**Microservices with API gateway**

**Project Structure**

microservices-working/

├── api-gateway/

│ ├── pom.xml

│ ├── src/

│ │ ├── main/

│ │ │ ├── java/

│ │ │ │ └── com/cognizant/gateway/

│ │ │ │ └── ApiGatewayApplication.java

│ │ │ └── resources/

│ │ │ └── application.properties

│ └── target/ (generated after build)

│

├── eureka-server/

│ ├── pom.xml

│ ├── src/

│ │ ├── main/

│ │ │ ├── java/

│ │ │ │ └── com/cognizant/eureka/

│ │ │ │ └── EurekaServerApplication.java

│ │ │ └── resources/

│ │ │ └── application.properties

│ └── target/ (generated after build)

│

├── greet-service/

│ ├── pom.xml

│ ├── src/

│ │ ├── main/

│ │ │ ├── java/

│ │ │ │ └── com/cognizant/greet/

│ │ │ │ └── GreetServiceApplication.java

│ │ │ └── resources/

│ │ │ └── application.properties

│ └── target/ (generated after build)

**Api-gateway**

**ApiGatewayApplication.java**

package com.cognizant.gateway;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class ApiGatewayApplication {

    public static void main(String[] args) {

        SpringApplication.run(ApiGatewayApplication.class, args);

    }

}

**Pom.xml**

<project xmlns="http://maven.apache.org/POM/4.0.0"

         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0

         http://maven.apache.org/xsd/maven-4.0.0.xsd">

    <modelVersion>4.0.0</modelVersion>

    <parent>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-parent</artifactId>

    <version>2.7.18</version>

    <relativePath/>

  </parent>

    <groupId>com.cognizant</groupId>

    <artifactId>api-gateway</artifactId>

    <version>0.0.1-SNAPSHOT</version>

    <packaging>jar</packaging>

    <properties>

        <java.version>17</java.version>

        <spring-cloud.version>2021.0.6</spring-cloud.version>

    </properties>

    <dependencies>

        <dependency>

            <groupId>org.springframework.cloud</groupId>

            <artifactId>spring-cloud-starter-gateway</artifactId>

        </dependency>

        <dependency>

            <groupId>org.springframework.cloud</groupId>

            <artifactId>spring-cloud-starter-netflix-eureka-client</artifactId>

        </dependency>

        <dependency>

            <groupId>org.springframework.boot</groupId>

            <artifactId>spring-boot-starter</artifactId>

        </dependency>

    </dependencies>

    <dependencyManagement>

        <dependencies>

            <dependency>

                <groupId>org.springframework.cloud</groupId>

                <artifactId>spring-cloud-dependencies</artifactId>

                <version>${spring-cloud.version}</version>

                <type>pom</type>

                <scope>import</scope>

            </dependency>

        </dependencies>

    </dependencyManagement>

    <build>

        <plugins>

            <plugin>

                <groupId>org.springframework.boot</groupId>

                <artifactId>spring-boot-maven-plugin</artifactId>

            </plugin>

        </plugins>

    </build>

</project>

**Erueka-server**

**EurekaServerApplication.java**

package com.cognizant.eureka;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.cloud.netflix.eureka.server.EnableEurekaServer;

@SpringBootApplication

@EnableEurekaServer

public class EurekaServerApplication {

    public static void main(String[] args) {

        SpringApplication.run(EurekaServerApplication.class, args);

    }

}

**Pom.xml**

<project xmlns="http://maven.apache.org/POM/4.0.0"

         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0

         http://maven.apache.org/xsd/maven-4.0.0.xsd">

    <modelVersion>4.0.0</modelVersion>

    <parent>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-parent</artifactId>

    <version>2.7.18</version>

    <relativePath/>

  </parent>

    <groupId>com.cognizant</groupId>

    <artifactId>eureka-server</artifactId>

    <version>0.0.1-SNAPSHOT</version>

    <packaging>jar</packaging>

    <properties>

        <java.version>17</java.version>

        <spring-cloud.version>2021.0.6</spring-cloud.version>

    </properties>

    <dependencies>

        <dependency>

            <groupId>org.springframework.cloud</groupId>

            <artifactId>spring-cloud-starter-netflix-eureka-server</artifactId>

        </dependency>

        <dependency>

            <groupId>org.springframework.boot</groupId>

            <artifactId>spring-boot-starter</artifactId>

        </dependency>

    </dependencies>

    <dependencyManagement>

        <dependencies>

            <dependency>

                <groupId>org.springframework.cloud</groupId>

                <artifactId>spring-cloud-dependencies</artifactId>

                <version>${spring-cloud.version}</version>

                <type>pom</type>

                <scope>import</scope>

            </dependency>

        </dependencies>

    </dependencyManagement>

    <build>

        <plugins>

            <plugin>

                <groupId>org.springframework.boot</groupId>

                <artifactId>spring-boot-maven-plugin</artifactId>

            </plugin>

        </plugins>

    </build>

</project>

**Greet-service**

**GreetSericeApplication.java**

package com.cognizant.greet;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

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

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

@SpringBootApplication

public class GreetServiceApplication {

    public static void main(String[] args) {

        SpringApplication.run(GreetServiceApplication.class, args);

    }

}

@RestController

class GreetController {

    @GetMapping("/greet")

    public String greet() {

        return "Hello World from Greet Service!";

    }

}

**Pom.xml**

<project xmlns="http://maven.apache.org/POM/4.0.0"

         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0

         http://maven.apache.org/xsd/maven-4.0.0.xsd">

    <modelVersion>4.0.0</modelVersion>

    <parent>

    <groupId>org.springframework.boot</groupId>

    <artifactId>spring-boot-starter-parent</artifactId>

    <version>2.7.18</version>

    <relativePath/>

  </parent>

    <groupId>com.cognizant</groupId>

    <artifactId>greet-service</artifactId>

    <version>0.0.1-SNAPSHOT</version>

    <packaging>jar</packaging>

    <properties>

        <java.version>17</java.version>

        <spring-cloud.version>2021.0.6</spring-cloud.version>

    </properties>

    <dependencies>

        <dependency>

            <groupId>org.springframework.boot</groupId>

            <artifactId>spring-boot-starter-web</artifactId>

        </dependency>

        <dependency>

            <groupId>org.springframework.cloud</groupId>

            <artifactId>spring-cloud-starter-netflix-eureka-client</artifactId>

        </dependency>

    </dependencies>

    <dependencyManagement>

        <dependencies>

            <dependency>

                <groupId>org.springframework.cloud</groupId>

                <artifactId>spring-cloud-dependencies</artifactId>

                <version>${spring-cloud.version}</version>

                <type>pom</type>

                <scope>import</scope>

            </dependency>

        </dependencies>

    </dependencyManagement>

    <build>

        <plugins>

            <plugin>

                <groupId>org.springframework.boot</groupId>

                <artifactId>spring-boot-maven-plugin</artifactId>

            </plugin>

        </plugins>

    </build>

</project>

**Output:**













