Creating and Fixing Loan Microservice in Spring Boot

# 📌 Overview

This document explains how to build a Spring Boot microservice named 'Loan', set it up in Visual Studio Code, and fix common 'package mismatch' and 404 issues.

# ✅ Step 1: Generate Loan Microservice from Spring Initializr

1. Visit https://start.spring.io  
2. Fill in the details:  
 - Group: com.cognizant  
 - Artifact: loan  
3. Add dependencies:  
 - Spring Web  
 - Spring Boot DevTools  
4. Click 'Generate' to download loan.zip  
5. Extract the contents and move the 'loan' folder to: D:/<your\_id>/microservices

# ✅ Step 2: Set Port to 8082

1. Go to src/main/resources/application.properties  
2. Add the line:  
 server.port=8082

# ✅ Step 3: Create LoanController

1. Navigate to: src/main/java/com/cognizant/loan/controller  
2. Create LoanController.java  
3. Paste the following code:  
  
package com.cognizant.loan.controller;  
  
import org.springframework.web.bind.annotation.\*;  
import java.util.\*;  
  
@RestController  
@RequestMapping("/loans")  
public class LoanController {  
 @GetMapping("/{number}")  
 public Map<String, Object> getLoanDetails(@PathVariable String number) {  
 Map<String, Object> response = new HashMap<>();  
 response.put("number", number);  
 response.put("type", "car");  
 response.put("loan", 400000);  
 response.put("emi", 3258);  
 response.put("tenure", 18);  
 return response;  
 }  
}

# ✅ Step 4: Main Class - LoanApplication.java

1. Go to src/main/java/com/cognizant/loan  
2. Create LoanApplication.java  
3. Paste the following:  
  
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);  
 }  
}

# ✅ Step 5: Fix Package Mismatch Error in VS Code

1. Right-click 'src/main/java' → Mark as Source Root  
2. Run: mvn clean compile  
3. Press Ctrl+Shift+P → Java: Clean Java Language Server Workspace → Restart VS Code  
4. Ensure the JDK is configured via Java: Configure Java Runtime

# ✅ Step 6: Run the Loan Microservice

In VS Code terminal:  
cd loan  
mvn spring-boot:run  
→ Wait for 'Tomcat started on port 8082'

# ✅ Step 7: Test the Endpoint

Open browser or Postman:  
http://localhost:8082/loans/H00987987972342  
  
Expected Response:  
{  
 "number": "H00987987972342",  
 "type": "car",  
 "loan": 400000,  
 "emi": 3258,  
 "tenure": 18  
}

