A Sample J2EE App using Form Based Authentication and a Style Sheet

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This article describes how to configure a J2EE application to use Form Based Authentication (FBA), including a login page with a style sheet.

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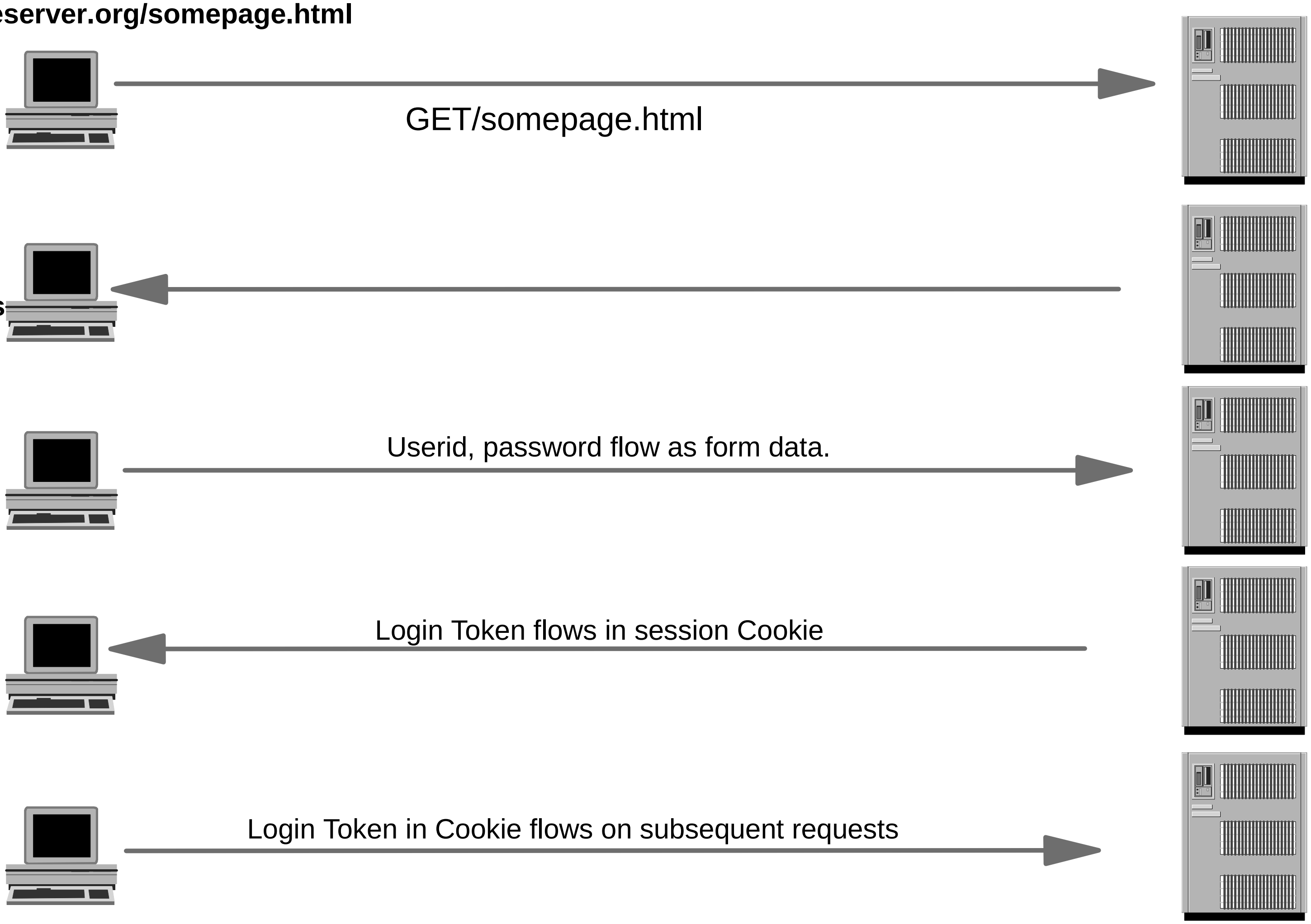
WebSphere Application Server supports the J2EE standard for authentication called Form Based Authentication (FBA).

Client enters url at browser:
http://someserver.org/somepage.html



GET/somepage.html

Server determines that a userid, password are required.

User fills in userid, password, clicks submit button.

Server redirects client to login page with userid, password form. Server creates cookie with original url.

Userid, password flow as form data.

Server validates userid, password, creates Login Token, or error page.

Browser caches Cookie.

Login Token flows in session Cookie

Server returns Login Token, redirects client to original url.

Login Token in Cookie flows on subsequent requests

Server processes Login Token, request.

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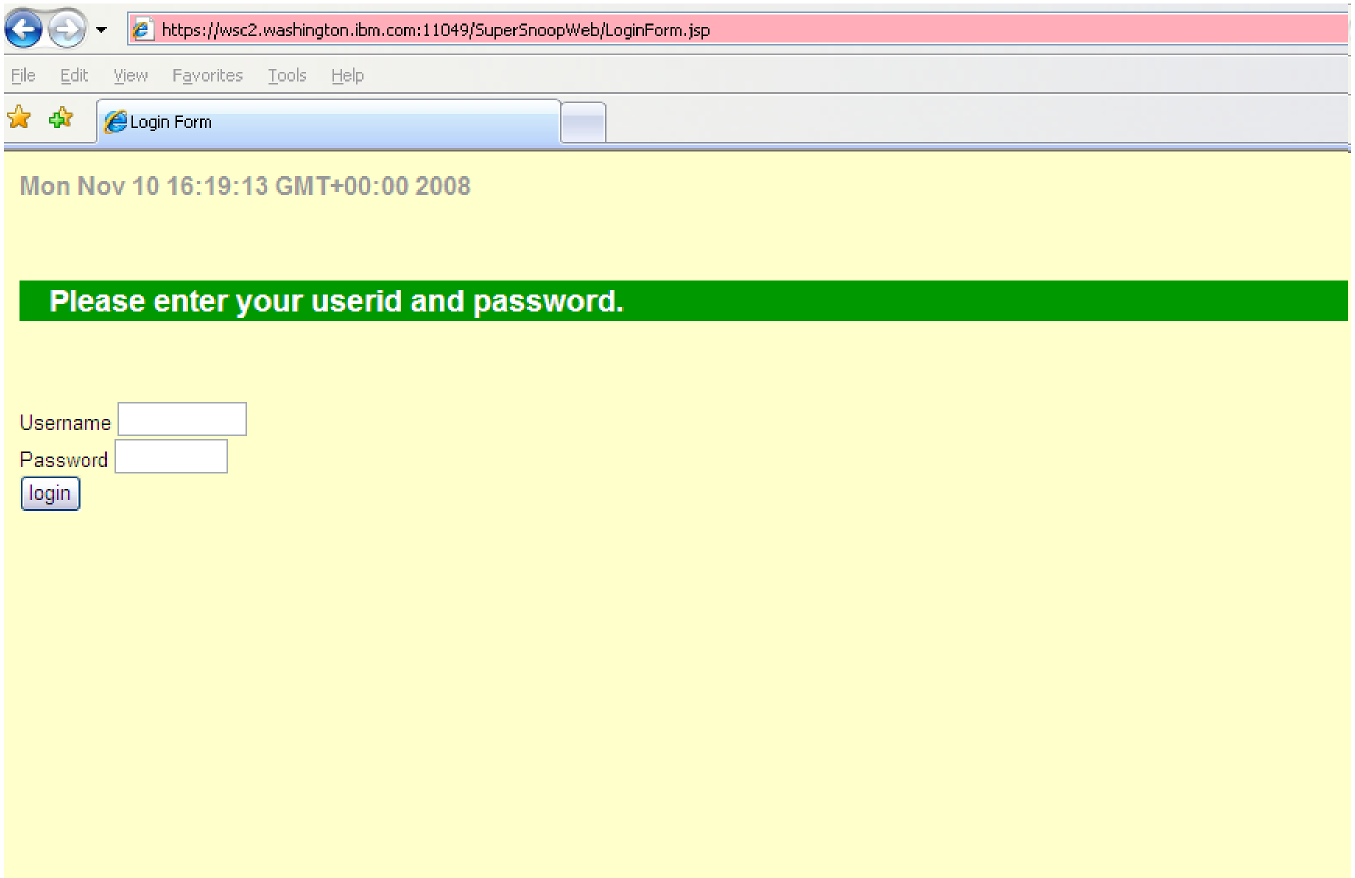
Form Based Authentication allows the Java developer to control the 'look and feel' of the login page.
A style sheet (.css file) controls the character set and background colors in this example:



https://wsc2.washington.ibm.com:11049/SuperSnoopWeb/LoginForm.jsp
File Edit View Favorites Tools Help
Login Form

Mon Nov 10 16:19:13 GMT+00:00 2008

Please enter your userid and password.

Username
Password

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A Checklist for Configuring FBA

1. Determine what Roles will be allowed to use your application.
2. Define RACF EJBROLE profiles to match your role names.
   - Include security domain name as a prefix.
   - EJBROLE profiles are case-sensitive.
   - Give users or groups READ access to the appropriate EJBROLE profile.
   - Raclist and refresh the EJBROLE class.

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A Checklist for Configuring FBA (cont.)

3. Create a Login page and an Error page
   - Form on Login Page must contain
     - j_username
     - j_password
   - Action on Login Form must be
     - j_security_check
   - Page can be HTML or a JSP.
4. Indicate that Form Based Authentication is Required.
   - Specify the name of your Login Page, Error Page.

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A Checklist for Configuring FBA (cont.)

5. Create a Security Constraint and Web Resource Collection to 'declare' each Applications security policy.
   - Specify URL(s) to be protected.
   - Specify HTTP methods to be protected.
   - Specify Role(s) authorized to access URLs.
6. Create a User Data Constraint with a Transport Guarantee of 'Confidential' to force the use of SSL for the Application. Optional but recommended to protect the userid/password.

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The style sheet is referenced from the login page html. In this example, the login page is LoginForm.jsp.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<HTML>
<HEAD>
<%@ page
language="java"
contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"
%>
<META http-equiv="Content-Type" content="text/html; charset=UTF-8">
<META name="GENERATOR" content="IBM WebSphere Studio">
<TITLE>Login Form</TITLE>
<link href='sample.css' rel="styleSheet" type="text/css">
</HEAD>
<BODY>
<h3><%= new java.util.Date() %></h3>
<br>
<br>
<H2>Please enter your userid and password.</H2>
<form method="post" action="j_security_check"><br>
<br>Username <input type="text" name="j_username" maxlength="8" size="8">
<br>Password <input type="password" name="j_password" maxlength="8" size="8">
<br><input type="submit" value="login"><BR>
</form>
</BODY>
</HTML>
```

To allow the style sheet, gif, jpeg, or other content to be displayed along with the login page, they must not be covered by the security constraint that protects the rest of the application.

You can accomplish this by creating a servlet mapping that maps the servlet url to a url protected by a security constraint. The login page and style sheet will remain unprotected, which is necessary for them to work properly.

Example on next page.

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In this example, taken from the web.xml file, the servlet url, SuperSnoop, is mapped to /secure/SuperSnoop. The url pattern in the security constraint protects /secure/*

```
- <servlet>
  <servlet-name>SuperSnoop</servlet-name>
  <display-name>SuperSnoop</display-name>
  <servlet-class>com.ibm.washington.SuperSnoop</servlet-class>
  </servlet>
```

mapping

```
- <servlet-mapping>
  <servlet-name>SuperSnoop</servlet-name>
  <url-pattern>/secure/SuperSnoop</url-pattern>
  </servlet-mapping>
- <security-constraint>
  <display-name>Manager</display-name>
- <web-resource-collection>
  <web-resource-name>Manager</web-resource-name>
  <description />
```

protected

```
  <url-pattern>/secure/*</url-pattern>
  <http-method>GET</http-method>
  <http-method>PUT</http-method>
  <http-method>HEAD</http-method>
  <http-method>TRACE</http-method>
  <http-method>POST</http-method>
  <http-method>DELETE</http-method>
  <http-method>OPTIONS</http-method>
  </web-resource-collection>
```

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A Checklist for Configuring FBA (cont.)

7. Link Servlet Roles (Programmatic security) to RACF Roles, if necessary.
8. Deploy the Application.

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About the sample .ear file.

- supersnoop-20081007-form.ear is configured to use FBA.
- It has no external data or application requirements. Just a working WebSphere Application Server V5, V6 or V7.
- It requires that users have the Manager role.
- It uses a transport guarantee to force the use of SSL.
- The url to access the application is: http://server/SuperSnoopWeb/secure/SuperSnoop

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