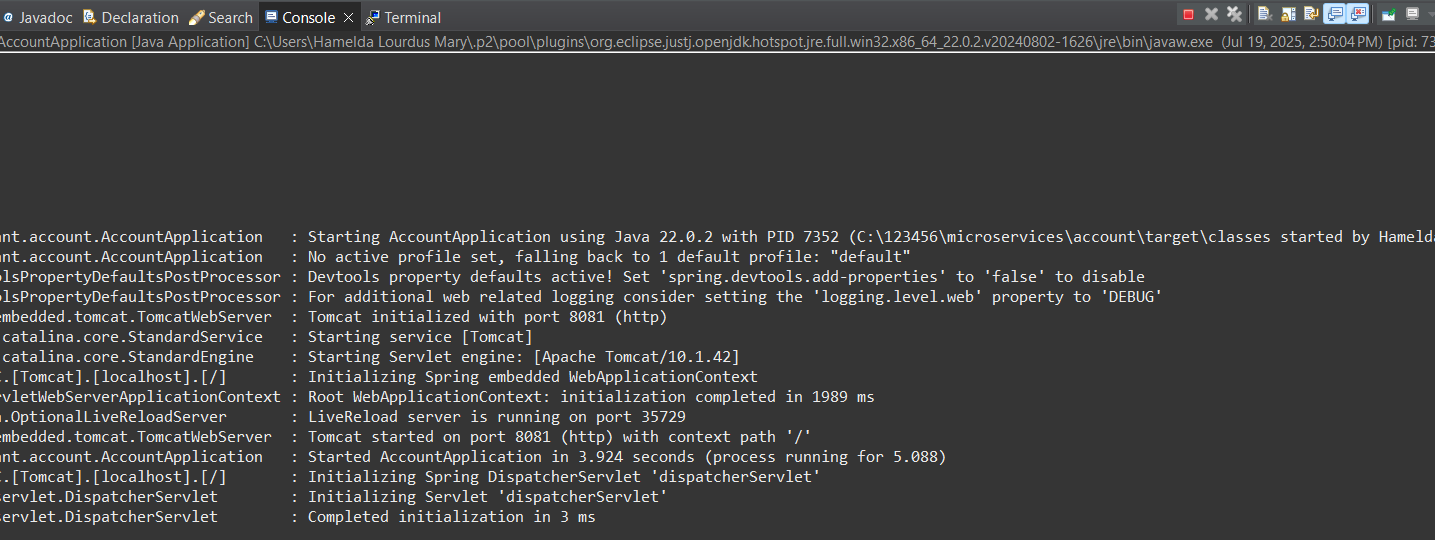
**Application.properties:**

spring.application.name=account

server.port=8081

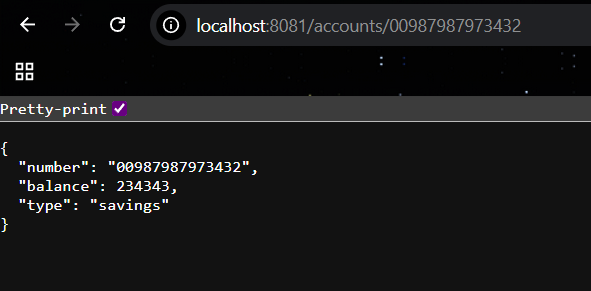
* Launch by running the application class and test the service in browser

**Output:**

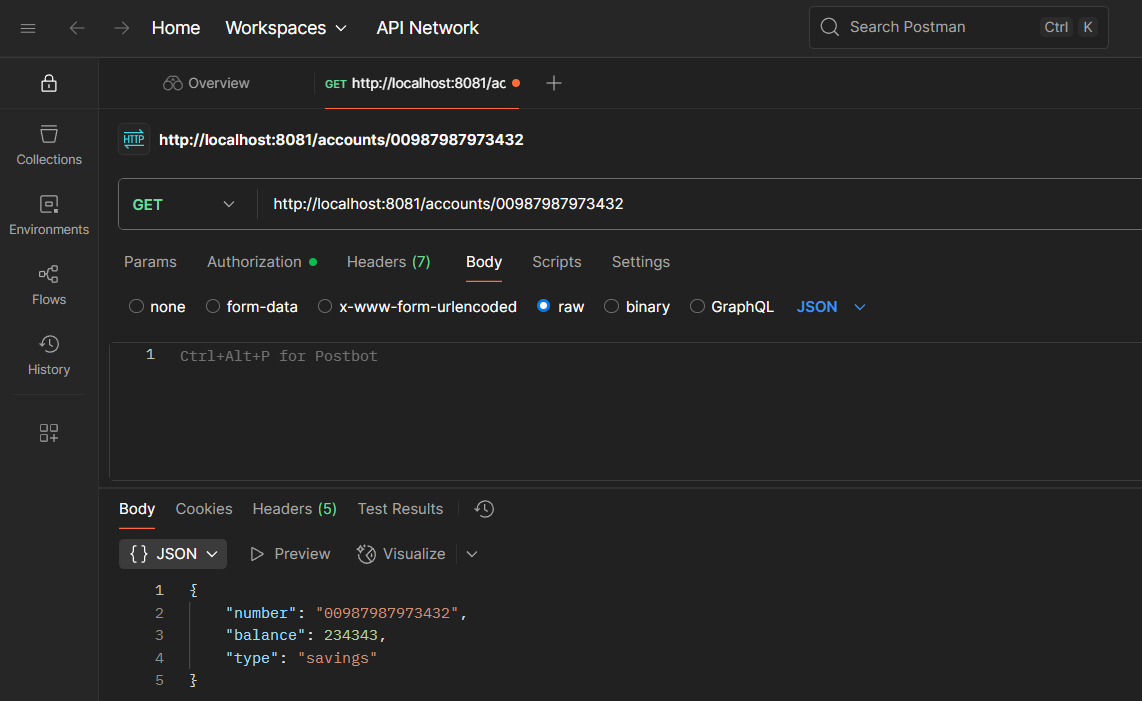


http://localhost:8081/accounts/00987987973432

**Chrome:**



**Postman:**



**Loan Microservice:**

**Open https://start.spring.io/ in browser **

* Enter form field values as specified below:

**Group:** com.cognizant

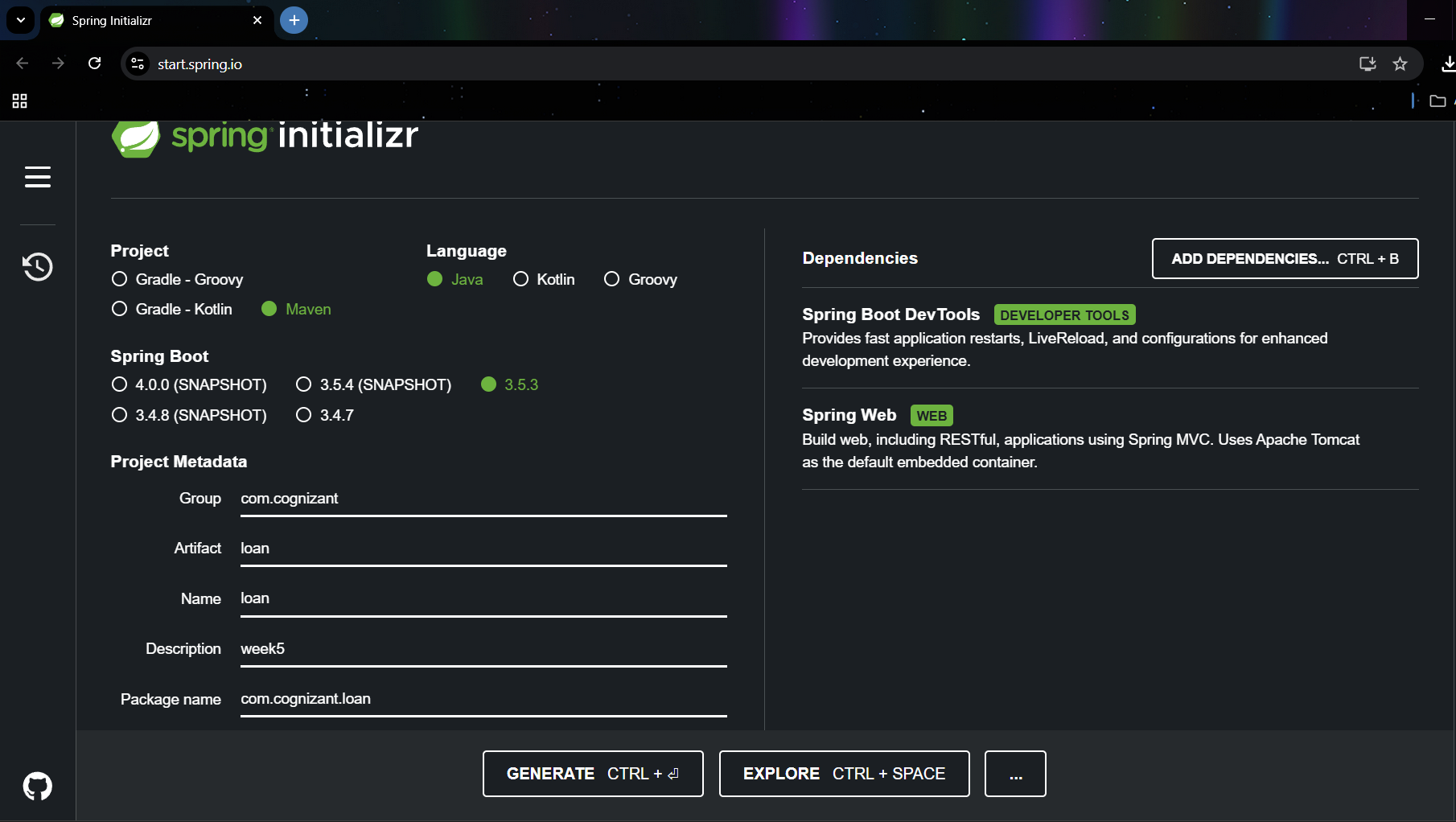
**Artifact:** loan 

* Select the following modules :

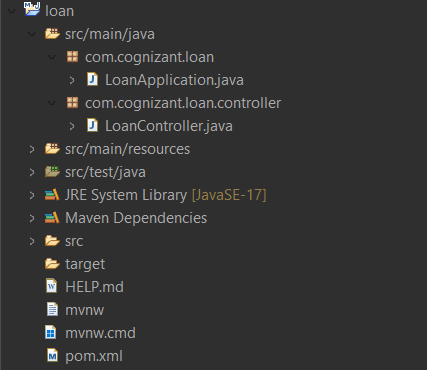
Developer Tools > Spring Boot DevTools

Web > Spring Web 

* Click generate and download the zip file



**Implement a service API to get loan account details**



**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.HashMap;

import java.util.Map;

@RestController

public class LoanController {

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

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

Map<String, Object> loanDetails = new HashMap<>();

loanDetails.put("number", number);

loanDetails.put("type", "car");

loanDetails.put("loan", 400000);

loanDetails.put("emi", 3258);

loanDetails.put("tenure", 18);

return loanDetails;

}

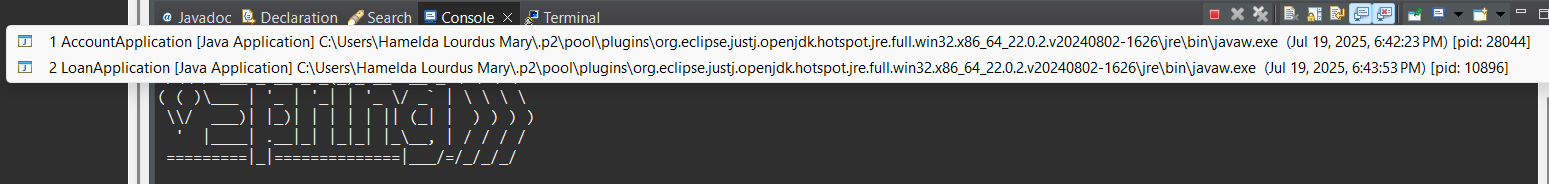
}

**Application.properties:**

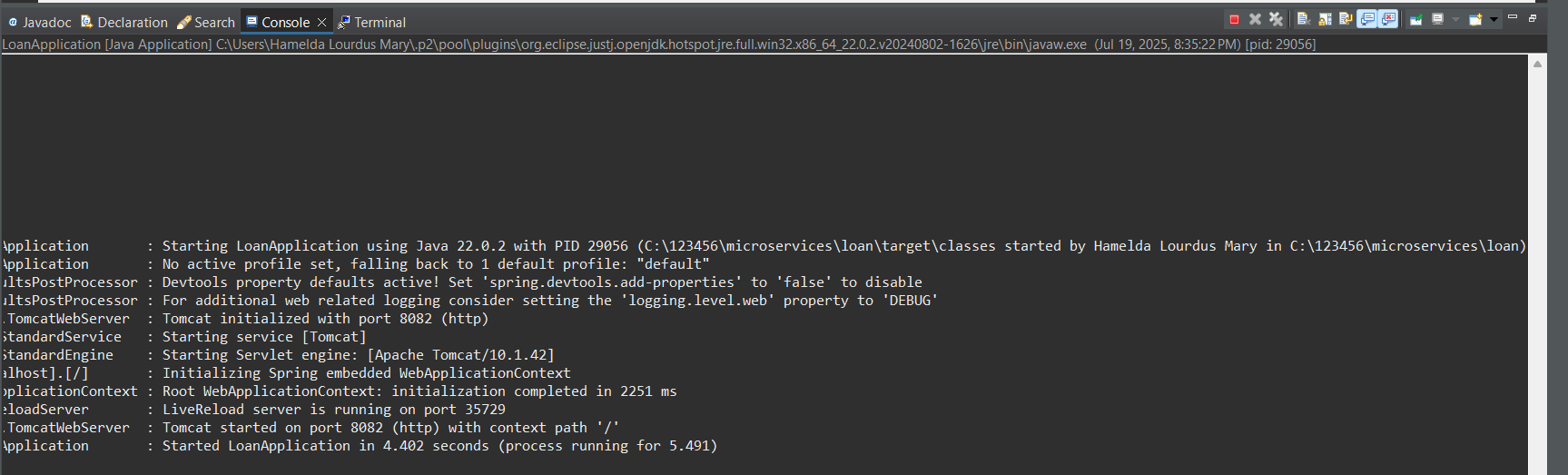
spring.application.name=loan

server.port=8082

* **Launching this application by having account service already running**

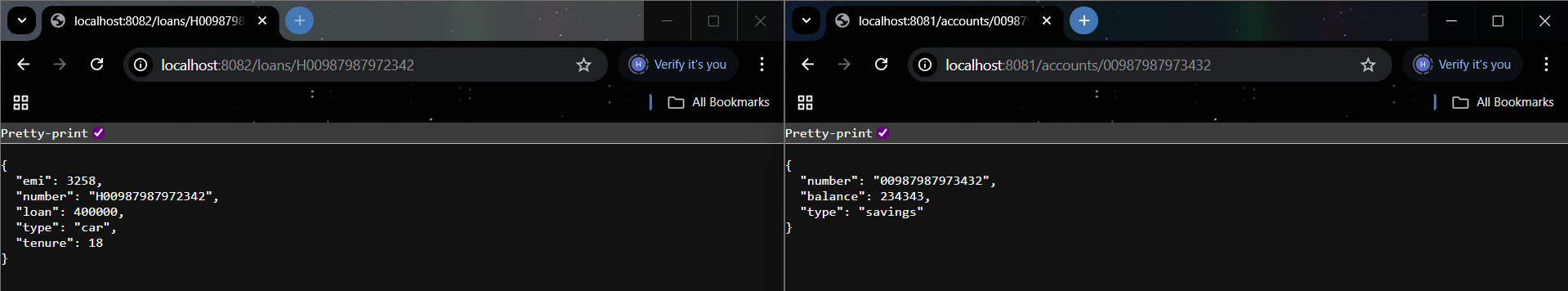


**Output:**



<http://localhost:8082/loans/H00987987972342>

**Chrome:**



Now we have two microservices running on different ports

**Postman:**

