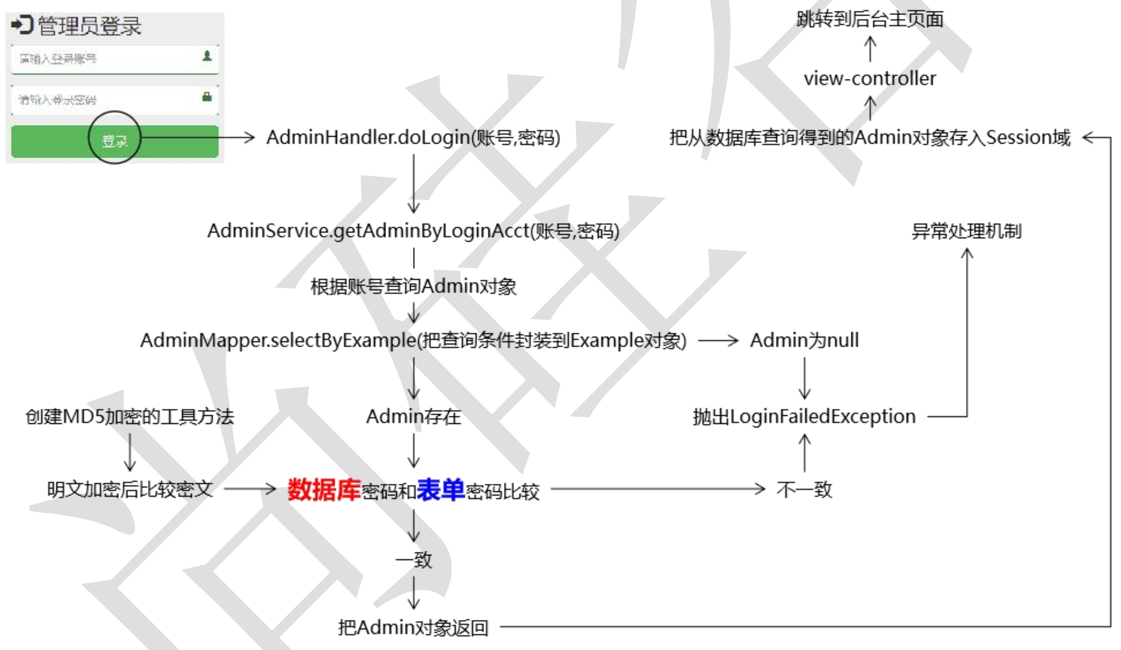
尚筹网

[04-后台管理系统-管理员登录]

1 目标

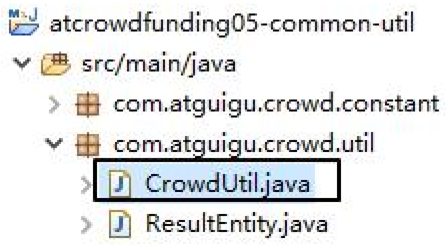
识别操作系统的人的身份，控制他的行为。

2 思路



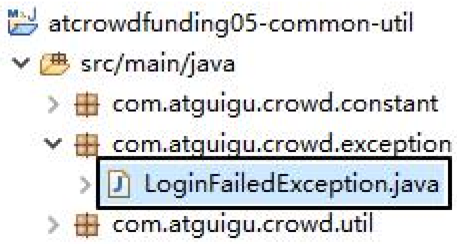
3 代码

3.1 创建工具方法执行 MD5 加密


atcrowdfunding05-common-util
src/main/java
com.atguigu.crowd.constant
com.atguigu.crowd.util
CrowdUtil.java
ResultEntity.java

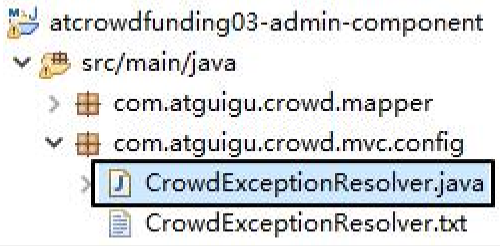
```
/**
 *  对明文字符串进行 MD5 加密
 * @param source  传入的明文字符串
 * @return  加密结果
 */
public static String md5(String source) {

    // 1.判断 source 是否有效
    if(source == null || source.length() == 0) {

        // 2.如果不是有效的字符串抛出异常
        throw new RuntimeException(CrowdConstant.MESSAGE_STRING_INVALIDATE);
    }

    try {
        // 3.获取 MessageDigest 对象
        String algorithm = "md5";

        MessageDigest messageDigest = MessageDigest.getInstance(algorithm);

        // 4.获取明文字符串对应的字节数组
        byte[] input = source.getBytes();

        // 5.执行加密
        byte[] output = messageDigest.digest(input);

        // 6.创建 BigInteger 对象
        int signum = 1;
        BigInteger bigInteger = new BigInteger(signum, output);

        // 7.按照 16 进制将 bigInteger 的值转换为字符串
        int radix = 16;
        String encoded = bigInteger.toString(radix).toUpperCase();

        return encoded;

    } catch (NoSuchAlgorithmException e) {
        e.printStackTrace();
    }

    return null;
}
```

3.2 创建登录失败异常


atcrowdfunding05-common-util
src/main/java
com.atguigu.crowd.constant
com.atguigu.crowd.exception
LoginFailedException.java
com.atguigu.crowd.util

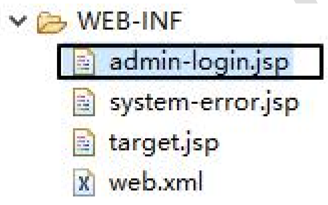
```
/**
 *  登录失败后抛出的异常
 * @author Lenovo
 *
 */
public class LoginFailedException extends RuntimeException {

	private static final long serialVersionUID = 1L;

	public LoginFailedException() {
		super();
	}

	public LoginFailedException(String message, Throwable cause, boolean enableSuppression,
			boolean writableStackTrace) {
		super(message, cause, enableSuppression, writableStackTrace);
	}

	public LoginFailedException(String message, Throwable cause) {
		super(message, cause);
	}

	public LoginFailedException(String message) {
		super(message);
	}

	public LoginFailedException(Throwable cause) {
		super(cause);
	}

}
```

3.3 在异常处理器类中增加登录失败异常的处理


atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
CrowdExceptionResolver.java
CrowdExceptionResolver.txt

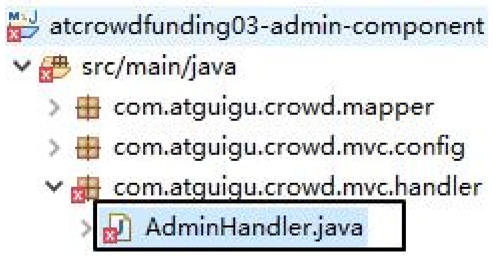
```
@ExceptionHandler(value = LoginFailedException.class)
public ModelAndView resolveLoginFailedException(
                    LoginFailedException exception,
                    HttpServletRequest request,
                    HttpServletResponse response
            ) throws IOException {

      String viewName = "admin-login";

      return commonResolve(viewName, exception, request, response);
}
```

3.4 在登录页面显示异常消息



```
<h2 class="form-signin-heading">
      <i class="glyphicon glyphicon-log-in"></i> 管理员登录
</h2>
<p>${requestScope.exception.message }</p>
```

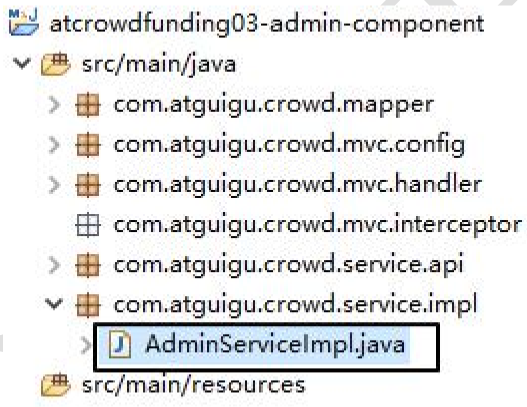
3.5 handler 方法


atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
com.atguigu.crowd.mvc.handler
AdminHandler.java

```
@RequestMapping("/admin/do/login.html")
```

```
public String doLogin(
                @RequestParam("loginAcct") String loginAcct,
                @RequestParam("userPswd") String userPswd,
                HttpSession session
            ) {

    // 调用 Service 方法执行登录检查
    // 这个方法如果能够返回 admin 对象说明登录成功，如果账号、密码不正确则会抛出
异常
    Admin admin = adminService.getAdminByLoginAcct(loginAcct, userPswd);

    // 将登录成功返回的 admin 对象存入 Session 域
    session.setAttribute(CrowdConstant.ATTR_NAME_LOGIN_ADMIN, admin);

    return "admin-main";
}
```

3.6 service 方法


```
atcrowdfunding03-admin-component
  src/main/java
    com.atguigu.crowd.mapper
    com.atguigu.crowd.mvc.config
    com.atguigu.crowd.mvc.handler
    com.atguigu.crowd.mvc.interceptor
    com.atguigu.crowd.service.api
    com.atguigu.crowd.service.impl
      AdminServiceImpl.java
  src/main/resources
```

```
@Override
public Admin getAdminByLoginAcct(String loginAcct, String userPswd) {

    // 1.根据登录账号查询 Admin 对象
    // ①创建 AdminExample 对象
    AdminExample adminExample = new AdminExample();

    // ②创建 Criteria 对象
    Criteria criteria = adminExample.createCriteria();

    // ③在 Criteria 对象中封装查询条件
    criteria.andLoginAcctEqualTo(loginAcct);

    // ④调用 AdminMapper 的方法执行查询
```

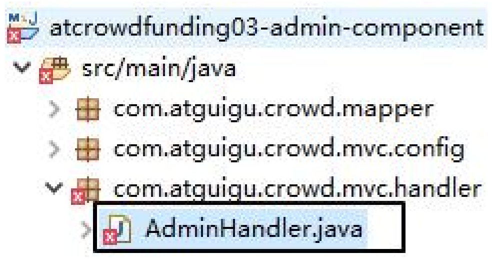
```
	List<Admin> list = adminMapper.selectByExample(adminExample);

	// 2.判断 Admin 对象是否为 null
	if(list == null || list.size() == 0) {
		throw new LoginFailedException(CrowdConstant.MESSAGE_LOGIN_FAILED);
	}

	if(list.size() > 1) {
		throw                                                                new
RuntimeException(CrowdConstant.MESSAGE_SYSTEM_ERROR_LOGIN_NOT_UNIQUE);
	}

	Admin admin = list.get(0);

	// 3.如果 Admin 对象为 null 则抛出异常
	if(admin == null) {
		throw new LoginFailedException(CrowdConstant.MESSAGE_LOGIN_FAILED);
	}

	// 4.如果 Admin 对象不为 null 则将数据库密码从 Admin 对象中取出
	String userPswdDB = admin.getUserPswd();

	// 5.将表单提交的明文密码进行加密
	String userPswdForm = CrowdUtil.md5(userPswd);

	// 6.对密码进行比较
	if(!Objects.equals(userPswdDB, userPswdForm)) {
		// 7.如果比较结果是不一致则抛出异常
		throw new LoginFailedException(CrowdConstant.MESSAGE_LOGIN_FAILED);
	}

	// 8.如果一致则返回 Admin 对象
	return admin;
}
```

3.7 补充

3.7.1 前往后台主页面的方式调整

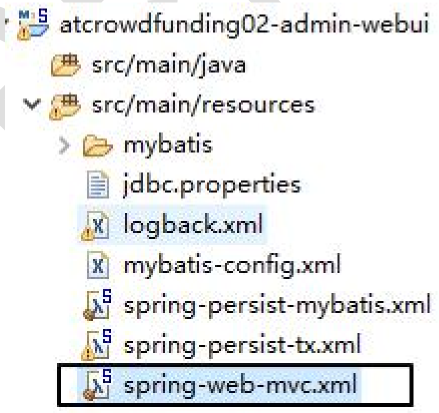
为了避免跳转到后台主页面再刷新浏览器导致重复提交登录表单，重定向到目标页面。

所以 handler 方法需要做相应修改


atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
com.atguigu.crowd.mvc.handler
AdminHandler.java

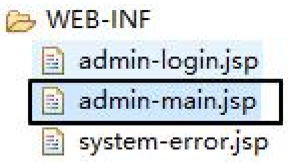
```
@RequestMapping("/admin/do/login.html")
public String doLogin(
                @RequestParam("loginAcct") String loginAcct,
                @RequestParam("userPswd") String userPswd,
                HttpSession session
        ) {

    // 调用 Service 方法执行登录检查
    // 这个方法如果能够返回 admin 对象说明登录成功，如果账号、密码不正确则会抛出
异常
    Admin admin = adminService.getAdminByLoginAcct(loginAcct, userPswd);

    // 将登录成功返回的 admin 对象存入 Session 域
    session.setAttribute(CrowdConstant.ATTR_NAME_LOGIN_ADMIN, admin);

    return "redirect:/admin/to/main/page.html";
}
```

需要给目标地址配置 view-controller

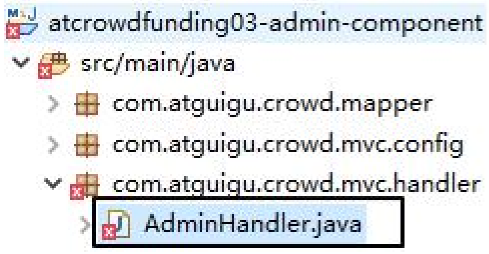

atcrowdfunding02-admin-webui
src/main/java
src/main/resources
mybatis
jdbc.properties
logback.xml
mybatis-config.xml
spring-persist-mybatis.xml
spring-persist-tx.xml
spring-web-mvc.xml

```
<mvc:view-controller path="/admin/to/main/page.html" view-name="admin-main"/>
```

3.7.2 退出登录



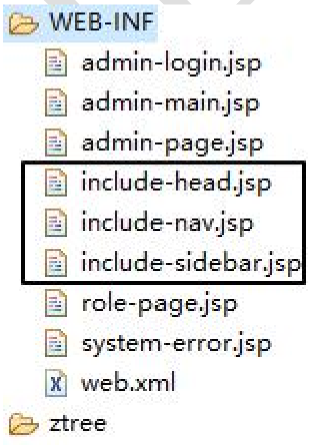
```
<li><a href="admin/do/logout.html"><i class="glyphicon glyphicon-off"></i> 退出系统</a></li>
```


atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
com.atguigu.crowd.mvc.handler
AdminHandler.java

```
    @RequestMapping("/admin/do/logout.html")
    public String doLogout(HttpSession session) {

        // 强制 Session 失效
        session.invalidate();

        return "redirect:/admin/to/login/page.html";
    }
```

4 抽取后台主页面公共部分

4.1 创建公共部分 JSP



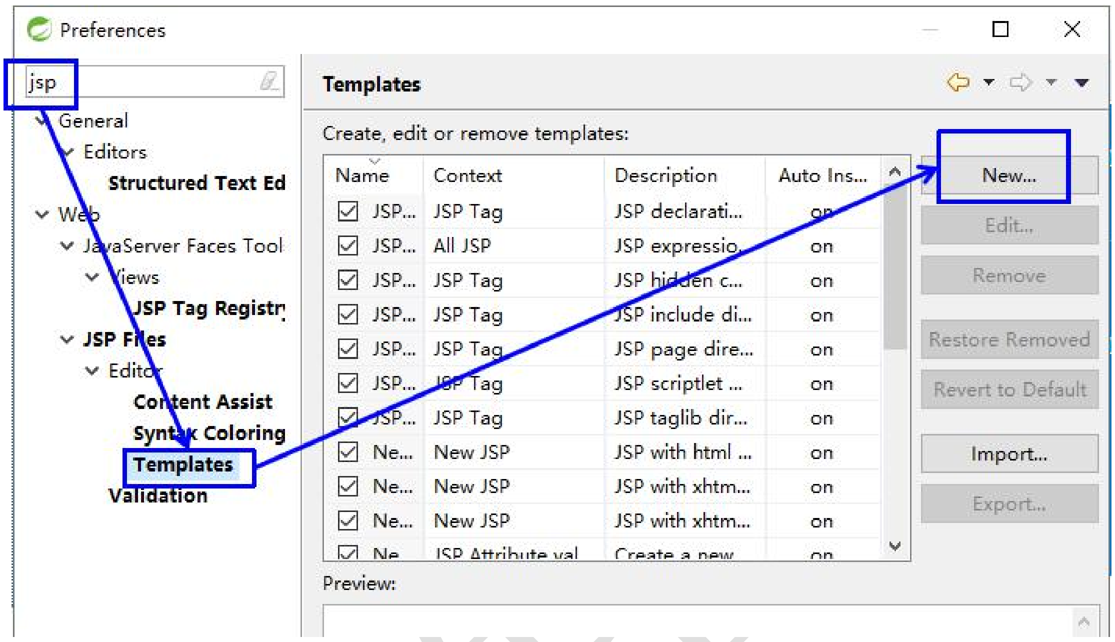
4.2 抽取后效果

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html lang="zh-CN">
<%@include file="/WEB-INF/include-head.jsp" %>

<body>

    <%@ include file="/WEB-INF/include-nav.jsp" %>
    <div class="container-fluid">
        <div class="row">
            <%@ include file="/WEB-INF/include-sidebar.jsp" %>
            <div class="col-sm-9 col-sm-offset-3 col-md-10 col-md-offset-2 main">
                <h1 class="page-header">控制面板</h1>

                <div class="row placeholders">
                    ……
                </div>
            </div>
        </div>
    </div>
</body>
</html>
```

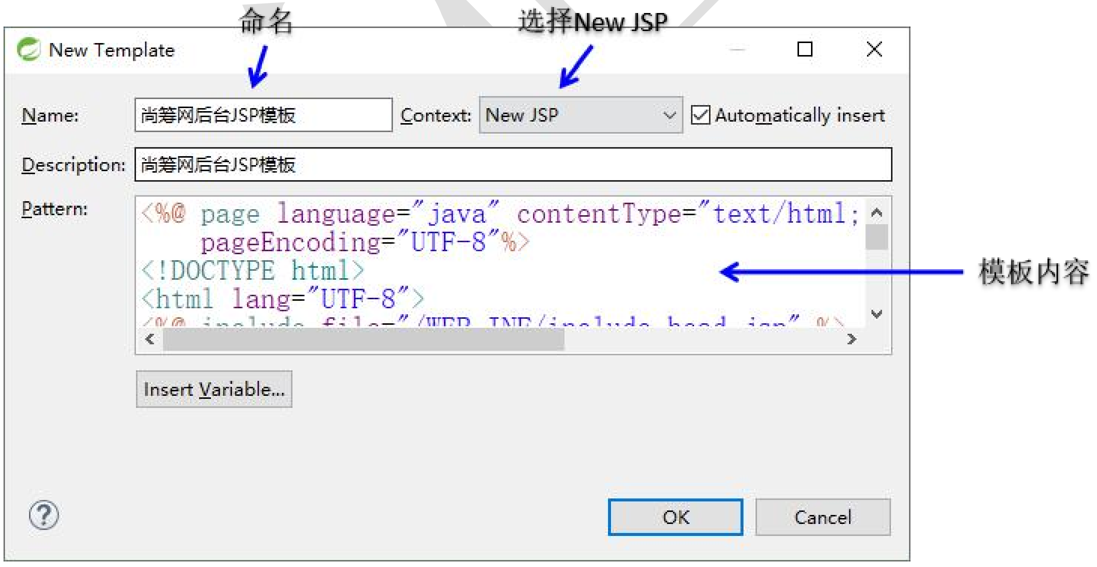
4.3 创建 JSP 模板

模板内容是：

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html lang="zh-CN">
<%@include file="/WEB-INF/include-head.jsp" %>
<body>

    <%@ include file="/WEB-INF/include-nav.jsp" %>
    <div class="container-fluid">
        <div class="row">
            <%@ include file="/WEB-INF/include-sidebar.jsp" %>
            <div class="col-sm-9 col-sm-offset-3 col-md-10 col-md-offset-2 main">

            </div>
            </div>
        </div>
</body>
</html>
```



Name	Context	Description	Auto Ins...
☑ JSP...	JSP Tag	JSP declarati...	on
☑ JSP...	All JSP	JSP expressio...	on
☑ JSP...	JSP Tag	JSP hidden c...	on
☑ JSP...	JSP Tag	JSP include di...	on
☑ JSP...	JSP Tag	JSP page dire...	on
☑ JSP...	JSP Tag	JSP scriptlet ...	on
☑ JSP...	JSP Tag	JSP taglib dir...	on
☑ Ne...	New JSP	JSP with html ...	on
☑ Ne...	New JSP	JSP with xhtm...	on
☑ Ne...	New JSP	JSP with xhtm...	on
☑ Ne	JSP Attribute val	Create a new	on



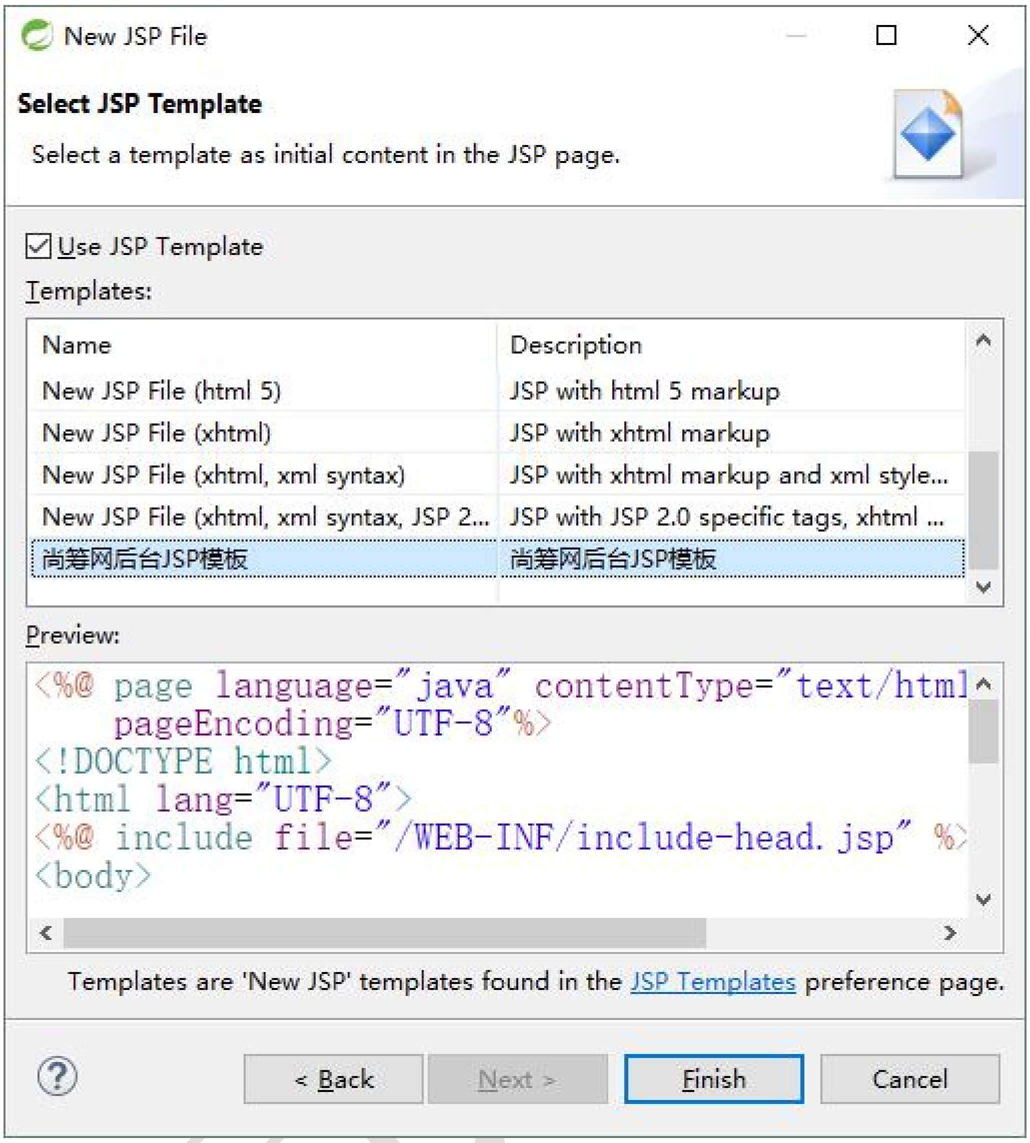
Name: 尚筹网后台JSP模板 Context: New JSP ☑ Automatically insert

Description: 尚筹网后台JSP模板

Pattern:

```
<%@ page language="java" contentType="text/html;
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html lang="UTF-8">
<%@ include file="/WEB-INF/include-head.jsp" %>
```

模板创建完成后，第一次创建 JSP 页面时需要选择一下我们创建的模板，以后就默认使用这个模板。



Name	Description
New JSP File (html 5)	JSP with html 5 markup
New JSP File (xhtml)	JSP with xhtml markup
New JSP File (xhtml, xml syntax)	JSP with xhtml markup and xml style...
New JSP File (xhtml, xml syntax, JSP 2...	JSP with JSP 2.0 specific tags, xhtml ...
尚筹网后台JSP模板	尚筹网后台JSP模板

```
<%@ page language="java" contentType="text/html
    pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html lang="UTF-8">
<%@ include file="/WEB-INF/include-head.jsp" %>
<body>
```

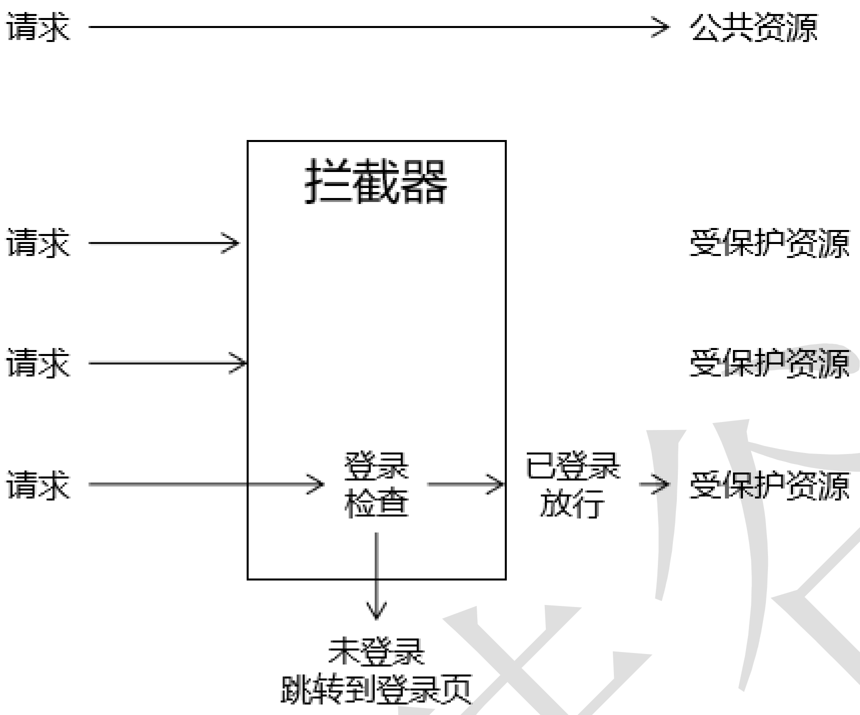
Templates are 'New JSP' templates found in the JSP Templates preference page.

5 登录状态检查

5.1 目标

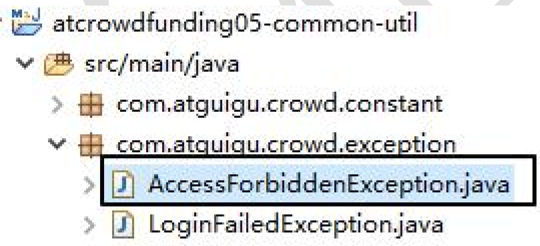
将部分资源保护起来，让没有登录的请求不能访问。

5.2 思路

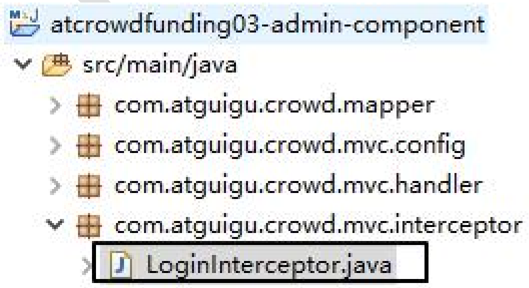


5.3 代码

5.3.1 创建自定义异常

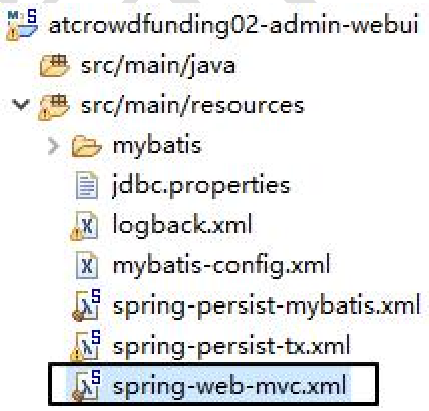

atcrowdfunding05-common-util
src/main/java
com.atguigu.crowd.constant
com.atguigu.crowd.exception
AccessForbiddenException.java
LoginFailedException.java

5.3.2 创建拦截器类


atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
com.atguigu.crowd.mvc.handler
com.atguigu.crowd.mvc.interceptor
LoginInterceptor.java

```
public class LoginInterceptor extends HandlerInterceptorAdapter {


    @Override
    public boolean preHandle(HttpServletRequest request, HttpServletResponse response,
Object handler)
            throws Exception {

        // 1.通过 request 对象获取 Session 对象
        HttpSession session = request.getSession();

        // 2.尝试从 Session 域中获取 Admin 对象
        Admin admin = (Admin) session.getAttribute(CrowdConstant.ATTR_NAME_LOGIN_ADMIN);

        // 3.判断 admin 对象是否为空
        if(admin == null) {

            // 4.抛出异常
            throw new AccessForbiddenException(CrowdConstant.MESSAGE_ACCESS_FORBIDEN);

        }

        // 5.如果 Admin 对象不为 null，则返回 true 放行
        return true;
    }

}
```

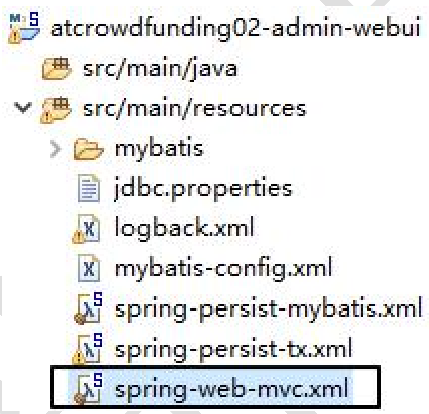
5.3.3 注册拦截器类


atcrowdfunding02-admin-webui
src/main/java
src/main/resources
mybatis
jdbc.properties
logback.xml
mybatis-config.xml
spring-persist-mybatis.xml
spring-persist-tx.xml
spring-web-mvc.xml

```
<!-- 注册拦截器 -->
<mvc:interceptors>
    <mvc:interceptor>
        <!-- mvc:mapping 配置要拦截的资源 -->
        <!-- /*对应一层路径，比如：/aaa -->
        <!-- /**对应多层路径，比如：/aaa/bbb 或/aaa/bbb/ccc 或/aaa/bbb/ccc/ddd -->
        <mvc:mapping path="/**"/>

        <!-- mvc:exclude-mapping 配置不拦截的资源 -->
        <mvc:exclude-mapping path="/admin/to/login/page.html"/>
        <mvc:exclude-mapping path="/admin/do/login.html"/>
        <mvc:exclude-mapping path="/admin/do/logout.html"/>

        <!-- 配置拦截器类 -->
        <bean class="com.atguigu.crowd.mvc.interceptor.LoginInterceptor"/>
    </mvc:interceptor>
</mvc:interceptors>
```

5.4 完善配套的异常映射

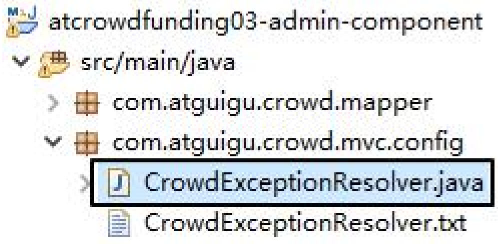
5.4.1 基于 XML 的异常映射



```
atcrowdfunding02-admin-webui
  src/main/java
  src/main/resources
    mybatis
    jdbc.properties
    logback.xml
    mybatis-config.xml
    spring-persist-mybatis.xml
    spring-persist-tx.xml
    spring-web-mvc.xml
```

```
<!-- 配置基于 XML 的异常映射 -->
<bean                                          id="simpleMappingExceptionResolver"
class="org.springframework.web.servlet.handler.SimpleMappingExceptionResolver">
    <!-- 配置异常类型和具体视图页面的对应关系 -->
    <property name="exceptionMappings">
        <props>
            <!-- key 属性指定异常全类名 -->
            <!-- 标签体中写对应的视图（这个值要拼前后缀得到具体路径） -->
            <prop key="java.lang.Exception">system-error</prop>
            <prop
key="com.atguigu.crowd.exception.AccessForbiddenException">admin-login</prop>
        </props>
    </property>
</bean>
```

5.4.2 基于注解的异常映射



atcrowdfunding03-admin-component
src/main/java
com.atguigu.crowd.mapper
com.atguigu.crowd.mvc.config
CrowdExceptionResolver.java
CrowdExceptionResolver.txt

```
@ExceptionHandler(value = AccessForbiddenException.class)
public ModelAndView resolveAccessForbiddenException(
            AccessForbiddenException exception,
            HttpServletRequest request,
            HttpServletResponse response
            ) throws IOException {

      String viewName = "admin-login";

      return commonResolve(viewName, exception, request, response);
}
```