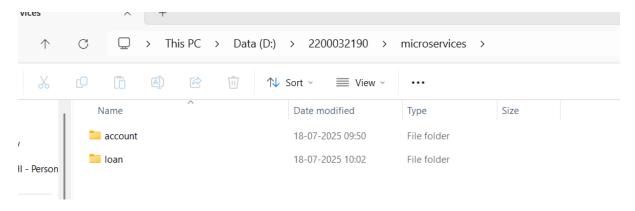
Creating Microservices for account and loan From File

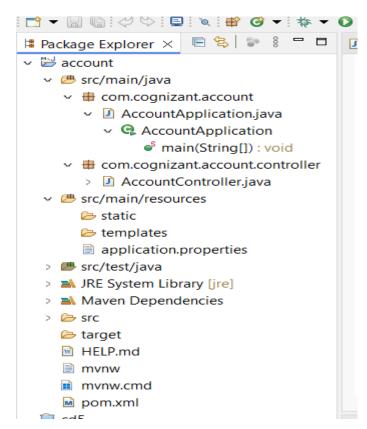
2. Microservices with API gateway

Create and extract account, loan project from spring-initializr as zip file



After importing account file into Eclipse

Create a Pacakge com.cognizant.account.controller:



In this 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> getAccount(@PathVariable String
number) {
    return Map.of(
      "number", number,
      "type", "savings",
      "balance", 234343
    );
  }
```

Pic From Eclipse IDE:

```
🤤 eclipse-workspace - account/src/main/java/com/cognizant/account/controller/AccountController.java - Eclipse IDE
File Edit Source Refactor Source Navigate Search Project Run Window Help
1 package com.cognizant.account.controller;
 3 mport org.springframework.web.bind.annotation.GetMapping; □

→ 

⊕ com.cognizant.account

    > AccountApplication.java
                       8 @RestController
9 public class AccountController {

www.src/main/resources

    static
    templates
    application.properties
 > # src/test/java
 > A JRE System Library [jre]
  Maven Dependencies
   HELP.md
   mvnw
```

Now change the serverport:

Application.properties

spring. application. name = account

server.port=8087

```
☐ LoanController.java ☐ application.properties ☐ LoanApplication.java ☐ application.properties × 1 spring.application.name=account 2 server.port=8087
```

Now run the AccountApplication.java:

```
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);
    }
}
```

Pic From Eclipse IDE:

```
🤤 eclipse-workspace - account/src/main/java/com/cognizant/account/AccountApplication.java - Eclipse IDE
File Edit Source Refactor Source Navigate Search Project Run Window Help
| 😭 🕶 🔡 🐚 | 🖒 🖖 | 🖳 | 🐧 | 🖎 | 😭 | Ø 🕶 | 🏇 🕶 💽 🕶 🕒 🗣 💽 🕶 | 🎒 💋 👂 🛂 | 🔞 🔞 🍴 🛭 👣 | 💆 💝 ኞ 🗢 🔻 🗘 🕶 | 📸
 Package Explorer 🗡 🖹 💲 🖁 🤻 🗖 📗 application.properties 🔛 LoanController.java 🗎 application.properties 🕑 AccountController.java
                                        1 package com.cognizant.account;
  3⊕ import org.springframework.boot.SpringApplication; [
     v # com.cognizant.account

    AccountApplication.java

                                       6 @SpringBootApplication

    AccountApplication

                                       7 public class AccountApplication {
             main(String[]): void

w ## com.cognizant.account.controller

                                        Qe
                                               public static void main(String[] args) {
                                       10
                                                 SpringApplication.run(AccountApplication.class, args);
       > 🗾 AccountController.java
                                       11

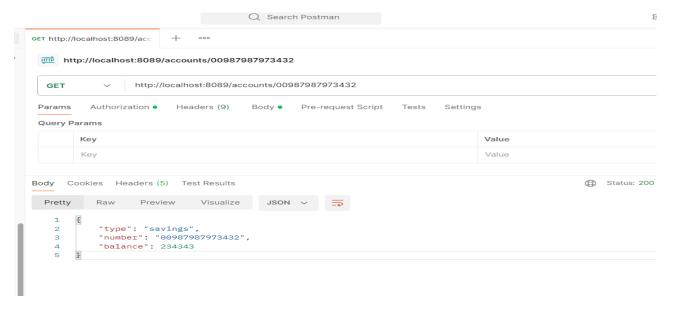
→ B src/main/resources

                                       12
                                       13 }
       templates
       application.properties
  > # src/test/java
  > 🛋 JRE System Library [jre]
  > Maven Dependencies
  > 🗁 src
```

Output From Postman:

```
{
  "type": "savings",
  "number": "00987987973432",
  "balance": 234343
}
```

Pic from postman:

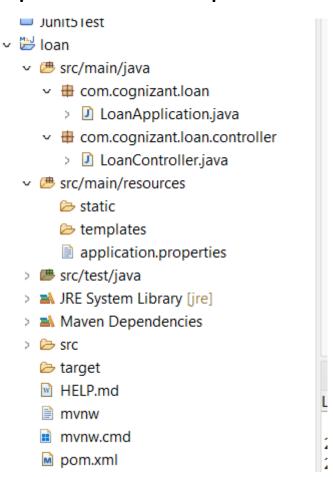


From Eclipse ide:

```
- [account] [ restartedMain] c.cognizant.account.AccountApplication : Starting AccountApplication using Java 22.0.1 with PID 20872 (D:\2200032190\microservices\account\t - [account] [ restartedMain] c.cognizant.account.AccountApplication : No active profile set, falling back to 1 default profile: "default" : No active profile set, falling back to 1 default profile: "default" : Tomcat initialized with port 8087 (http) : Starting service [Tomcat] :
```

2.

Import file Loan into Eclipse:



Create Controller package in that Create LoanController.java

Class:

Code:

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> getLoan(@PathVariable String number)
{
    return Map.of(
      "number", number,
      "type", "car",
      "loan", 400000,
      "emi", 3258,
      "tenure", 18
    );
  }
```

}

Pic From Eclipse IDE:

```
🛑 eclipse-workspace - loan/src/main/java/com/cognizant/loan/controller/LoanController.java - Eclipse IDE
 File Edit Source Refactor Source Navigate Search Project Run Window Help

    Image: Package Explorer ×
    Image: Second of the package Explorer in the 
  > 👺 account
                                                                                                                                                                       1 package com.cognizant.loan.controller;
       ° cd5
                                                                                                                                                                       3⊖ import org.springframework.web.bind.annotation.GetMapping;
  > 📂 ECommerceSearch
                                                                                                                                                                     4 import org.springframework.web.bind.annotation.PathVariable;
  > 📂 Factorymethodpattern
                                                                                                                                                                     5 import org.springframework.web.bind.annotation.RestController;
  > 📂 FinancialForecasting
                                                                                                                                                                   6 import java.util.Map;
  > 👺 jpademo
      Junit5Test
                                                                                                                                                                   8 @RestController
                                                                                                                                                                     9 public class LoanController {
 v 👺 loan
                                                                                                                                                                  10
           @GetMapping("/loans/{number}")
                  v # com.cognizant.loan
                                                                                                                                                                                                 public Map<String, Object> getLoan(@PathVariable String number) {

> LoanApplication.java

                                                                                                                                                                                                                    return Map.of(
                    {\tt ~~ \#~ com.cognizant.loan.controller}
                                                                                                                                                                                                                                     "number", number,
"type", "car",
"loan", 400000,
"emi", 3258,
                             ▶ LoanController.java

www.src/main/resources

                            static
                                                                                                                                                                                                                                       "tenure", 18

    beta templates
    beta
                                                                                                                                                                    19
                             application.properties
                                                                                                                                                                  20
           > # src/test/iava
           > 🛋 JRE System Library [jre]
                                                                                                                                                                   22
            > Maven Dependencies
            > 🗁 src
                  target
                   M HELP.md
                    mvnw
                    mvnw.cmd
                    Imx.mog
```

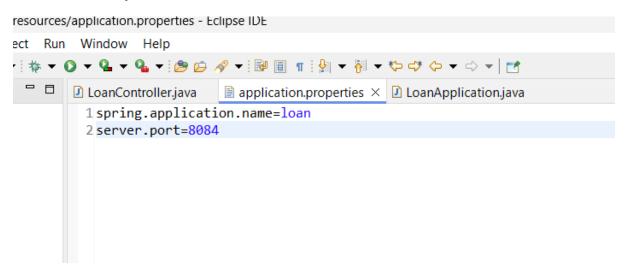
Now Change the port if needed:

Application.properties

spring.application.name=loan

server.port=8083

Pic From Eclipse IDE:



LoanApplication.java:

Code:

```
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);
    }
}
```

Pic From Eclipse IDE:

```
👄 eclipse-workspace - loan/src/main/java/com/cognizant/loan/LoanApplication.java - Eclipse IDE
File Edit Source Refactor Source Navigate Search Project Run Window Help
| 🖰 ▼ 🔡 🖏 | ♦⁄ ♦⁄ | 🖳 | 🐿 📵 ▼ | ‡∗ ▼ 🔘 ▼ 📞 ▼ 💁 ▼ 😥 Ø 🗸 🕬 🖟 📝 🖟 🕶 🗘 ▼ | 🚰
🖺 Package Explorer 🗴 🖹 💲 🦭 🖁 🗖 🗖 🗓 LoanController.java 📄 application.properties 🗓 LoanApplication.java 🗴
> 👺 account
                                         1 package com.cognizant.loan;
  \texttt{3} \textcircled{\texttt{m} \textbf{port}} \ \text{org.springframework.boot.SpringApplication;} \underline{\square}
> 📂 ECommerceSearch
> 📂 Factorymethodpattern
                                         6 @SpringBootApplication
> 📂 FinancialForecasting
                                           public class LoanApplication {
> 👺 jpademo
  Junit5Test
                                                public static void main(String[] args) {
v 👺 loan
                                                    SpringApplication.run(LoanApplication.class, args);

→ B src/main/java

→ 

⊕ com.cognizant.loan

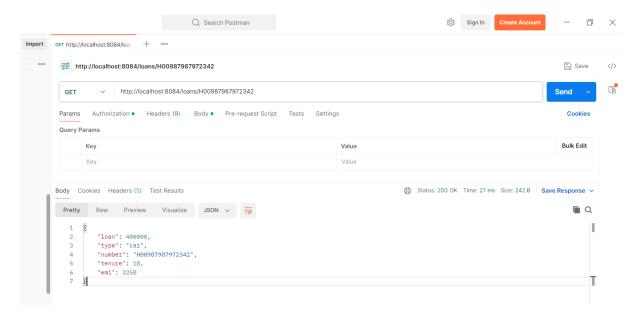
                                        13 }
       > LoanApplication.java
     # com.cognizant.loan.controller
       > LoanController.java
  static
       application.properties
   > # src/test/java
   JRE System Library firel
   > Maven Dependencies
```

After Running This Class:

Output From Postman:

```
{
  "loan": 400000,
  "type": "car",
  "number": "H00987987972342",
  "tenure": 18,
  "emi": 3258
}
```

Pic From Postman:



Output from Eclipse:

```
@ Javadoc 	☐ Declaration ☐ Console ×
                                                                                                                                                                                                                                                                                                                                                                                               LoanApplication [Java Application] C\Users\91833\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.1.v20240426-1149\jre\bin\javaw.exe (18 Jul 2025, 10:09:52 am) [pid: 6768]
                                                                                                                                                                                                                                                                                                                               Starting LoanApplication using Java 22.0.1 with PID 6768 (D No active profile set, falling back to 1 default profile: "Tomcat initialized with port 8084 (http)
Starting service [Tomcat]
Starting Servlet engine: [Apache Tomcat/10.1.42]
Initializing Spring embedded WebApplicationContext
Root WebApplicationContext: initialization completed in 242
Unable to start LiveReload server
Tomcat started on port 8084 (http) with context path '/'
Started LoanApolication in 0.395 seconds (process running f
2025-07-18T10:29:36.152+05:30 INFO 6768 --- [loan] 2025-07-18T10:29:36.153+05:30 INFO 6768 --- [loan] 2025-07-18T10:29:36.380+05:30 INFO 6768 --- [loan]
                                                                                                                                                            restartedMain] com.cognizant.loan.LoanApplication restartedMain] com.cognizant.loan.LoanApplication
                                                                                                                                                           restartedMain] com.cognizant.loan.Loanapplication restartedMain] o.s.b.w.embedded.tomcat.TomcatthebServer restartedMain] o.apache.catalina.core.StandardService restartedMain] o.apache.catalina.core.StandardEngine restartedMain] o.ac.c.c.(Iomcat].[localhost].[] restartedMain] w.s.c.ServletWebServerApplicationContext restartedMain] o.s.b.d.a.OptionalLiveReloadServer restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer restartedMain] om.complayat.loan_loanapplication
2025-07-18T10:29:36.381+05:30
2025-07-18T10:29:36.382+05:30
2025-07-18T10:29:36.401+05:30
                                                                                      INFO 6768 --- [loan]
INFO 6768 --- [loan]
                                                                                        INFO 6768 --- [loan]
2025-07-18T10:29:36.401+05:30
2025-07-18T10:29:36.500+05:30
2025-07-18T10:29:36.512+05:30
                                                                                       INFO 6768 --- [loan]
WARN 6768 --- [loan]
                                                                                       WARN 6768
INFO 6768
                                                                                                                                [loan]
2025-07-18T10:29:36.516+05:30 INFO 6768 --- [loan] [ restartedMain] com.cognizant.loan.LoanApplication 2025-07-18T10:29:36.520+05:30 INFO 6768 --- [loan] [ restartedMain] .ConditionEvaluationDeltaloggingListener 2025-07-18T10:30:11.834+05:30 INFO 6768 --- [loan] [nio-8084-exec-2] o.a.c.c.C.C.Commat].[localhost].[/] 2025-07-18T10:30:11.835+05:30 INFO 6768 --- [loan] [nio-8084-exec-2] o.s.web.servlet.DispatcherServlet
                                                                                                                                                                                                                                                                                                                                Started LoanApplication in 0.395 seconds (process running f
Condition evaluation unchanged
Initializing Spring DispatcherServlet 'dispatcherServlet'
Initializing Servlet 'dispatcherServlet'
2025-07-18T10:30:11.836+05:30 INFO 6768 --- [loan] [nio-8084-exec-2] o.s.web.servlet.DispatcherServlet
                                                                                                                                                                                                                                                                                                                                Completed initialization in 1 ms
```