# 学习springboot的最基本的用法

## 搭建无ide的springboot的开发环境

### 运行IntelliJ IDEA

### 在IntelliJ的

## 搭建IntelliJ IDEA的springboot的开发环境

## 增加Controller类

@RestController  
class Controller{

}

## 增加get方法

### 无请求参数的get

<http://localhost:8080/hello1/>

hello1地址后面有其他内容，否则就会找不到页面，包404错误

@GetMapping("hello1")  
public String hello1(){  
 return "hello1()";  
}

### 参数直接在路径中

<http://localhost:8080/hello2/123>

Hello2地址后面必须要有其他内容，否则就会找不到页面，包404错误

http://localhost:8080/hello2/123/123也会报404错误

@GetMapping("hello2/{name}")  
public String hello2(@PathVariable("name") String name){  
 return "hello2() 获取到的name是：" + name;  
}

### 参数跟在 ? 号后面

<http://localhost:8080/hello3?name=123>

@GetMapping("hello3")  
public String hello3(@RequestParam("name") String name){  
 return "hello3() 获取到的name是：" + name;  
}

### 参数跟在 ? 号后面，且**required = false** 标注参数是非必须的

@GetMapping("hello4")  
public String hello4(@RequestParam(name = "name",required = false) String name){  
 return "hello4() 获取到的name是：" + name;  
}

则有下面几种场景：

#### 正常场景



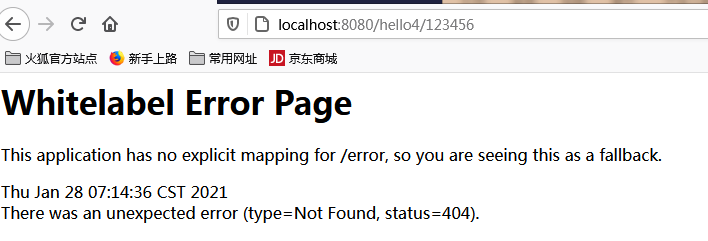
#### 指定名词不指定值



#### 不指定参数



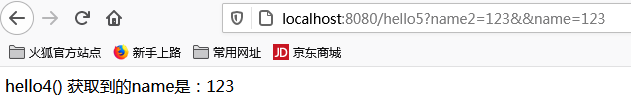
#### 不指定参数，而是跟斜杠



### 参数跟在 ? 号后面，且指定个默认值

@GetMapping("hello5")  
public String hello5(@RequestParam(name = "name",defaultValue = "xxx") String name){  
 return "hello4() 获取到的name是：" + name;  
}

#### 正常场景



#### 指定参数，但是缺少需要的参数



#### 指定参数但不指定值



#### 指定参数但不指定等号



#### 不指定参数



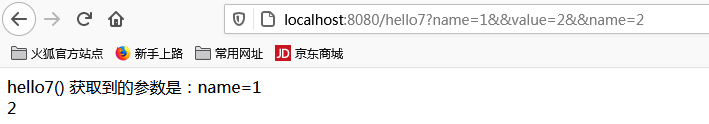
### 使用 map 来接收参数

@GetMapping("hello6")  
public String hello6(@RequestParam Map<String, Object> params){  
 return "hello6() 获取到的参数是：name=" + params.get("name") + ", vamue=" + params.get("value");  
}



### 接收一个数组

@GetMapping("hello7")  
public String hello7(@RequestParam("name") String[] names){  
 String result = "";  
 for(String name:names){  
 result += name + "<br>";  
 }  
 return "hello7() 获取到的参数是：name=" + result;  
}



### 定义类来接收参数

## 增加swagger，生成接口文档

### 在pom文件中：**导入依赖**

<dependency>  
 <groupId>io.springfox</groupId>  
 <artifactId>springfox-swagger2</artifactId>  
 <version>2.9.2</version>  
</dependency>  
<dependency>  
 <groupId>io.springfox</groupId>  
 <artifactId>springfox-swagger-ui</artifactId>  
 <version>2.9.2</version>  
</dependency>

增加后如下图：

### **编写Swagger2的配置类**

**添加如下的类**

@Configuration  
@EnableSwagger2  
public class SwaggerConfig {  
 @Bean  
 public Docket createRestApi() {  
 return new Docket(DocumentationType.*SWAGGER\_2*)  
 .pathMapping("/")  
 .select()  
 .apis(RequestHandlerSelectors.*basePackage*("com.example.demo"))  
 .paths(PathSelectors.*any*())  
 .build().apiInfo(new ApiInfoBuilder()  
 .title("SpringBoot整合Swagger")  
 .description("SpringBoot整合Swagger，详细信息......")  
 .version("9.0")  
 //.contact(new Contact("啊啊啊啊","blog.csdn.net","aaa@gmail.com"))  
 .license("The Apache License")  
 .licenseUrl("http://www.baidu.com")  
 .build());  
 }  
}

### **配置某个Controller**

**在controller类前加注解:**

@Api(tags = "用户接口")  
@RestController  
@EnableSwagger2  
class Controller{

### **配置某个接口方法**

@GetMapping("hello2/{name}")  
@ApiOperation("第二接口")  
@ApiImplicitParams({  
 @ApiImplicitParam(name = "name", value = "用户名", defaultValue = "李四")  
})

### **测试**

在浏览器输入地址:http://localhost:8080/swagger-ui.html#/

### **使用新的主题**

**在pom增加依赖**

<dependency>  
 <groupId>com.github.caspar-chen</groupId>  
 <artifactId>swagger-ui-layer</artifactId>  
 <version>1.1.3</version>  
</dependency>

**在浏览器输入新的地址**

<http://localhost:8080/docs.html>

调试

## 增加post方法

### 接收 **form-data** 格式的 **POST** 数据

@PostMapping("/hello")  
public String hello(@RequestParam("name") String name,  
 @RequestParam("age") Integer age) {  
 return "name：" + name + "\nage：" + age;  
}

### 接收 **form-data** 格式的 **POST** 数据， 并且容许数据不填

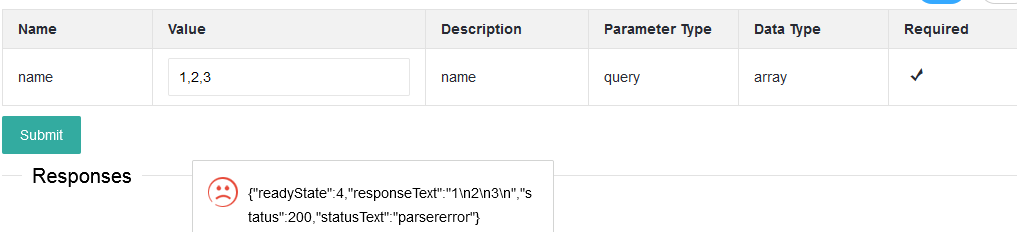
@PostMapping("/hello10")  
public String hello10(@RequestParam(name="name", defaultValue = "xxx") String name,  
 @RequestParam(name="age", required = false) Integer age) {  
 return "name：" + name + "\nage：" + age;  
}

### 使用map来接收参数

@PostMapping("/hello11")  
public String hello11(@RequestParam Map<String,Object> params) {  
 return "name：" + params.get("name") + "\nage：" + params.get("age");  
}

### 使用数组来接收参数

@PostMapping("/hello12")  
public String hello12(@RequestParam("name") String[] names) {  
 String result = "";  
 for(String name:names){  
 result += name + "\n";  
 }  
 return result;  
}



## 增加delete方法

### url传递参数

@DeleteMapping("/delete1/{id}")  
public String delete1(@PathVariable("id")String id){  
  
 return id;  
}

### json

## 增加put方法

1. 通过url传递参数

@PutMapping("/password")  
public String editPassword(String oldPassword,String newPassword){  
 return "";  
}

1. 通过data传递参数

## 增加数据库访问

## 增加数据库连接池的访问方法

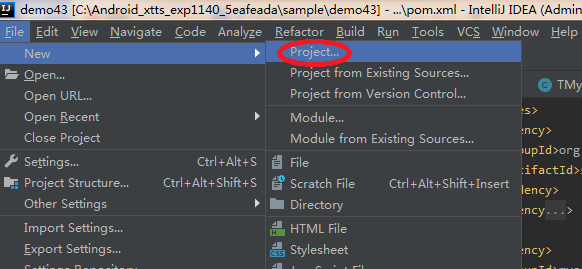
## 代码打包

# Springboot连接mysql数据库

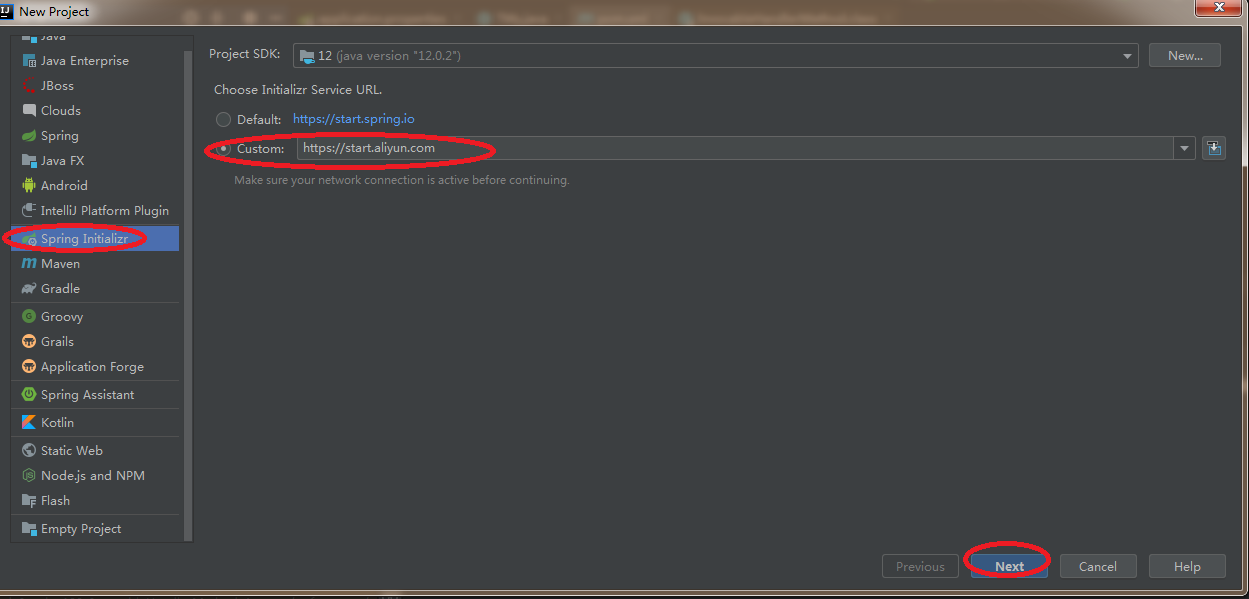
## 新建工程

### 打开intellij

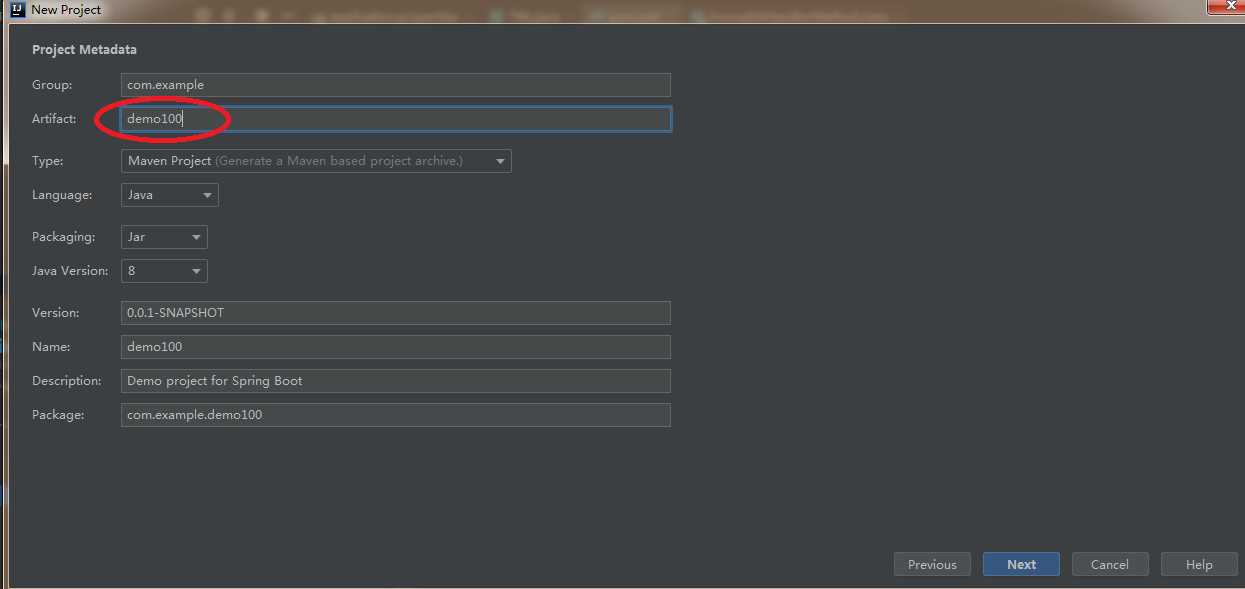
### 点击[File][New][Project]



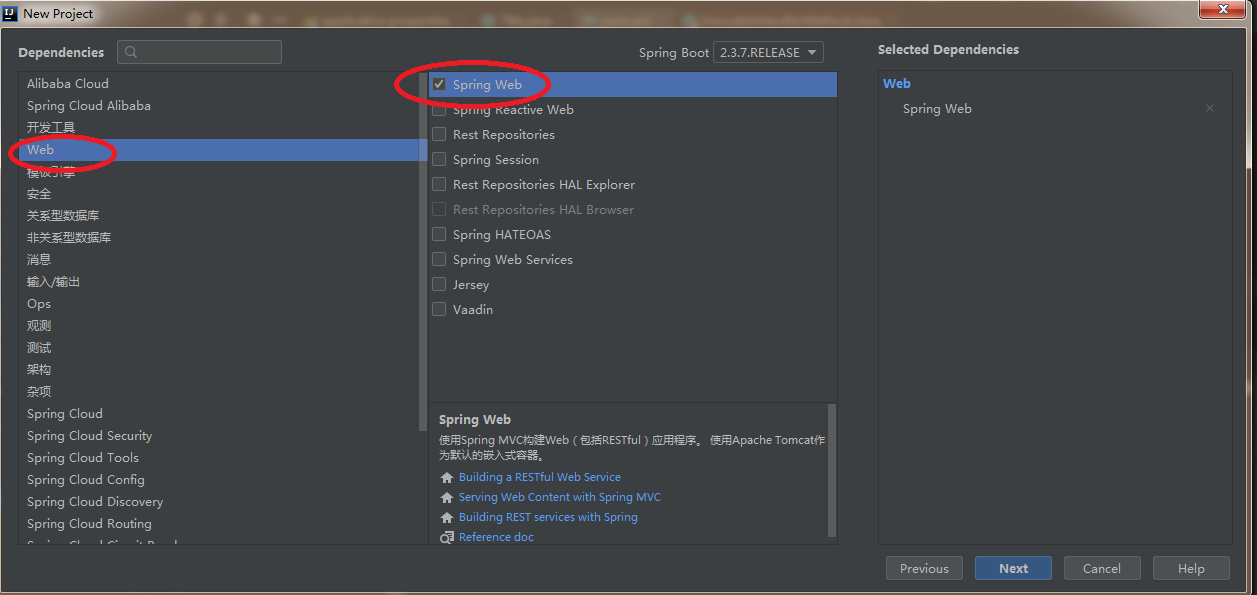
### 选择[Spring Initializr][Next]

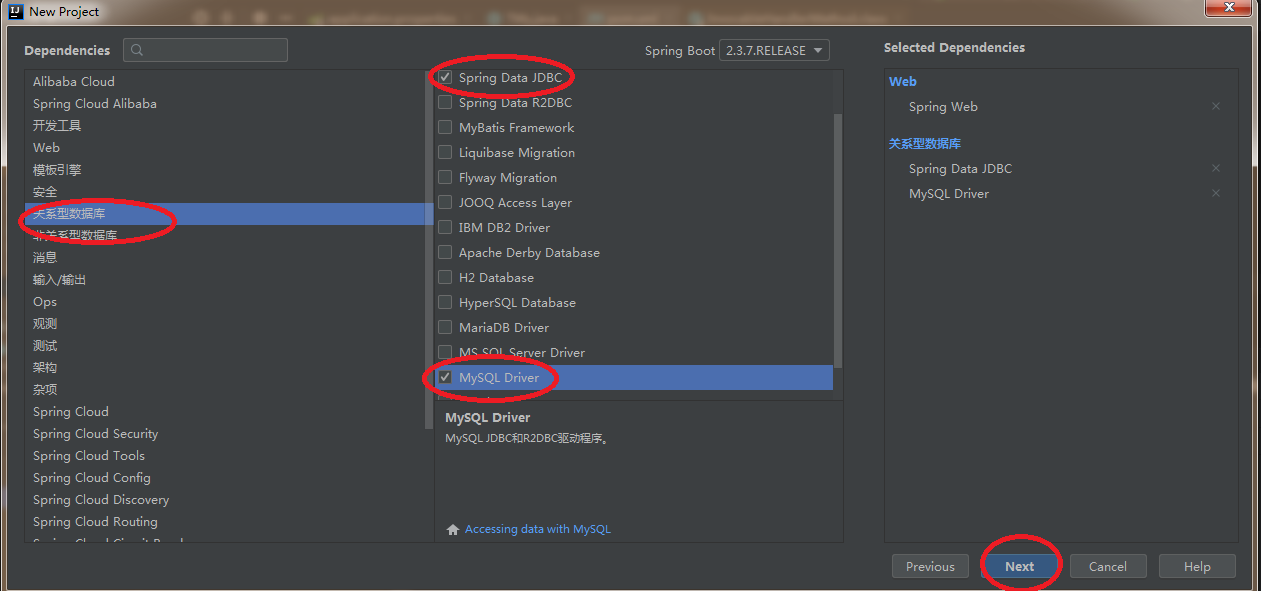


### 修改为自己的工程名字， Next

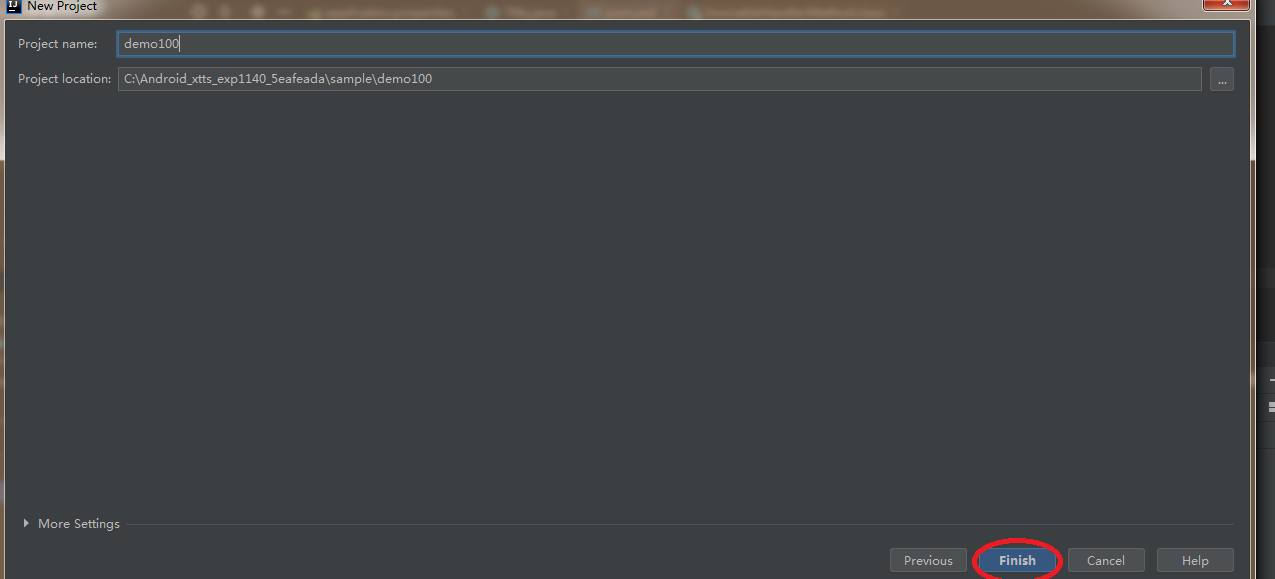


### 选择依赖包[spring web]+[spring Data JDBC]+[MySql Driver]

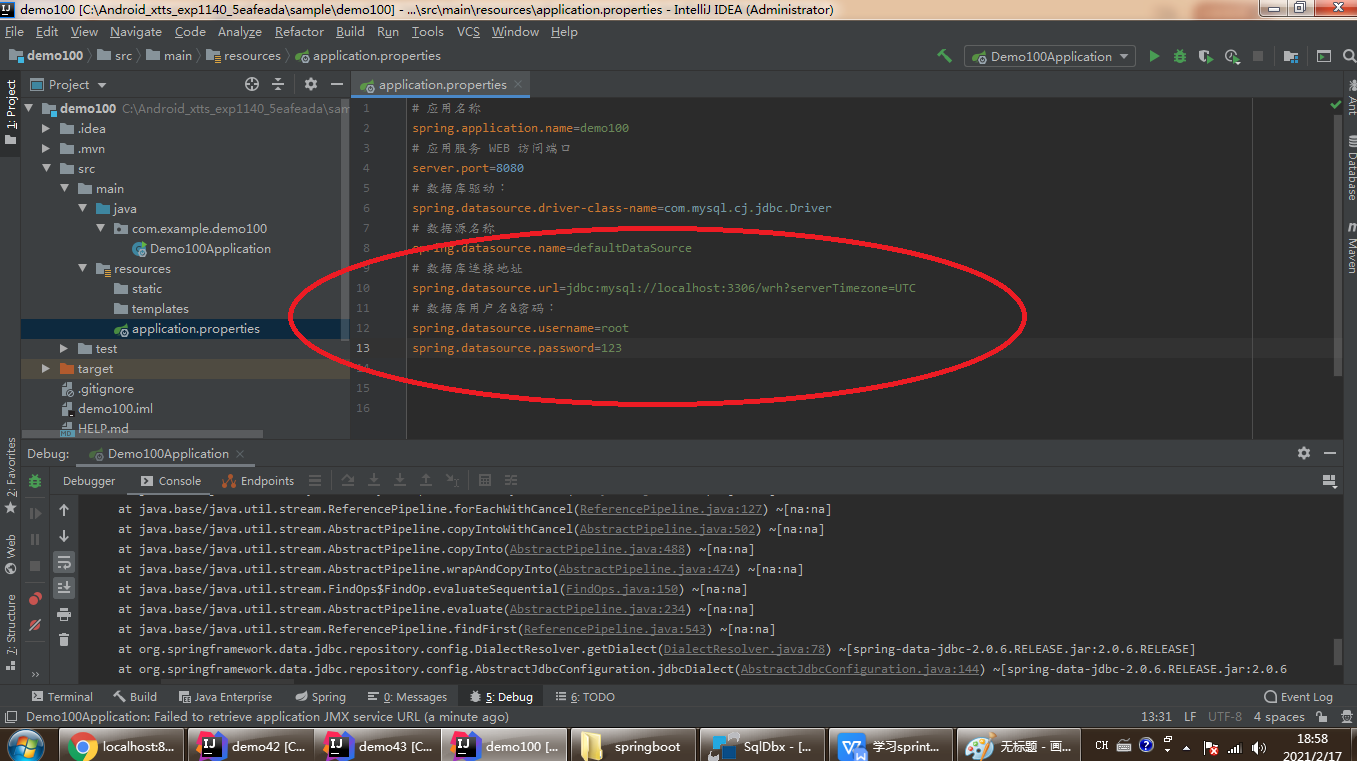




### [Finish]新建工程

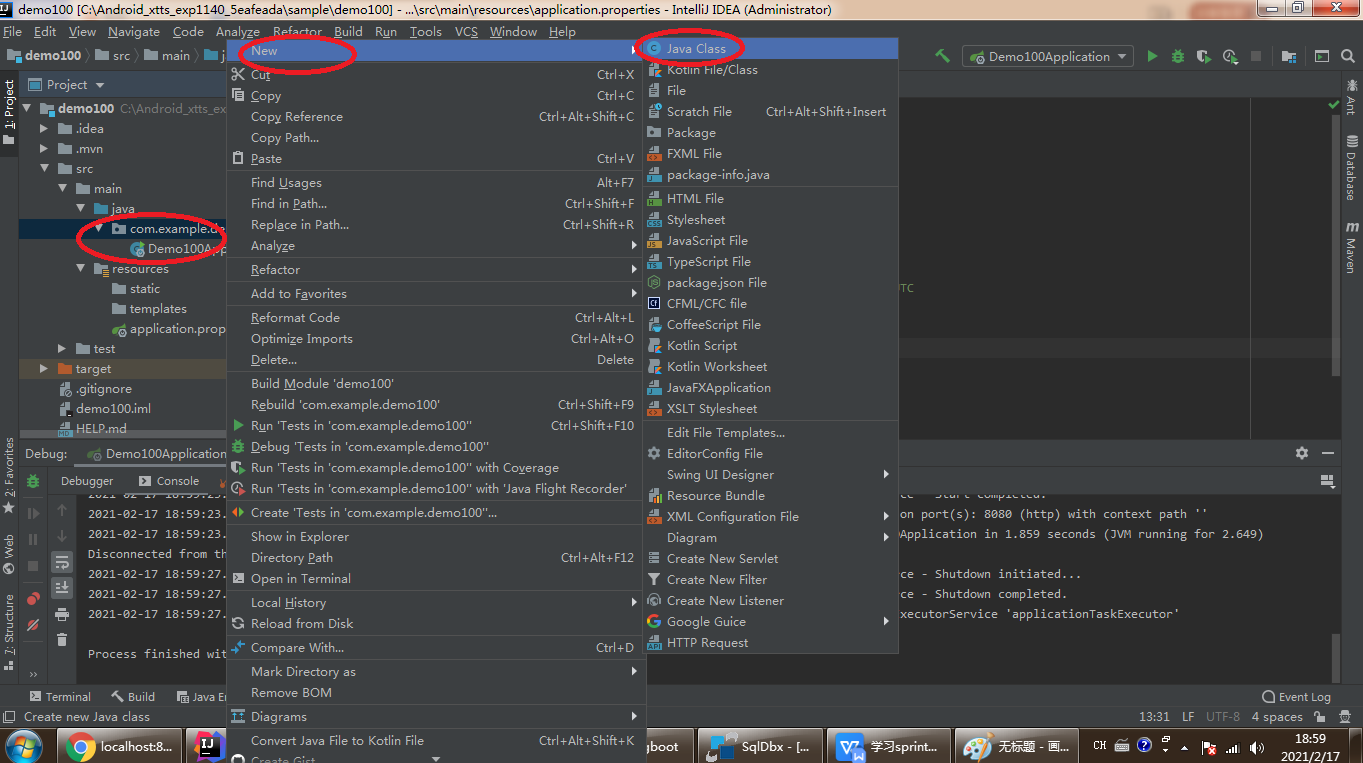


## 配置数据库连接

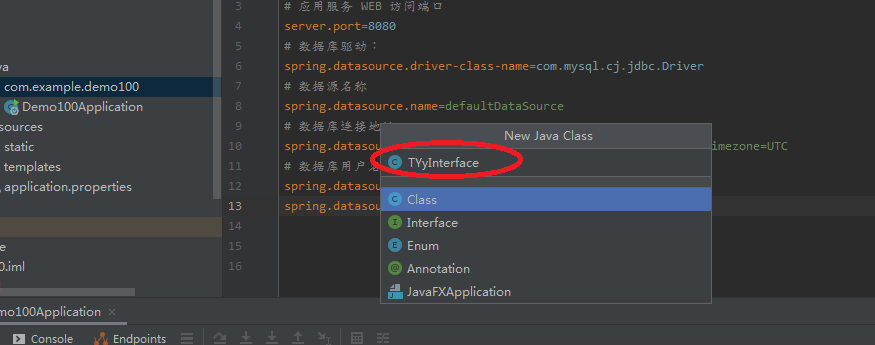


## 添加http的path接口

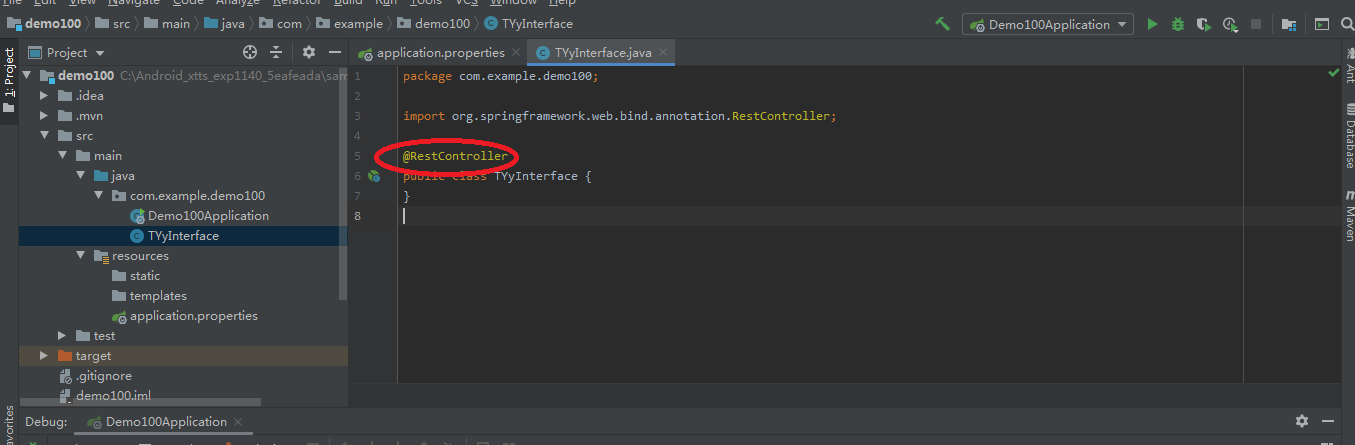
### 正在源代码目录， 右键菜单， 选择[New][Java Class]



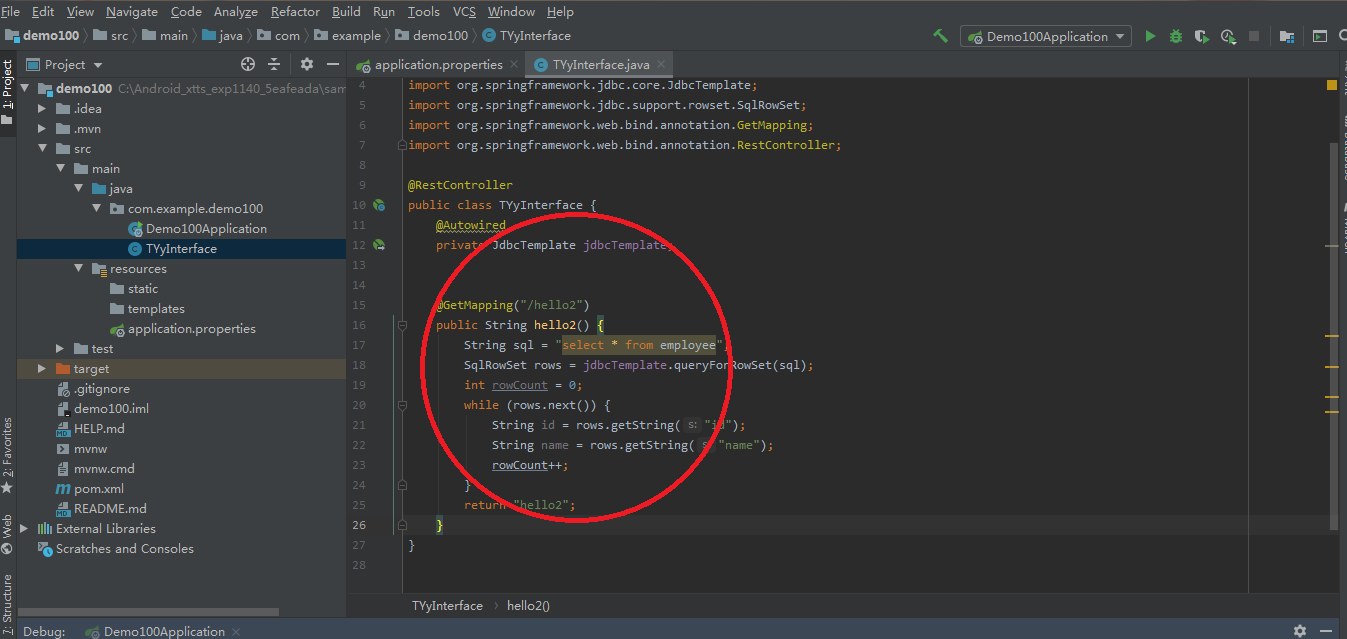
### 输入新类的类名TYyInterface



### 为新类添加一个注释



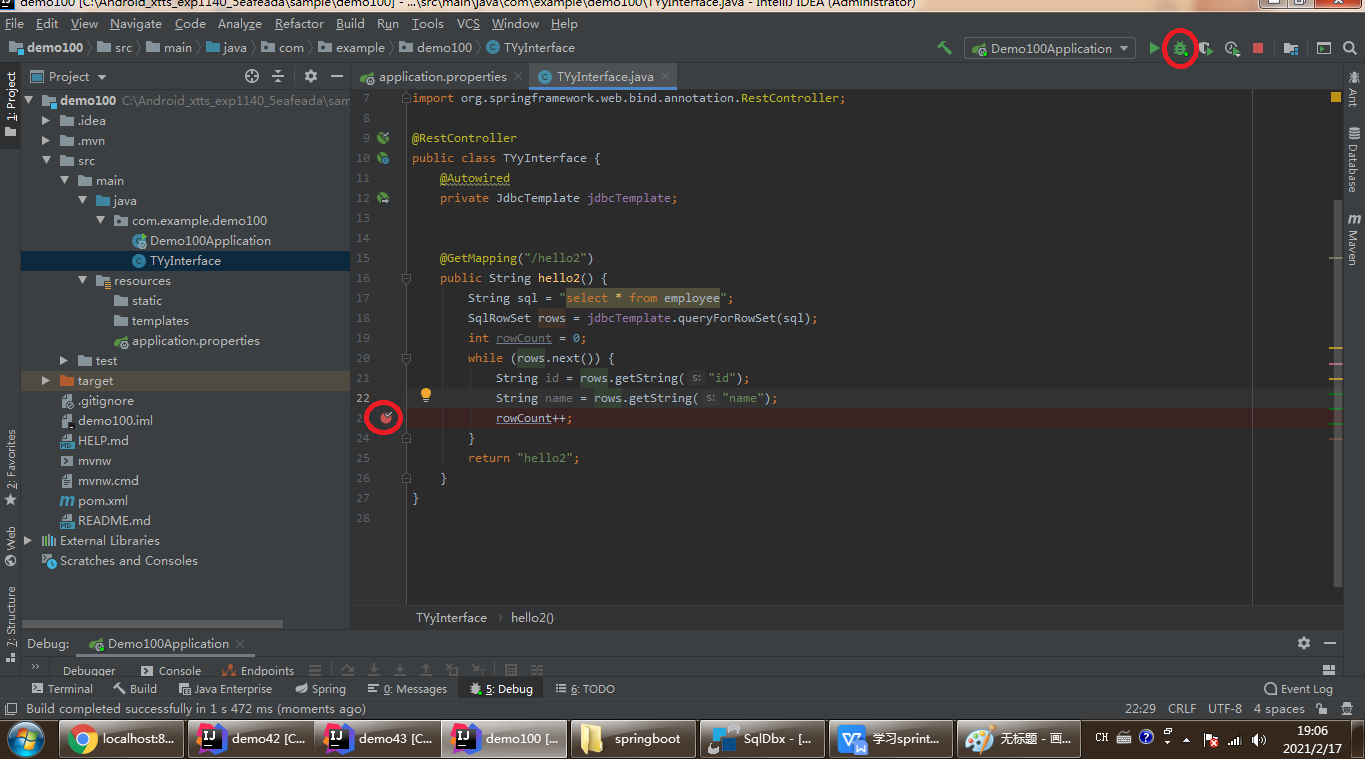
### 为新类增加一个接口



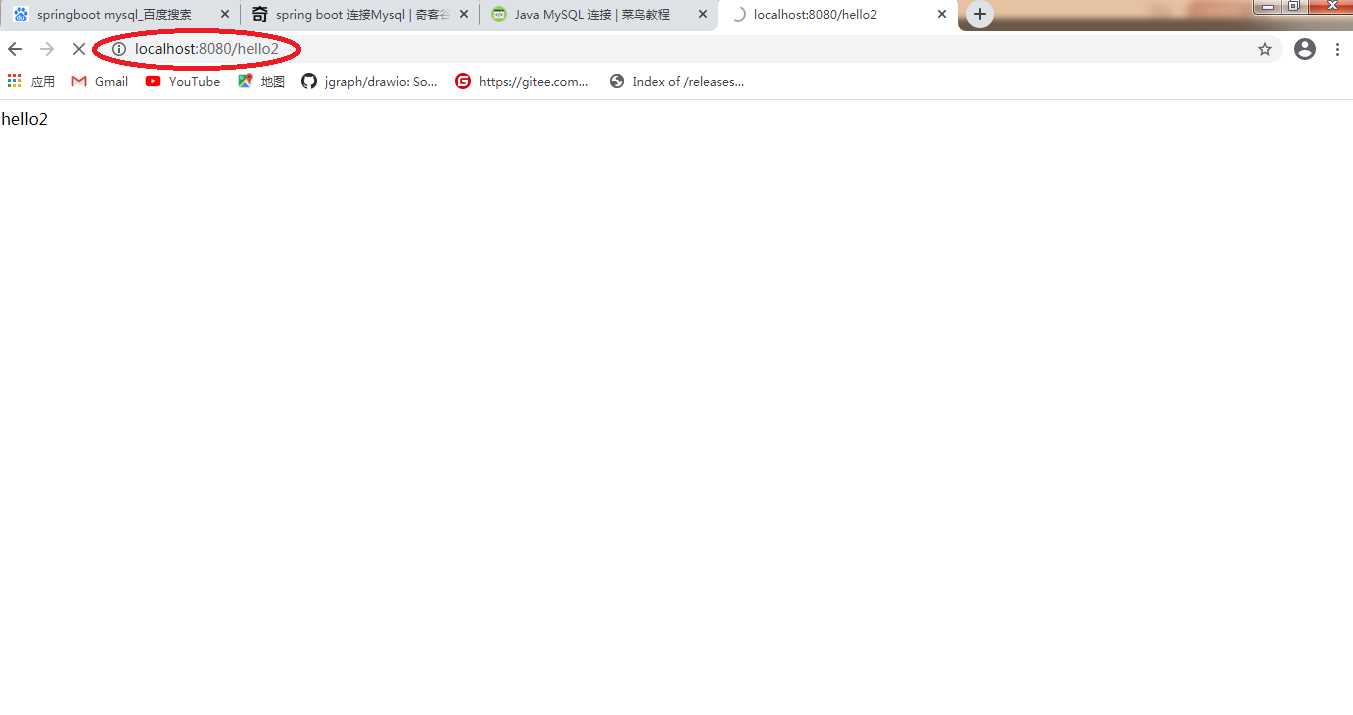
新接口的代码如下

@RestController  
public class TYyInterface {  
 @Autowired  
 private JdbcTemplate jdbcTemplate;  
  
  
 @GetMapping("/hello2")  
 public String hello2() {  
 String sql = "select \* from employee";  
 SqlRowSet rows = jdbcTemplate.queryForRowSet(sql);  
 int rowCount = 0;  
 while (rows.next()) {  
 String id = rows.getString("id");  
 String name = rows.getString("name");  
 rowCount++;  
 }  
 return "hello2";  
 }  
}

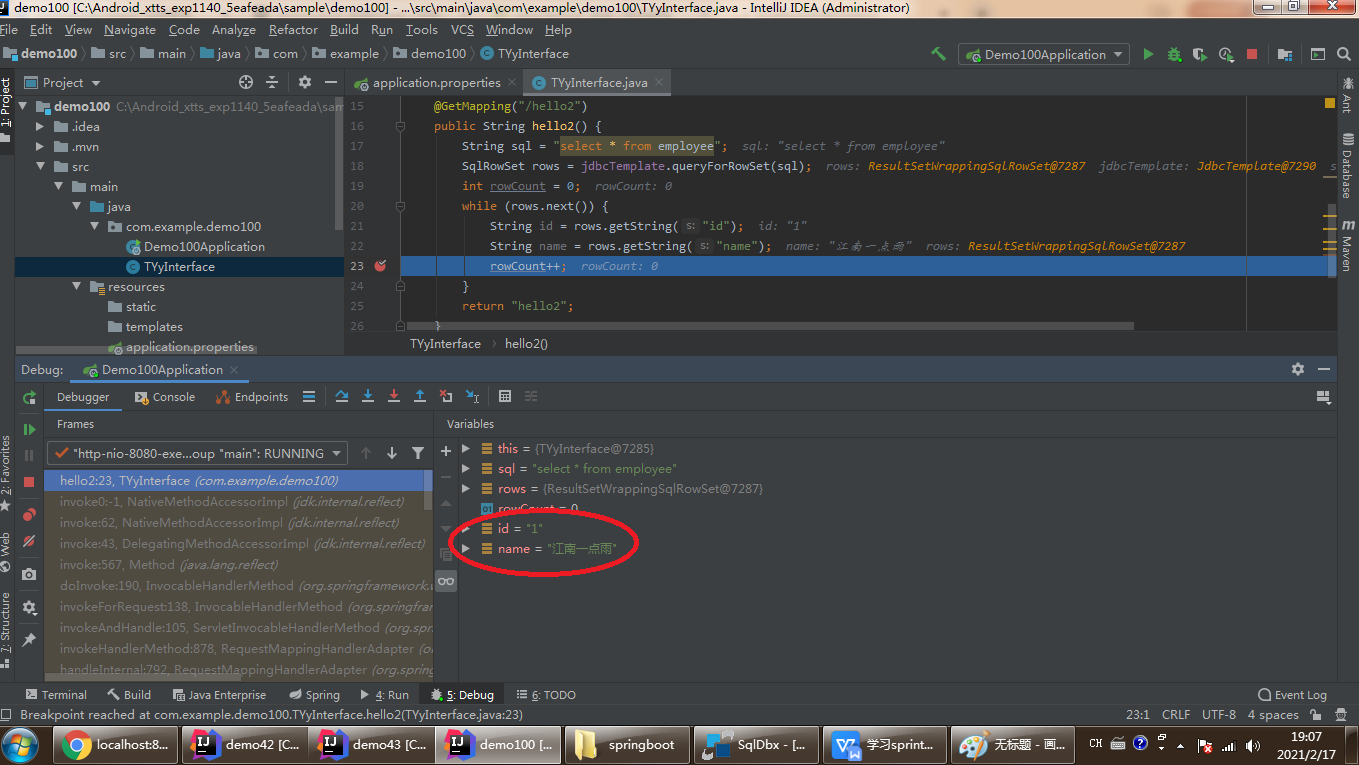
## 调试进程



## 浏览器请求连接



## 服务器调试



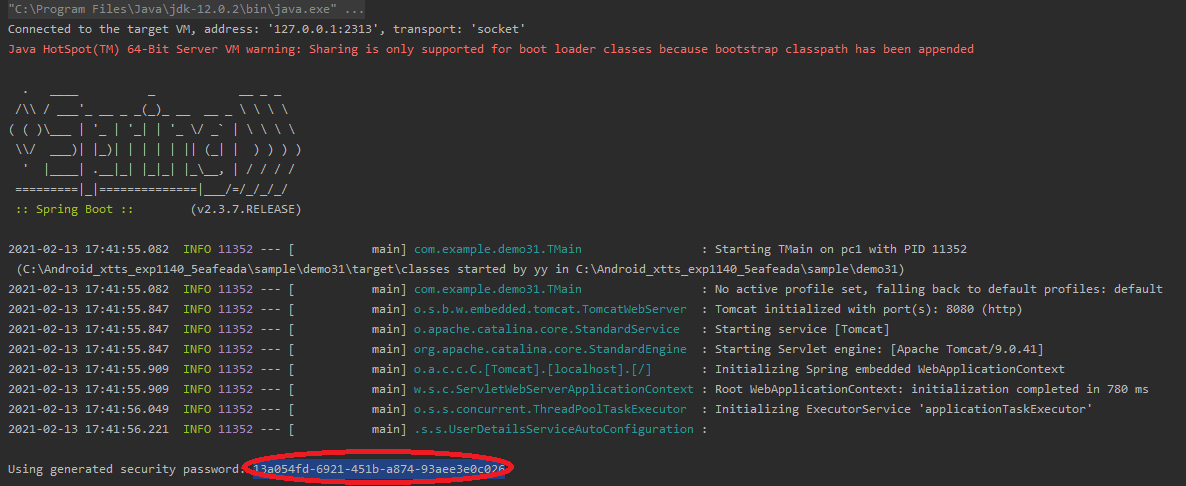
# 学习Spring security

## 配置步骤

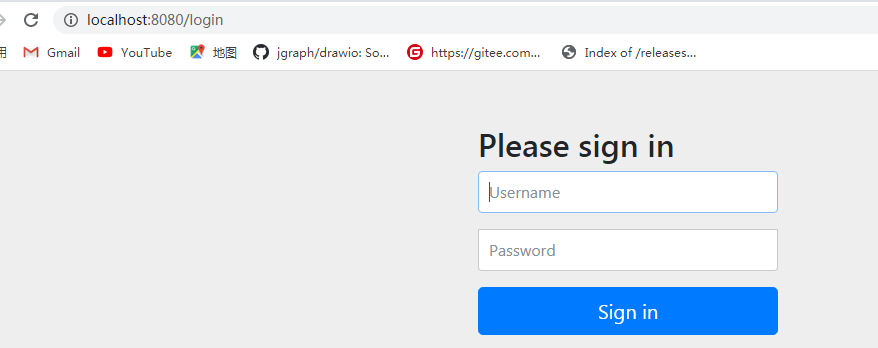
### 在pom文件中增加如下的依赖

<dependency>  
 <groupId>org.springframework.boot</groupId>  
 <artifactId>spring-boot-starter-security</artifactId>  
</dependency>

运行代码后，在spring的控制塔器， 寻找spring生成的缺省密码

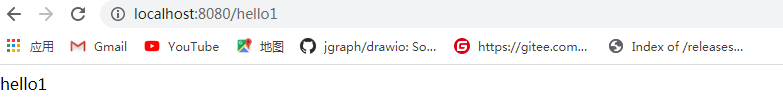


访问接口就需要先输入用户名密码认证

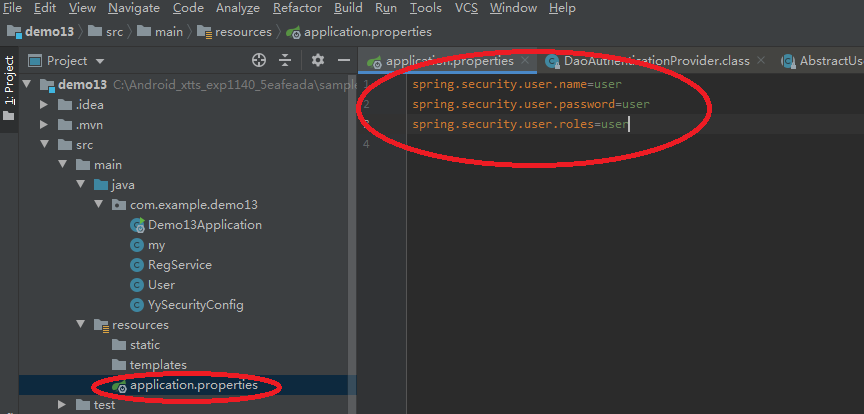


输入用户名: user, 密码见上上图的红色圈中的密码

然后就可以看到登录后成功的页面



### 在配置文件中配置用户名密码



运行后， 输入用户名密码： user/user,登录ok

### 基于内存认证

在工程中增加WebSecurityConfigurerAdapter， 并且增加下面3个函数：加密函数，用户认证授权函数，目录权限函数

@Configuration  
public class YySecurityConfig extends WebSecurityConfigurerAdapter {  
 PasswordEncoder passwordEncoder(){  
 return NoOpPasswordEncoder.*getInstance*();  
 }  
  
  
 protected void configure(AuthenticationManagerBuilder auth) throws Exception {  
 auth.inMemoryAuthentication()  
 .withUser("yy").password("yy").roles("ADMIN")  
 .and().withUser("admin").password("admin1").roles("ADMIN")  
 .and().withUser("user").password("$2a$10$/Dvu/HoBwEgQT4fw/vS0QOVAHzaFNrdKmxl8zngFlY4InoVPnRrcy").roles("USER")  
 ;  
 }  
  
  
 protected void configure(HttpSecurity http) throws Exception {  
 http.authorizeRequests()  
 .antMatchers("/admin/\*\*").hasRole("ADMIN")  
 .antMatchers("/user/\*\*").hasRole("user")  
 //.anyRequest().authenticated()  
 .and().formLogin().loginProcessingUrl("/login").permitAll()  
 .and().logout().logoutUrl("/logout").clearAuthentication(true).invalidateHttpSession(true).addLogoutHandler(new LogoutHandler() {  
 @Override  
 public void logout(HttpServletRequest httpServletRequest, HttpServletResponse httpServletResponse, Authentication authentication) {  
  
 }  
 }).logoutSuccessHandler(new LogoutSuccessHandler() {  
 @Override  
 public void onLogoutSuccess(HttpServletRequest httpServletRequest, HttpServletResponse httpServletResponse, Authentication authentication) throws IOException, ServletException {  
 httpServletResponse.sendRedirect("/login");  
 }  
 }  
 )  
 .and().csrf().disable()  
 ;  
 }

}

### 编写自己的认证授权类

设置使得框架使用自己新编写的认证类

RegService MyUserDetailsService = new MyUserDetailsService();

protected void configure(AuthenticationManagerBuilder auth) throws Exception {  
 /\*auth.inMemoryAuthentication()  
 .withUser("yy").password("yy").roles("ADMIN")  
 .and().withUser("admin").password("admin1").roles("ADMIN")  
 .and().withUser("user").password("$2a$10$/Dvu/HoBwEgQT4fw/vS0QOVAHzaFNrdKmxl8zngFlY4InoVPnRrcy").roles("USER")  
 ;  
 \*/  
 auth.userDetailsService(regService);  
}

添加自己的认证授权类

public class MyUserDetailsService implements UserDetailsService {  
 @Override  
 public UserDetails loadUserByUsername(String s) throws UsernameNotFoundException {  
 MyUserDetails user = new MyUserDetails();  
 user.username = "user";  
 user.password = "user";  
 user.role = "ROLE\_user";  
 return user;  
 }  
}

添加自己的用户类

public class MyUserDetails implements UserDetails {  
  
 public String username;  
 public String password;  
 public String role;  
  
 @Override  
 public Collection<? extends GrantedAuthority> getAuthorities() {  
 List<SimpleGrantedAuthority> authorities = new ArrayList<>();  
 authorities.add(new SimpleGrantedAuthority(role));  
 return authorities;  
 }  
  
 @Override  
 public String getPassword() {  
 return password;  
 }  
  
 @Override  
 public String getUsername() {  
 return username;  
 }  
  
 @Override  
 public boolean isAccountNonExpired() {  
 return true;  
 }  
  
 @Override  
 public boolean isAccountNonLocked() {  
 return true;  
 }  
  
 @Override  
 public boolean isCredentialsNonExpired() {  
 return true;  
 }  
  
 @Override  
 public boolean isEnabled() {  
 return true;  
 }  
}

### 加密方法

PasswordEncoder passwordEncoder(){  
 //return NoOpPasswordEncoder.*getInstance*();  
 return new BCryptPasswordEncoder(10);  
}

然后通过下面函数求到密码加密后对用的密文：

static public int reg(String username, String password){  
 BCryptPasswordEncoder encoder= new BCryptPasswordEncoder(10);  
 String pass=encoder.encode(password);  
 //return saveToDb(username,pass);  
 return 1;  
}

最后，修改配置的密码

.and().withUser("user").password("$2a$10$/Dvu/HoBwEgQT4fw/vS0QOVAHzaFNrdKmxl8zngFlY4InoVPnRrcy").roles("USER")

### 注销

在登录配置后面增加logout的配置

.and().logout().logoutUrl("/logout").clearAuthentication(true).invalidateHttpSession(true).addLogoutHandler(new LogoutHandler() {  
 @Override  
 public void logout(HttpServletRequest httpServletRequest, HttpServletResponse httpServletResponse, Authentication authentication) {  
  
 }  
 }).logoutSuccessHandler(new LogoutSuccessHandler() {  
 @Override  
 public void onLogoutSuccess(HttpServletRequest httpServletRequest, HttpServletResponse httpServletResponse, Authentication authentication) throws IOException, ServletException {  
 httpServletResponse.sendRedirect("/login");  
 }  
 }  
 )

# 自己动手写“最简版的springboot，”最基本的原理）

# 自己动手写“简化版的spring boot”，了解spring boot的大致结构

# 学习spring boot的源代码

# spring boot微服务部署

# spring boot反向代理