# web综合案例

# 学习目标

目标1:完成用户与角色的绑定功能

目标2:完成登陆功能的快速开发

目标3:完成登陆用户菜单控制的功能

目标4:完成登陆用户权限校验的功能

# 1. 用户与角色

#### 1.1 绑定用户与角色关系数据准备

- (1) 在用户模块下的 \WEB-INF\pages\system\user\list.jsp 页面中找到 角色 按钮,对应的点击事件和函数的绑定都已完成,roleList 方法中向后台 UserServelt 发送请求,执行 userRoleList 方法,传递参数用户id
  - (2) 找到 UserServlet ,添加方法

```
1
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
 2
    ServletException, IOException {
        String operation = request.getParameter("operation");
 3
 4
        if("list".equals(operation)){
 5
            this.list(request, response);
 6
        //中间的省略
 7
 8
        else if("userRoleList".equals(operation)){
 9
            this.userRoleList(request,response);
10
        }
11
    private void userRoleList(HttpServletRequest request, HttpServletResponse response) throws
12
    ServletException, IOException {
        String userId = request.getParameter("id");
13
14
        User user = userService.findById(userId);
        //将数据加载到指定区域, 供页面获取
15
16
        request.setAttribute("user, user);
17
        //获取所有的角色列表
        List<Role> all = roleService.findAllRoleByUserId(userId);
18
19
        request.setAttribute("roleList",all);
20
        //跳转页面
        request.getRequestDispatcher("/WEB-
21
    INF/pages/system/user/role.jsp").forward(request, response);
22
    }
```

(3) 在 RoleService 接口中添加查询方法,根据用户id查询角色列表

```
1 List<Role> findAllRoleByUserId(String userId);
```

(4) 在对应的实现类中去实现该方法

```
@Override
 1
    public List<Role> findAllRoleByUserId(String userId) {
 2
 3
        SqlSession sqlSession = null;
 4
        try{
 5
            //1.获取SqlSession
            sqlSession = MapperFactory.getSqlSession();
 6
            //2.获取Dao
 7
            RoleDao roleDao = MapperFactory.getMapper(sqlSession,RoleDao.class);
 8
 9
            //3.调用Dao层操作
            return roleDao.findAllRoleByUserId(userId);
10
11
        }catch (Exception e){
            throw new RuntimeException(e);
12
13
            //记录日志
        }finally {
14
15
            try {
16
                 TransactionUtil.close(sqlSession);
            }catch (Exception e){
17
                 e.printStackTrace();
18
19
            }
20
        }
21
```

(5) 在dao接口 RoleDao 中添加查询方法 findAllRoleByUserId

```
1 List<Role> findAllRoleByUserId(String userId);
```

(6) 在映射配置文件 RoleDao.xml 中添加对应的查询

```
<!--配置根据ID查询-->
 1
     <select id="findAllRoleByUserId" parameterType="java.lang.String" resultMap="BaseResultMap">
 2
        SELECT
 3
 4
             role_id,
             NAME,
 6
             CASE
                 WHEN role_id IN (SELECT role_id FROM ss_role_user WHERE user_id = #{'userId'})
                 THEN 'checked'
 8
9
                 ELSE ''
             END
10
11
             AS remark
12
        FROM
13
             ss_role
14
    </select>
```

(7) 修改页面 /WEB-INF/pages/system/user/role.jsp , 添加checked

```
1
     <form id="urform" action="${ctx}/system/user?operation=updateRole" method="post">
 2
         <input type="hidden" name="userId" value="${user.id}"/>
         <div class="textbox" id="centerTextbox">
 3
             <div style="text-align:left">
 4
                 <c:forEach items="${roleList}" var="role" varStatus="vs">
 5
 6
                     <span style="padding:3px;margin-right:30px;width: 160px;display: inline-</pre>
    block">
             <input type="checkbox" name="roleIds" value="${role.id}"</pre>
7
    ${role.remark}/>${role.name}
8
                     </span>
9
                 </c:forEach>
10
             </div>
11
        </div>
12
    </form>
```

(8) 启动项目测试!

### 1.2 绑定用户与角色关系

现在要真正去绑定用户与角色的关系,前台页面提交表单后会将用户的id和选择的角色的id传递到后台servlet

(1) 在 UserServlet 中添加新的方法

```
1
    @Override
 2
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
 3
        String operation = request.getParameter("operation");
 4
        if("list".equals(operation)){
            this.list(request, response);
 6
        }
        //中间的省略
 7
        else if("userRoleList".equals(operation)){
 8
 9
            this.userRoleList(request, response);
        }else if("updateRole".equals(operation)){
10
11
            this.updateRole(request, response);
        }
12
13
    private void updateRole(HttpServletRequest request, HttpServletResponse response) throws
14
    IOException {
15
        String userId = request.getParameter("userId");
        String[] roleIds = request.getParameterValues("roleIds");
16
        userService.updateRole(userId,roleIds);
17
        //跳转回到页面list
18
19
        response.sendRedirect(request.getContextPath()+"/system/user?operation=list");
20
    }
```

(2) 在 UserService 接口中添加一个新的方法 updateRole

```
void updateRole(String userId, String[] roleIds);
```

#### (3) 在对应的实现类中去实现

```
@Override
 1
 2
    public void updateRole(String userId, String[] roleIds) {
        SqlSession sqlSession = null;
 4
        try{
            //1.获取SqlSession
 5
            sqlSession = MapperFactory.getSqlSession();
 6
 7
            //2.获取Dao
 8
            UserDao userDao = MapperFactory.getMapper(sqlSession,UserDao.class);
 9
            userDao.deleteRole(userId);
10
            for(String roleId : roleIds){
                 userDao.updateRole(userId,roleId);
11
            }
12
13
            //4.提交事务
14
            TransactionUtil.commit(sqlSession);
15
         }catch (Exception e){
            TransactionUtil.rollback(sqlSession);
16
            throw new RuntimeException(e);
17
18
            //记录日志
19
        }finally {
20
            try {
21
                 TransactionUtil.close(sqlSession);
22
            }catch (Exception e){
23
                 e.printStackTrace();
24
            }
25
        }
26
```

#### (4) 在dao接口 UserDao 中添加两个方法

```
void deleteRole(String userId);
void updateRole(@Param("userId") String userId, @Param("roleId")String roleId);
```

(5) 在该接口对应的映射配置文件中添加两个操作

```
1
    <!--配置根据roleId删除关系表数据-->
 2
    <delete id="deleteRole" parameterType="java.lang.String">
3
        delete from ss_role_user
4
        where user_id = #{userId,jdbcType=VARCHAR}
 5
    </delete>
 6
    <!--配置全字段插入, 当某个字段没有值时, 插入null-->
7
    <insert id="updateRole" parameterType="map">
8
9
        insert into ss role user (role id, user id)
        values (#{roleId,jdbcType=VARCHAR}, #{userId,jdbcType=VARCHAR})
10
    </insert>
11
```

(6) 启动项目进行测试!

# 2. 登陆

### 2.1 登陆功能快速开发

(1) 找到项目 webapp/login.jsp 登陆页面,修改form表单提交的action路径

(2) 在后台 UserServlet 添加登陆的方法

```
@Override
 1
 2
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
        String operation = request.getParameter("operation");
 3
        if("list".equals(operation)){
 4
 5
            this.list(request, response);
        }
 6
        //中间省略
        else if("login".equals(operation)){
 8
9
            this.login(request, response);
10
        }
11
    private void login(HttpServletRequest request, HttpServletResponse response) throws
     ServletException, IOException {
        String email = request.getParameter("email");
13
14
        String pwd = request.getParameter("password");
15
        User user = userService.login(email,pwd);
        if(user != null) {
16
17
            request.getSession().setAttribute("loginUser", user);
            //跳转页面
18
19
            request.getRequestDispatcher("/WEB-INF/pages/home/main.jsp").forward(request,
     response);
        }else{
21
             response.sendRedirect(request.getContextPath()+"/login.jsp");
22
```

```
23 }
```

(3) 在因为层接口 UserService 中添加登陆的方法

(4) 在对应的实现类中去实现登陆方法

```
1
    @Override
 2
    public User login(String email, String pwd) {
        SqlSession sqlSession = null;
 3
 4
        try{
 5
             //1.获取SqlSession
             sqlSession = MapperFactory.getSqlSession();
 6
 7
 8
             UserDao userDao = MapperFactory.getMapper(sqlSession,UserDao.class);
             //3.调用Dao层操作
 9
             pwd = MD5Util.md5(pwd);
10
             return userDao.findByEmailAndPwd(email,pwd);
11
        }catch (Exception e){
12
13
             throw new RuntimeException(e);
14
             //记录日志
        }finally {
15
            try {
16
                 TransactionUtil.close(sqlSession);
17
             }catch (Exception e){
18
19
                 e.printStackTrace();
             }
20
21
        }
22
    }
```

(5) 在 UserDao 接口中添加查询方法

```
User findByEmailAndPwd(@Param("email")String email, @Param("password")String pwd);
```

(6) 在 UserDao.xml 中添加查询

- (7) 将原本在 webapp/pages/home 下的所有页面统一挪到 /WEB-INF/pages 下, 注意是连同 home 目录一起挪
- (8) 修改 /WEB-INF/pages/home/main.jsp 内容区的路径

(9) 在后台 UserServlet 中添加方法

```
1
    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
 3
        String operation = request.getParameter("operation");
        if("list".equals(operation)){
4
 5
            this.list(request,response);
        }
 6
        //中间省略
 8
        else if("home".equals(operation)){
9
            this.home(request, response);
10
        }
11
    private void home(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
        request.getRequestDispatcher("/WEB-INF/pages/home/home.jsp").forward(request, response);
13
14
    }
```

(10) 启动项目测试

### 2.2 用户菜单控制数据准备

我们先来完成登陆后的注销操作,这是一套的

(1) 找到 /WEB-INF/pages/home/header.jsp 中找到注销,添加请求连接

(2) 在后台 UserServlet 中添加对应的方法logout

```
1 @Override
2 protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
```

```
ServletException, IOException {
 3
        String operation = request.getParameter("operation");
 4
        if("list".equals(operation)){
 5
             this.list(request,response);
        }
 6
        //中间的省略
 7
        else if("login".equals(operation)){
 8
 9
             this.login(request, response);
10
        }else if("logout".equals(operation)){
             this.logout(request, response);
11
12
        }else if("home".equals(operation)){
13
             this.home(request, response);
14
        }
15
16
    private void logout(HttpServletRequest request, HttpServletResponse response) throws
    ServletException, IOException {
17
        request.getSession().removeAttribute("loginUser");
18
        response.sendRedirect(request.getContextPath()+"/login.jsp");
19
    }
```

(3) 在用户登陆的时候需要去查询该用户对应的角色对应的所有模块,因此需要在后台的 UserServlet 中修 改用户登陆的方法,添加数据的查询

```
private void login(HttpServletRequest request, HttpServletResponse response) throws
 1
    ServletException, IOException {
        String email = request.getParameter("email");
 2
 3
        String pwd = request.getParameter("password");
 4
        User user = userService.login(email,pwd);
 5
        if(user != null) {
 6
            request.getSession().setAttribute("loginUser", user);
            //如果登录成功,加载该用户对应的角色对应的所有模块
 7
 8
            List<Module> moduleList = userService.findModuleById(user.getId());
 9
            request.setAttribute("moduleList", moduleList);
10
            //跳转页面
            request.getRequestDispatcher("/WEB-INF/pages/home/main.jsp").forward(request,
11
    response);
12
        }else{
            response.sendRedirect(request.getContextPath()+"/login.jsp");
13
14
        }
15
    }
```

(4) 在 UserService 接口中添加方法 findModuleById

```
1 /**

2 * 根据用户id查询所有可以操作的菜单对象

3 * @param id 用户的id

4 * @return

5 */

6 List<Module> findModuleById(String id);
```

(5) 在实现类中去实现该方法

```
1
    @Override
 2
    public List<Module> findModuleById(String id) {
 3
        SqlSession sqlSession = null;
 4
        try{
 5
             //1.获取SqlSession
             sqlSession = MapperFactory.getSqlSession();
 6
             //2.获取Dao
 7
             ModuleDao moduleDao = MapperFactory.getMapper(sqlSession,ModuleDao.class);
 8
 9
             //3.调用Dao层操作
             return moduleDao.findModuleByUserId(id);
10
11
        }catch (Exception e){
12
             throw new RuntimeException(e);
             //记录日志
13
        }finally {
14
15
            try {
                 TransactionUtil.close(sqlSession);
16
17
             }catch (Exception e){
                 e.printStackTrace();
18
19
             }
20
        }
21
    }
```

(6) 在 ModuleDao 接口中添加查询方法 findModuleByUserId

```
1 List<Module> findModuleByUserId(String id);
```

(7) 在 ModuleDao.xml 中添加对应的查询

```
1
    <select id="findModuleByUserId" parameterType="java.lang.String" resultMap="BaseResultMap">
            /*userid->用户角色关系表->roleid->角色模块关系表->moduleid->module信息*/
 2
            SELECT DISTINCT
 3
 4
              m.module_id, m.parent_id, m.name, m.ctype, m.state, m.curl, m.remark
            FROM
 5
 6
                ss module AS m,
                ss role module AS rm,
                ss_role_user AS ru
 8
            WHERE
 9
                m.module id = rm.module id
10
11
            AND rm.role id = ru.role id
            AND ru.user id = #{id,jdbcType=VARCHAR}
12
13
        </select>
```

至此: 用户的角色对应的模块数据已查询出来了, 后续就是要在页面进行控制展示

# 2.3 登陆用户菜单控制

(1) 找到 /WEB-INF/pages/home/aside.jsp 页面,添加用户菜单的展示

```
1 <!-- sidebar menu: : style can be found in sidebar.less -->
```

```
2
    3
       cli class="header">菜单
4
       <c:forEach items="${moduleList}" var="item">
 5
           <c:if test="${item.ctype==0}">
 6
               7
                  <a href="#">
 8
9
                      <i class="fa fa-cube"></i> <span>${item.name}</span>
                      <span class="pull-right-container"><i class="fa fa-angle-left pull-</pre>
10
    right"></i></span>
11
                  </a>
                  12
13
                      <c:forEach items="${moduleList}" var="item2">
14
                          <c:if test="${item2.ctype==1 && item2.parentId == item.id}">
15
                             id="${item2.id}">
                                 <a onclick="setSidebarActive(this)"</pre>
16
    href="${ctx}/${item2.curl}" target="iframe">
17
                                    <i class="fa fa-circle-o"></i>${item2.name}
18
19
                             20
                          </cif>
                      </c:forEach>
21
22
                  23
               24
           </c:if>
25
       </c:forEach>
```

启动项目进行测试

# 3.权限校验

# 3.1 获取请求url

(1) 创建过滤器: com.itheima.web.filters.AuthorFilter

```
1
    @WebFilter(value = "/*")
 2
    public class AuthorFilter implements Filter {
 3
 4
        private FilterConfig filterConfig;
 5
 6
         * 初始化方法, 获取过滤器的配置对象
 7
         * @param filterConfig
 8
 9
         * @throws ServletException
         */
10
        @Override
11
        public void init(FilterConfig filterConfig) throws ServletException {
12
            this.filterConfig = filterConfig;
13
14
        }
15
        @Override
16
17
        public void doFilter(ServletRequest req, ServletResponse resp, FilterChain chain) throws
```

```
IOException, ServletException {
18
            //1.定义和协议相关的请求和响应对象
19
            HttpServletRequest request ;
            HttpServletResponse response;
20
21
            try{
               //2.把参数转换成协议相关的对象
22
23
               request = (HttpServletRequest)req;
               response = (HttpServletResponse)resp;
25
               //1.获取本次操作
26
27
               String url = request.getRequestURI();
28
               String queryString = request.getQueryString();
29
30
               //1. 当前获取到的url:
                                    /system/dept
31
               url = url.substring(1);
               //2. 当前获取到的查询参数: operation=list
32
                                                          operation=toEdit&id=100
               int index = queryString.indexOf('&');
33
34
               if(index != -1){
35
                   queryString = queryString.substring(0,index);
36
               url = url + "?" + queryString;
37
38
39
               //2.获取到当前登录人允许的操作
40
               //3.比对本次操作是否在当前登录人允许的操作范围内
41
42
               //3.1如果允许,放行
               //3.2不允许跳转到非法访问页
43
44
               //6.放行
45
               chain.doFilter(request, response);
46
47
            }catch (Exception e){
               e.printStackTrace();
48
49
            }
50
        }
51
52
        @Override
        public void destroy() {
53
            //可以做一些清理操作
54
55
        }
56
    }
```

# 3.2 获取登陆用户可执行操作

(1) 登陆成功后需要将用户的觉得对应的模块信息存放到session,找到 UserServlet 中的登陆方法 login ,

```
private void login(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
   String email = request.getParameter("email");
   String pwd = request.getParameter("password");
   User user = userService.login(email,pwd);
   if(user != null) {
```

```
request.getSession().setAttribute("loginUser", user);
 6
 7
            //如果登录成功,加载该用户对应的角色对应的所有模块
 8
            List<Module> moduleList = userService.findModuleById(user.getId());
            request.setAttribute("moduleList", moduleList);
 9
10
            //当前登录用户对应的可操作模块的所有url拼接成一个大的字符串
11
            StringBuffer sbf = new StringBuffer();
12
13
            for(Module m: moduleList){
14
                sbf.append(m.getCurl());
                sbf.append(',');
15
16
            }
17
            request.getSession().setAttribute("authorStr",sbf.toString());
18
19
            //跳转页面
20
            request.getRequestDispatcher("/WEB-INF/pages/home/main.jsp").forward(request,
    response);
        }else{
21
22
            response.sendRedirect(request.getContextPath()+"/login.jsp");
23
        }
24
```

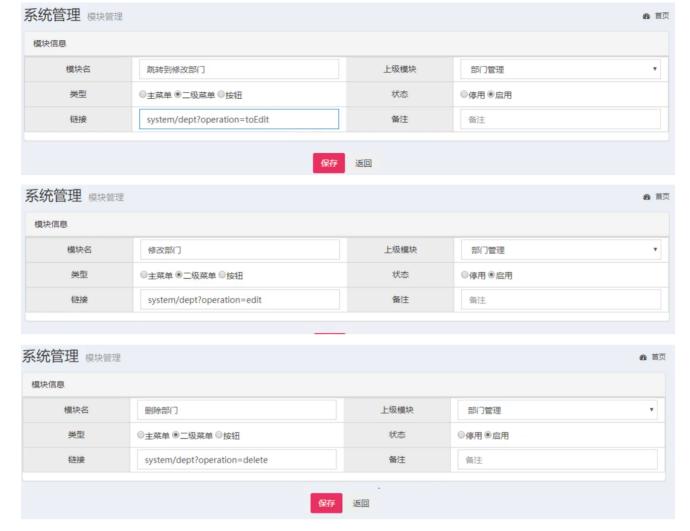
#### (2) 修改 AuthorFilter

```
@Override
 1
 2
    public void doFilter(ServletRequest req, ServletResponse resp, FilterChain chain) throws
    IOException, ServletException {
 3
        //1.定义和协议相关的请求和响应对象
        HttpServletRequest request ;
 4
        HttpServletResponse response;
 5
 6
        HttpSession session;
        trv{
 8
            //2.把参数转换成协议相关的对象
 9
            request = (HttpServletRequest)req;
            response = (HttpServletResponse)resp;
10
            session = request.getSession();
11
12
            //1.获取本次操作
            String url = request.getRequestURI();
13
14
            //.css
                    .js
                                          .index
                            .png
                                  .jpg
            if(url.endsWith(".css")
15
               || url.endsWith(".js")
16
17
               || url.endsWith(".png")
               || url.endsWith(".jpg")
18
19
               || url.endsWith("index.jsp")
               || url.endsWith("login.jsp")){
20
                chain.doFilter(request, response);
21
                return;
22
23
            }
            String queryString = request.getQueryString();
24
25
            if(queryString.endsWith("operation=login")){
                chain.doFilter(request, response);
26
27
                return;
28
```

```
29
30
           //1.当前获取到的url:
31
                               /system/dept
           url = url.substring(1);
32
33
           //2.当前获取到的查询参数: operation=list
                                                operation=toEdit&id=100
           int index = queryString.indexOf('&');
34
35
           if(index != -1){
36
               queryString = queryString.substring(0,index);
37
           }
38
           url = url + "?" + queryString;
39
           //2.获取到当前登录人允许的操作
40
41
           String authorStr = session.getAttribute("authorStr").toString();
           //3.比对本次操作是否在当前登录人允许的操作范围内
42
           //3.1如果允许, 放行
43
           //3.2不允许跳转到非法访问页
44
45
46
           //6.放行
47
           chain.doFilter(request, response);
        }catch (Exception e){
48
           e.printStackTrace();
49
       }
50
51
   }
```

(3) 启动项目在模块管理功能中去添加一些数据,如下所示





然后需要在角色管理中为对应的角色进行授权

### 3.3 权限校验

开始授权

- (1) 从 day03 的课程资料中找到 模块页面/unauthorized.jsp , 拷贝到项目的 webapp 下即可
- (2) 更改 AuthorFilter,

```
1
    @Override
 2
    public void doFilter(ServletRequest req, ServletResponse resp, FilterChain chain) throws
    IOException, ServletException {
        HttpServletRequest request ;
 3
        HttpServletResponse response;
4
        HttpSession session;
 6
        try{
 7
            request = (HttpServletRequest)req;
            response = (HttpServletResponse)resp;
 8
9
            session = request.getSession();
10
            //1.获取本次操作
11
12
            String url = request.getRequestURI();
13
            //.css .js .png .jpg .index
```

```
if(url.endsWith(".css")
14
15
               || url.endsWith(".js")
16
               || url.endsWith(".png")
               || url.endsWith(".jpg")
17
               || url.endsWith("index.jsp")
18
               || url.endsWith("unauthorized.jsp")
19
               || url.endsWith("login.jsp")){
20
21
                chain.doFilter(request, response);
22
                return;
23
            }
            String queryString = request.getQueryString();
24
            if(queryString.endsWith("operation=login")
25
26
               ||queryString.endsWith("operation=home")
               ||queryString.endsWith("operation=logout")){
27
28
                chain.doFilter(request, response);
                return;
29
            }
30
31
            //1. 当前获取到的url:
                                   /system/dept
32
            url = url.substring(1);
            //2. 当前获取到的查询参数: operation=list
33
                                                         operation=toEdit&id=100
            int index = queryString.indexOf('&');
34
            if(index != -1){
35
36
                queryString = queryString.substring(0,index);
37
            }
            url = url + "?" + queryString;
38
39
            //2.获取到当前登录人允许的操作
40
41
            String authorStr = session.getAttribute("authorStr").toString();
42
            //3.比对本次操作是否在当前登录人允许的操作范围内
43
44
            if(authorStr.contains(url)){
                //3.1如果允许,放行
45
                chain.doFilter(request, response);
46
47
                return;
48
            }else{
49
                //3.2不允许跳转到非法访问页
                response.sendRedirect(request.getContextPath()+"/unauthorized.jsp");
50
            }
51
52
        }catch (Exception e){
            e.printStackTrace();
53
54
        }
55
```

(3) 对于页面上的元素,如果没有操作权限,我们直接让用户看不到即可,怎么操作呢?在页面上做一个判断,我们举一个例子,其他操作都是一样的

找到 /WEB-INF/pages/system/user/list.jsp ,

```
1
    <div class="btn-group">
2
        <c:if test="${sessionScope.authorStr.contains('system/user?operation=toAdd')}">
            <button type="button" class="btn btn-default" title="新建"
 3
    onclick='location.href="${ctx}/system/user?operation=toAdd"'><i class="fa fa-file-o"></i> 新
    建</button>
        </c:if>
 4
        <button type="button" class="btn btn-default" title="删除" onclick='deleteById()'><i</pre>
 5
    class="fa fa-trash-o"></i> 删除</button>
 6
        <button type="button" class="btn btn-default" title="刷新"</pre>
    onclick="window.location.reload();"><i class="fa fa-refresh"></i> 刷新</button>
        <c:if test="${sessionScope.authorStr.contains('system/user?operation=userRoleList')}">
            <button type="button" class="btn btn-default" title="角色" onclick="roleList()"><i</pre>
8
    class="fa fa-user-circle-o"></i> 角色</button>
9
        </c:if>
10 </div>
```

#### (4) 启动项目,测试