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Spring Security 4 Secure View Fragments using taglibs

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This tutorial shows you how to secure view layer, show/hide parts of jsp/view based on logged-in user's roles, using Spring Security tags in Spring MVC web application.

First of all, in order to use Spring Security tags, we need to include **spring-security-taglibs** dependency in pom.xml as shown below:

```
<dependency>
  <groupId>org.springframework.security</groupId>
  <artifactId>spring-security-taglibs</artifactId>
  <version>4.0.1.RELEASE</version>
</dependency>
```

Then the next step would be to include taglib in your views/JSP's.

```
<%@ taglib prefix="sec" uri="http://www.springframework.org/security" %>
```

Finally, we can use Spring **Security expressions** like `hasRole`, `hasAnyRole`, etc.. in Views as shown below:

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1" %>
```



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```

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
<%@ taglib prefix="sec" uri="http://www.springframework.org/security/tags"%>
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1"%>
  <title>Welcome page</title>
</head>
<body>
  Dear <strong>${user}</strong>, Welcome to Home Page.
  <a href="<c:url value="/logout" />">Logout</a>

  <br/>
  <br/>
  <div>
    <label>View all information| This part is visible to Everyone</label>
  </div>

  <br/>
  <div>
    <sec:authorize access="hasRole('ADMIN')"%>
      <label><a href="#">Edit this page</a> | This part is visible to Admins</label>
    </sec:authorize>
  </div>

  <br/>
  <div>
    <sec:authorize access="hasRole('ADMIN') and hasRole('DBA')"%>
      <label><a href="#">Start backup</a> | This part is visible to Admins and DBAs</label>
    </sec:authorize>
  </div>
</body>
</html>

```

That's all you need to conditionally show/hide view fragments based on roles, using Spring Security expressions in your Views.

Below is the Security Configuration used for this example:

```

package com.websystique.springsecurity.configuration;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Configuration;
import org.springframework.security.config.annotation.authentication.configuration.EnableWebSecurity;
import org.springframework.security.config.annotation.web.builders.HttpSecurity;
import org.springframework.security.config.annotation.web.configuration.EnableWebSecurity;
import org.springframework.security.config.annotation.web.configuration.WebSecurityConfigurerAdapter;

@Configuration
@EnableWebSecurity
public class SecurityConfiguration extends WebSecurityConfigurerAdapter {

    @Autowired
    public void configureGlobalSecurity(AuthenticationManagerBuilder auth) throws Exception {
        auth.inMemoryAuthentication().withUser("bill").password("abc").roles("USER");
        auth.inMemoryAuthentication().withUser("admin").password("password").roles("ADMIN");
        auth.inMemoryAuthentication().withUser("dba").password("password").roles("ADMIN", "DBA");
    }

    @Override
    protected void configure(HttpSecurity http) throws Exception {
        http.authorizeRequests()
            .antMatchers("/", "/home").access("hasRole('USER') or hasRole('ADMIN')")
            .and().formLogin().loginPage("/login")
            .usernameParameter("ssoId").passwordParameter("password")
            .and().exceptionHandling().accessDeniedPage("/Access_Denied");
    }
}

```

```
}
```

Above security configuration in XML configuration format would be:

```
<beans:beans xmlns="http://www.springframework.org/schema/security"
  xmlns:beans="http://www.springframework.org/schema/beans"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.springframework.org/schema/beans
    http://www.springframework.org/schema/beans http://www.springframework.org/schema/security http://www.springframework.org/schema/security" >

  <http auto-config="true" >
    <intercept-url pattern="/" access="hasRole('USER') or hasRole('ADMIN')"/>
    <intercept-url pattern="/home" access="hasRole('USER') or hasRole('ADMIN')"/>
    <form-login login-page="/login"
      username-parameter="ssoId"
      password-parameter="password"
      authentication-failure-url="/Access_Denied" />
  </http>

  <authentication-manager >
    <authentication-provider>
      <user-service>
        <user name="bill" password="abc123" authorities="ROLE_USER"/>
        <user name="admin" password="root123" authorities="ROLE_ADMIN"/>
        <user name="dba" password="root123" authorities="ROLE_ADMIN"/>
      </user-service>
    </authentication-provider>
  </authentication-manager>

</beans:beans>
```

And the controller:

```
package com.websystique.springsecurity.controller;

import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import org.springframework.security.core.Authentication;
import org.springframework.security.core.context.SecurityContextHolder;
import org.springframework.security.core.userdetails.UserDetails;
import org.springframework.security.web.authentication.logout.SecurityContextLogoutHandler;
import org.springframework.stereotype.Controller;
import org.springframework.ui.ModelMap;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;

@Controller
public class HelloWorldController {

    @RequestMapping(value = { "/", "/home" }, method = RequestMethod.GET)
    public String homePage(ModelMap model) {
        model.addAttribute("user", getPrincipal());
        return "welcome";
    }

    @RequestMapping(value = "/Access_Denied", method = RequestMethod.GET)
    public String accessDeniedPage(ModelMap model) {
        model.addAttribute("user", getPrincipal());
        return "accessDenied";
    }
}
```

```

@RequestMapping(value = "/login", method = RequestMethod.GET)
public String loginPage() {
    return "login";
}

@RequestMapping(value="/logout", method = RequestMethod.GET)
public String logoutPage (HttpServletRequest request, HttpServletResponse response) {
    Authentication auth = SecurityContextHolder.getContext().getAuthentication();
    if (auth != null){
        new SecurityContextLogoutHandler().logout(request, response, auth);
    }
    return "redirect:/login?logout";
}

private String getPrincipal(){
    String userName = null;
    Object principal = SecurityContextHolder.getContext().getAuthentication().getPrincipal();

    if (principal instanceof UserDetails) {
        userName = ((UserDetails)principal).getUsername();
    } else {
        userName = principal.toString();
    }
    return userName;
}
}

```

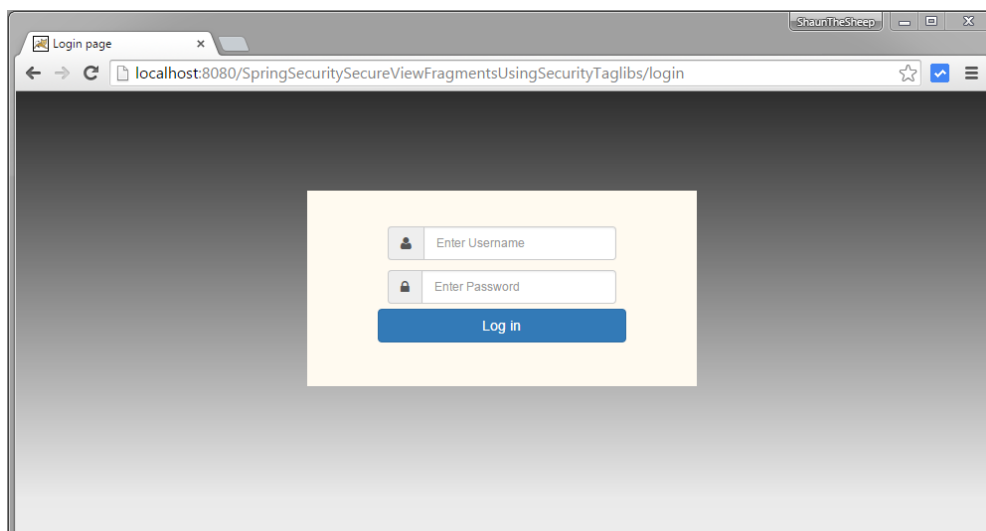
Rest of application code is same as other posts in this series.

Deploy & Run

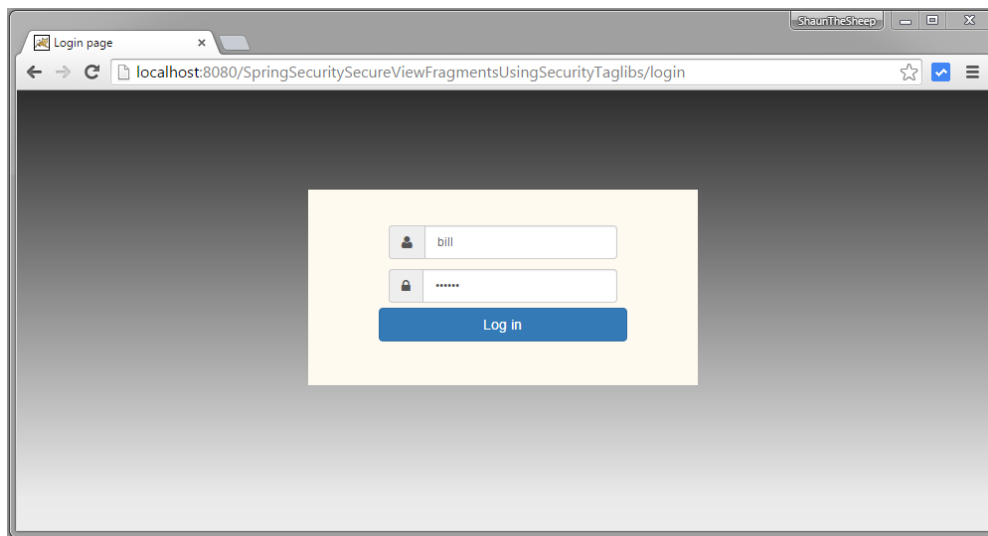
Download complete code of this project using download button shown at the bottom of this post. Build and deploy it on Servlet 3.0 container(Tomcat7/8).

Open browser and access homepage at

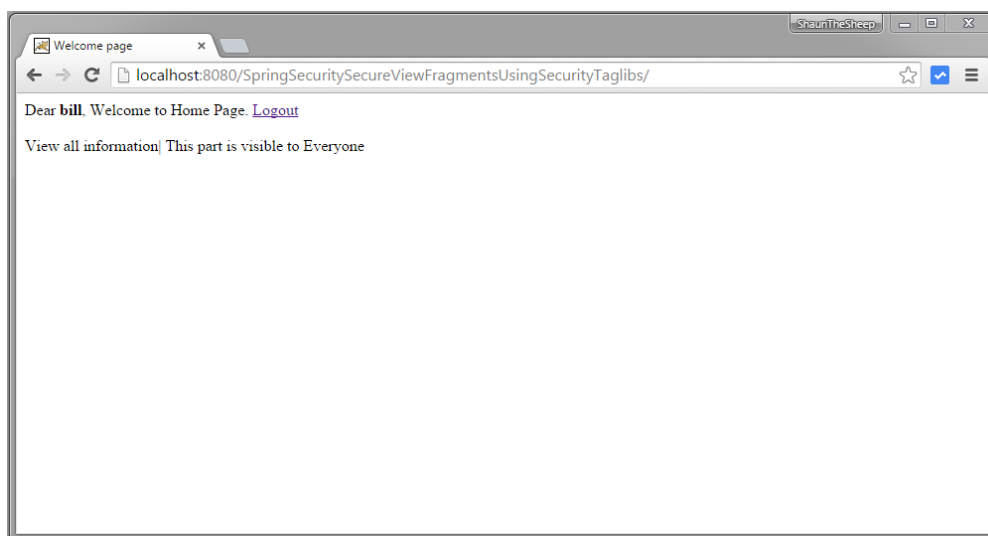
localhost:8080/SpringSecuritySecureViewFragmentsUsingSecurityTaglibs/,
you will be prompted for login.



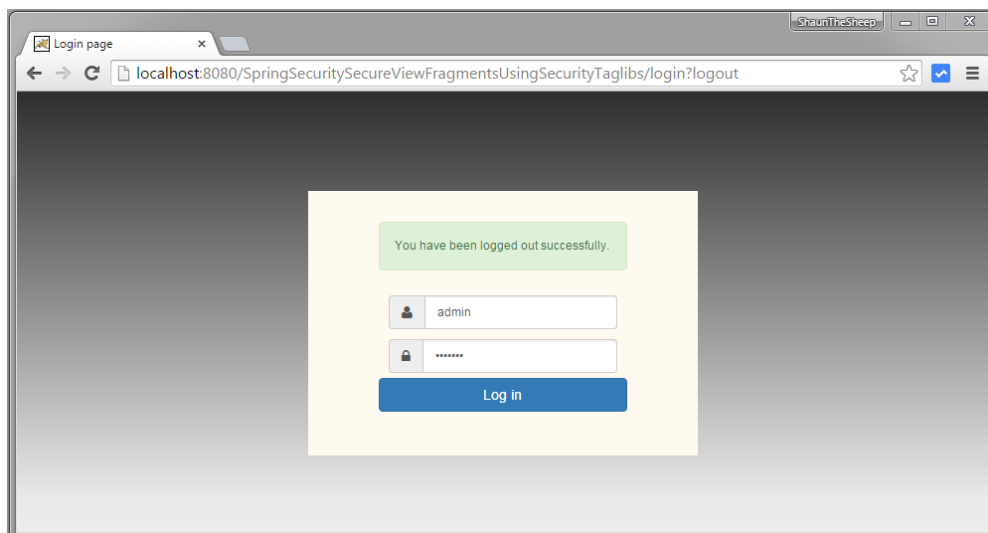
Provide USER credentials.



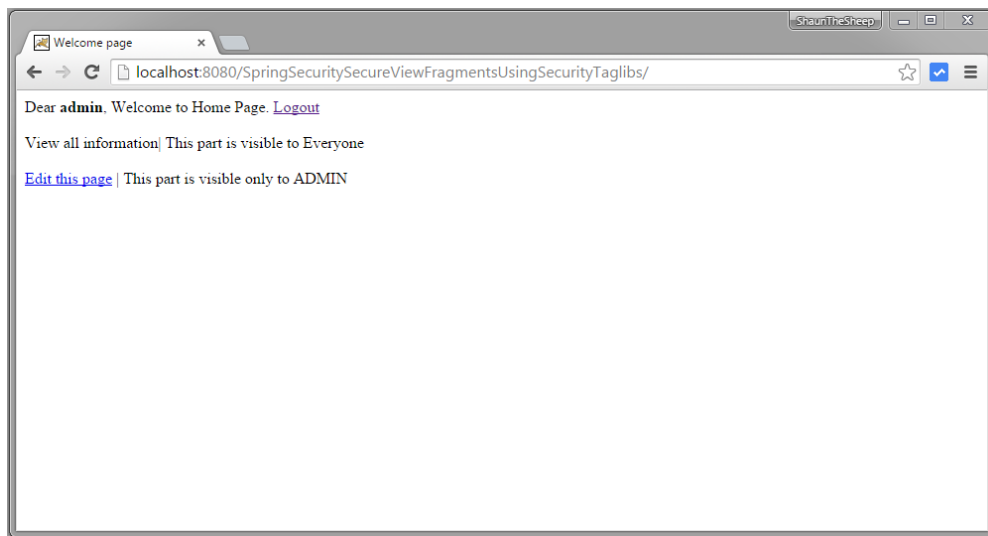
You can see that limited information is shown on page.



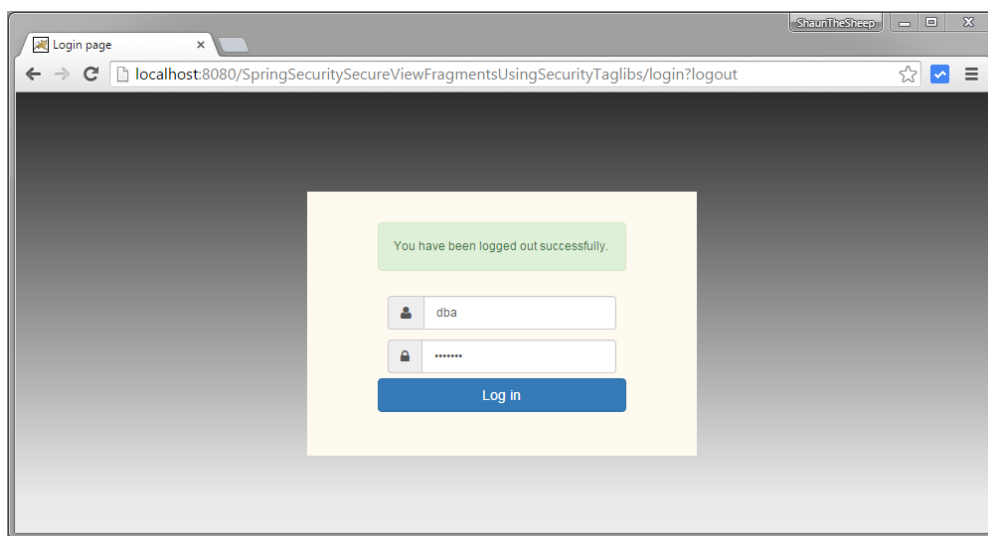
Now click on logout and login with ADMIN role



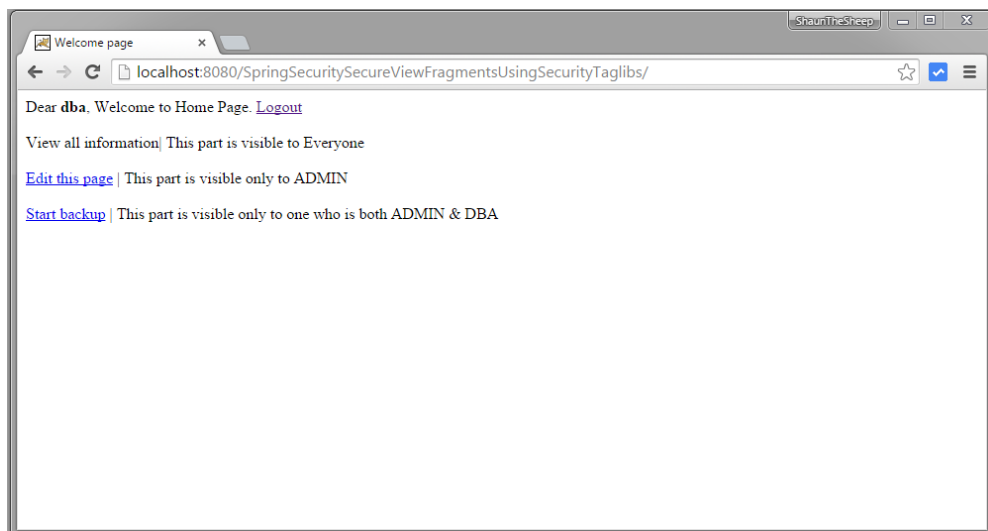
Submit, you will see that operation related to ADMIN role is accessible.



Now logout, and login with DBA role.



Submit, you will see that operation related to DBA role is accessible.



That's it. **Next post** shows you how to use role based login. That means redirecting users to different URLs upon login according to their assigned roles.

[Download Source Code](#)

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References

- [Spring Security Expressions](#)
- [Spring Security 4 Project Page](#)
- [Spring Security 4 Reference Manual](#)



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