**WEEK 5 SOLUTONS**

**Sample exercises on Centralized Authentication and SSO with Spring Boot 3 and Spring Cloud**

**Exercise 1: Implementing Centralized Authentication with OAuth 2.1/OIDC**

SpringCloudLearnApplication.java:

package com.cognizant.spring\_cloud\_learn;  
  
import org.springframework.boot.SpringApplication;  
import org.springframework.boot.autoconfigure.SpringBootApplication;  
  
@SpringBootApplication  
public class SpringCloudLearnApplication {  
 public static void main(String[] args) {  
 SpringApplication.*run*(SpringCloudLearnApplication.class, args);  
 }  
}

**application.yaml:**

spring:  
 security:  
 oauth2:  
 client:  
 registration:  
 my-client:  
 client-id: 737128186931-\*\*\*\*\*\*\*\*\*nt.com  
 client-secret: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*   
 provider: my-provider  
 scope: openid, profile, email  
 authorization-grant-type: authorization\_code  
 redirect-uri: "http://localhost:8080/login/oauth2/code/my-client"  
 provider:  
 my-provider:  
 authorization-uri: https://accounts.google.com/o/oauth2/auth  
 token-uri: https://oauth2.googleapis.com/token  
 user-info-uri: https://openidconnect.googleapis.com/v1/userinfo  
 user-name-attribute: sub  
  
 *# disable DataSource auto‑config since you don’t need a DB yet* autoconfigure:  
 exclude: org.springframework.boot.autoconfigure.jdbc.DataSourceAutoConfiguration

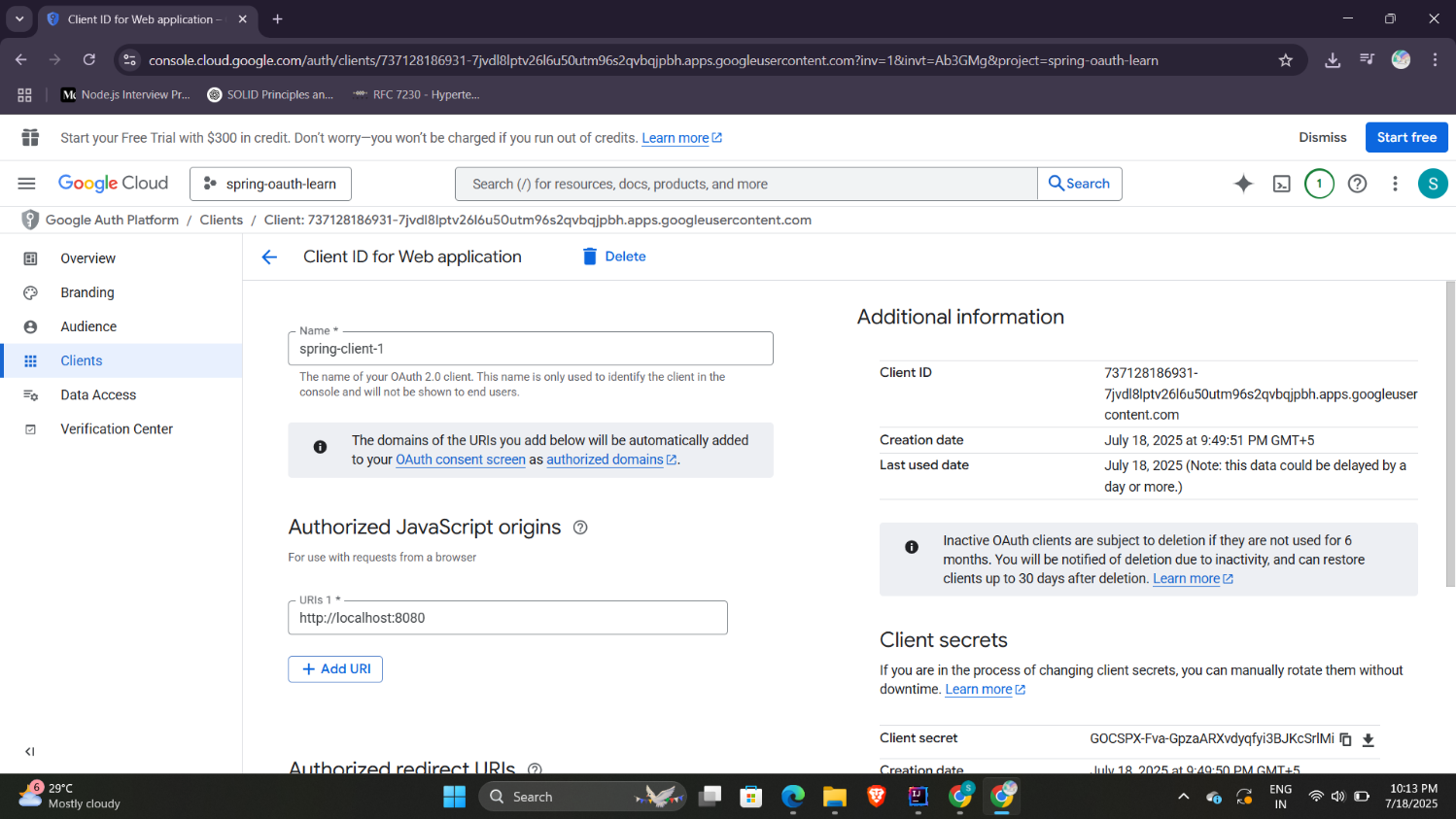
SecurityConfig.java

package com.cognizant.spring\_cloud\_learn.security;  
  
import org.springframework.context.annotation.Bean;  
import org.springframework.context.annotation.Configuration;  
import org.springframework.security.config.annotation.web.builders.HttpSecurity;  
import org.springframework.security.web.SecurityFilterChain;  
  
@Configuration  
public class SecurityConfig {  
  
 @Bean  
 public SecurityFilterChain filterChain(HttpSecurity http) throws Exception {  
 http  
 .authorizeHttpRequests(authz -> authz  
 .anyRequest().authenticated()  
 )  
 .oauth2Login(); // Enables OAuth2 login with Google  
  
 return http.build();  
 }  
}

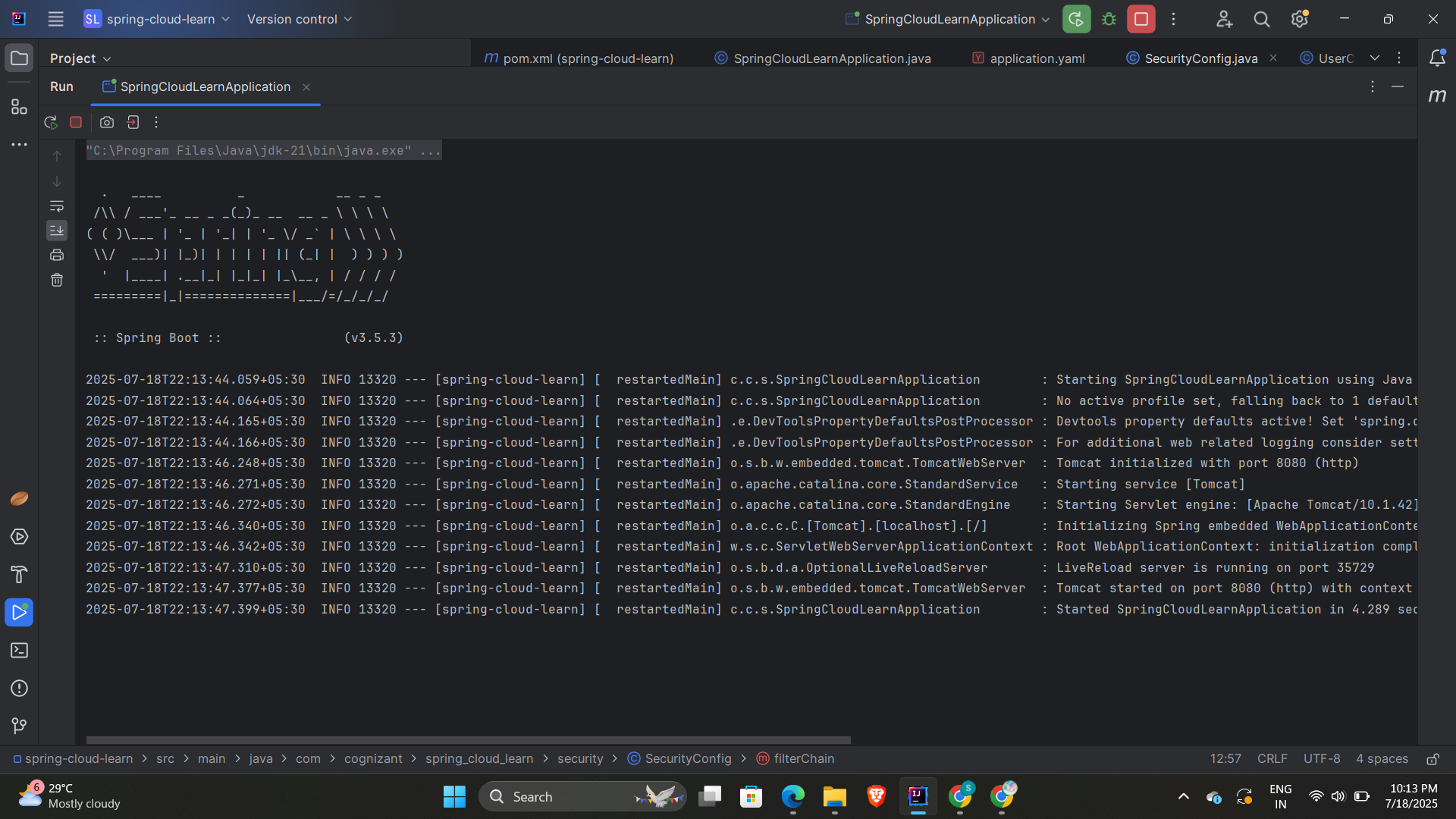
**UserContoller.java**

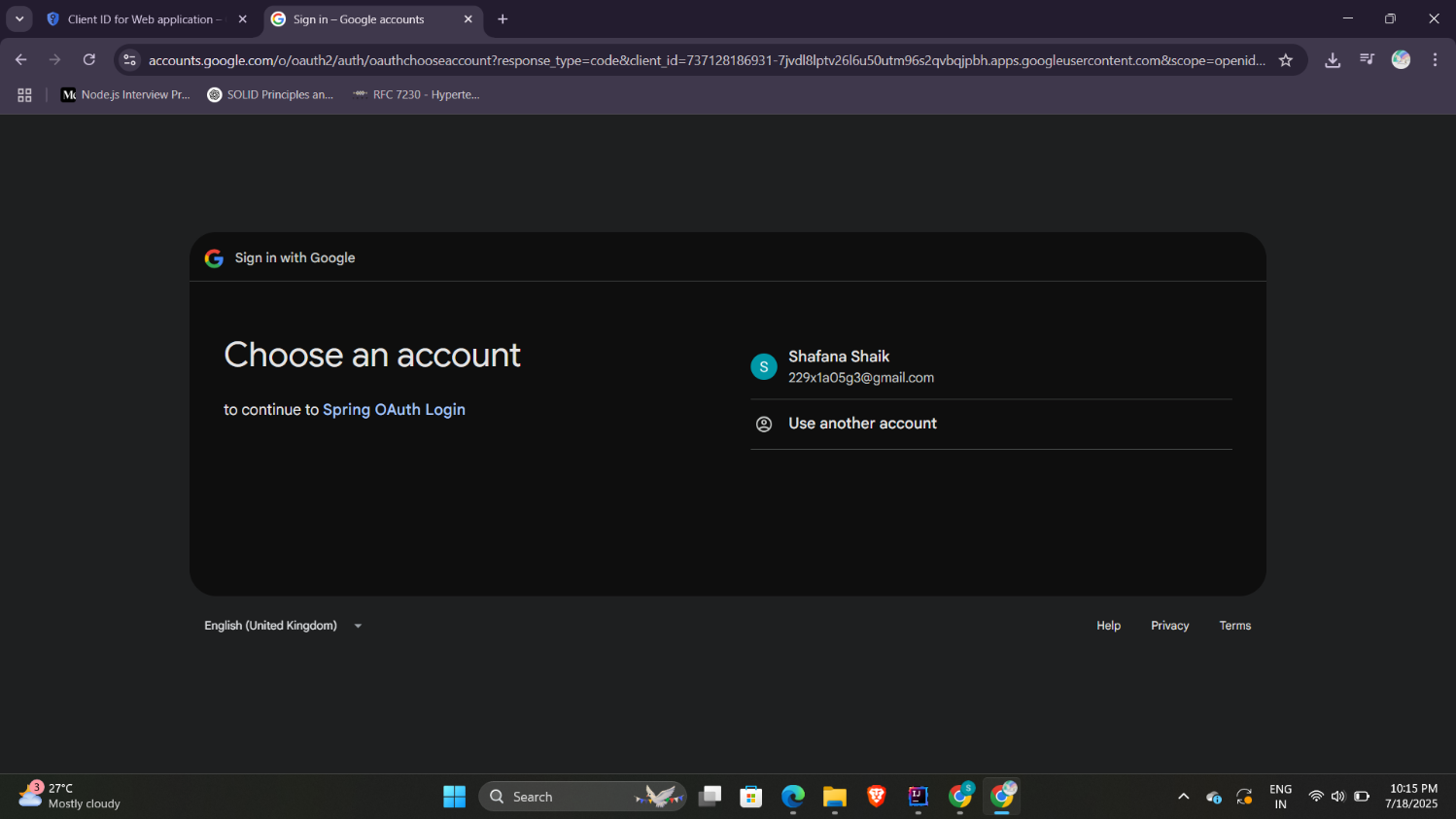
package com.cognizant.spring\_cloud\_learn.controller;  
  
import org.springframework.web.bind.annotation.GetMapping;  
import org.springframework.web.bind.annotation.RestController;  
  
import java.security.Principal;  
  
@RestController  
public class UserController {  
 @GetMapping("/user")  
 public Principal user(Principal principal) {  
 return principal;  
 }  
}

**Output:**

****



****

****