Spring Day 4

Spring Security

인증 & 인가

인증 authentication 회원 로그인, 회원/비회원, 멤버쉽

인가 authorization 1급 기밀, 접근 권한, 무료회원/유료회원

환경설정

1. pom.xml : spring-security-web , spring-security-config 의존성 라이브러리 주입

```
                    maven repository
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="<http://maven.apache.org/POM/4.0.0>" xmlns:xsi="<http://www.w3.org/200
1/XMLSchema-instance>"
  xsi:schemaLocation="<http://maven.apache.org/POM/4.0.0> <https://maven.apache.org/ma
ven-v4_0_0.xsd>">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.carshop</groupId>
  <artifactId>controller</artifactId>
  <name>CarShop</name>
  <packaging>war</packaging>
  <version>1.0.0-BUILD-SNAPSHOT</version>
  <properties>
    <java-version>1.6</java-version>
    <org.springframework-version>5.3.19</org.springframework-version>
    <org.aspectj-version>1.6.10</org.aspectj-version>
    <org.slf4j-version>1.6.6</org.slf4j-version>
  </properties>
  <dependencies>
    <!-- Spring -->
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-context</artifactId>
      <version>${org.springframework-version}</version>
      <exclusions>
        <!-- Exclude Commons Logging in favor of SLF4j -->
        <exclusion>
          <groupId>commons-logging</groupId>
          <artifactId>commons-logging</artifactId>
        </exclusion>
      </exclusions>
    </dependency>
    <dependency>
```

```xml
      <groupId>org.springframework</groupId>
      <artifactId>spring-webmvc</artifactId>
      <version>${org.springframework-version}</version>
   </dependency>

   <!-- AspectJ -->
   <dependency>
      <groupId>org.aspectj</groupId>
      <artifactId>aspectjrt</artifactId>
      <version>${org.aspectj-version}</version>
   </dependency>

   <!-- Logging -->
   <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>${org.slf4j-version}</version>
   </dependency>
   <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>jcl-over-slf4j</artifactId>
      <version>${org.slf4j-version}</version>
      <scope>runtime</scope>
   </dependency>
   <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>${org.slf4j-version}</version>
      <scope>runtime</scope>
   </dependency>
   <dependency>
      <groupId>log4j</groupId>
      <artifactId>log4j</artifactId>
      <version>1.2.15</version>
      <exclusions>
        <exclusion>
           <groupId>javax.mail</groupId>
           <artifactId>mail</artifactId>
        </exclusion>
        <exclusion>
           <groupId>javax.jms</groupId>
           <artifactId>jms</artifactId>
        </exclusion>
        <exclusion>
           <groupId>com.sun.jdmk</groupId>
           <artifactId>jmxtools</artifactId>
        </exclusion>
        <exclusion>
           <groupId>com.sun.jmx</groupId>
           <artifactId>jmxri</artifactId>
        </exclusion>
      </exclusions>
      <scope>runtime</scope>
   </dependency>

   <!-- @Inject -->
   <dependency>
      <groupId>javax.inject</groupId>
```

```xml
      <artifactId>javax.inject</artifactId>
      <version>1</version>
    </dependency>

    <!-- Servlet -->
    <dependency>
      <groupId>javax.servlet</groupId>
      <artifactId>servlet-api</artifactId>
      <version>2.5</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>javax.servlet.jsp</groupId>
      <artifactId>jsp-api</artifactId>
      <version>2.1</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>javax.servlet</groupId>
      <artifactId>jstl</artifactId>
      <version>1.2</version>
    </dependency>

    <!-- Test -->
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.7</version>
      <scope>test</scope>
    </dependency>

<!-- <https://mvnrepository.com/artifact/org.springframework.security/spring-security-
web> -->
    <dependency>
        <groupId>org.springframework.security</groupId>
        <artifactId>spring-security-web</artifactId>
        <version>5.4.6</version>
    </dependency>
<!-- <https://mvnrepository.com/artifact/org.springframework.security/spring-security-
config> -->
    <dependency>
        <groupId>org.springframework.security</groupId>
        <artifactId>spring-security-config</artifactId>
        <version>5.4.6</version>
    </dependency>


  </dependencies>
    <build>
        <plugins>
            <plugin>
                <artifactId>maven-eclipse-plugin</artifactId>
                <version>2.9</version>
                <configuration>
                    <additionalProjectnatures>
                        <projectnature>org.springframework.ide.eclipse.core.springnatu
re</projectnature>
                    </additionalProjectnatures>
```

```
                    <additionalBuildcommands>
                        <buildcommand>org.springframework.ide.eclipse.core.springbuild
er</buildcommand>
                    </additionalBuildcommands>
                    <downloadSources>true</downloadSources>
                    <downloadJavadocs>true</downloadJavadocs>
                </configuration>
            </plugin>
            <plugin>
                <groupId>org.apache.maven.plugins</groupId>
                <artifactId>maven-compiler-plugin</artifactId>
                <version>2.5.1</version>
                <configuration>
                    <source>1.6</source>
                    <target>1.6</target>
                    <compilerArgument>-Xlint:all</compilerArgument>
                    <showWarnings>true</showWarnings>
                    <showDeprecation>true</showDeprecation>
                </configuration>
            </plugin>
            <plugin>
                <groupId>org.codehaus.mojo</groupId>
                <artifactId>exec-maven-plugin</artifactId>
                <version>1.2.1</version>
                <configuration>
                    <mainClass>org.test.int1.Main</mainClass>
                </configuration>
            </plugin>
        </plugins>
    </build>
</project>
```

1. web.xml : filter 추가 - jsp 페이지를 유저에게 보내기 전에 필터링

param 추가 - **security-context.xml** 설정 (권한 / 인증 설정)

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="2.5" xmlns="<http://java.sun.com/xml/ns/javaee>"
  xmlns:xsi="<http://www.w3.org/2001/XMLSchema-instance>"
  xsi:schemaLocation="<http://java.sun.com/xml/ns/javaee> <https://java.sun.com/xml/n
s/javaee/web-app_2_5.xsd>">

  <!-- The definition of the Root Spring Container shared by all Servlets and Filters
 -->
  <context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/spring/root-context.xml
                /WEB-INF/spring/security-context.xml
    </param-value>
  </context-param>

  <!-- Creates the Spring Container shared by all Servlets and Filters -->
```

```xml
  <listener>
    <listener-class>org.springframework.web.context.ContextLoaderListener</listener-class>
  </listener>

  <!-- Processes application requests -->
  <servlet>
    <servlet-name>appServlet</servlet-name>
    <servlet-class>org.springframework.web.servlet.DispatcherServlet</servlet-class>
    <init-param>
      <param-name>contextConfigLocation</param-name>
      <param-value>/WEB-INF/spring/appServlet/servlet-context.xml</param-value>
    </init-param>
    <load-on-startup>1</load-on-startup>
  </servlet>

  <servlet-mapping>
    <servlet-name>appServlet</servlet-name>
    <url-pattern>/</url-pattern>
  </servlet-mapping>

  <filter>
    <filter-name>encodingFilter</filter-name>
    <filter-class>org.springframework.web.filter.CharacterEncodingFilter</filter-class>
    <init-param>
      <param-name>encoding</param-name>
      <param-value>UTF-8</param-value>
    </init-param>
  </filter>
  <filter-mapping>
    <filter-name>encodingFilter</filter-name>
    <url-pattern>/*</url-pattern>
  </filter-mapping>

  <filter>
    <filter-name>springSecurityFilterChain</filter-name>
    <filter-class>org.springframework.web.filter.DelegatingFilterProxy
    </filter-class>
  </filter>

  <filter-mapping>
    <filter-name>springSecurityFilterChain</filter-name>
    <url-pattern>/*</url-pattern>
  </filter-mapping>


</web-app>
```

```xml
<filter>
    <filter-name>springSecurityFilterChain</filter-name>
    <filter-class>org.springframework.web.filter.DelegatingFilterProxy
    </filter-class>
</filter>

<filter-mapping>
    <filter-name>springSecurityFilterChain</filter-name>
    <url-pattern>/*</url-pattern>
</filter-mapping>
```
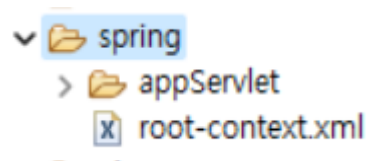
```xml
<context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/spring/root-context.xml
                 /WEB-INF/spring/security-context.xml
    </param-value>
</context-param>
```

1. **security-context.xml** 작성 - 가장 중요 !! 위치 확인할것 spring 바로 아래

```
∨ 🗁 spring
    > 🗁 appServlet
      🗴 root-context.xml
```

```xml
<?xml version="1.0" encoding="UTF-8"?>
<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/spring-beans.xsd>
 <http://www.springframework.org/schema/security>
 <http://www.springframework.org/schema/security/spring-security.xsd>">

    <http auto-config="true" use-expressions="true">

 <intercept-url pattern="/admin/add" access="hasAuthority('ROLE_ADMIN')" />
 <intercept-url pattern="/manager" access="hasRole('ROLE_MANAGER')" />
 <intercept-url pattern="/member" access="isAuthenticated()" />
 <intercept-url pattern="/**" access="permitAll" />

    </http>

    <authentication-manager>
        <authentication-provider>
            <user-service>
```

```
        <user name="admin" password="{noop}admin" authorities="ROLE_ADMIN, ROLE_USER"/>
        <user name="manager" password="{noop}manager" authorities="ROLE_MANAGER, ROLE_US
ER"/>
        <user name="guest" password="{noop}guest" authorities="ROLE_USER"/>


            </user-service>
        </authentication-provider>
    </authentication-manager>
</beans:beans>
```

Custom Login

→ 기본적으로 로그인 로그아웃이 스프링이 대충 만들어둔다. → 커스텀.

컨트롤러에서 설정 → 시큐리티xml에서 설정.

5시에 정리 !

로그인 ↔ 로그아웃 전환 표시 처리.

헤더.

```
<%@ taglib prefix="c" uri="<http://java.sun.com/jsp/jstl/core>"%>
```

c 태그를 활용할 것이라 가져온다.

```
<c:choose> // 선택지 내에서 넣는다.
  <c:when test="${isLogOn=true}">
          <a href="${contextPath }/logout">로그아웃</a>
  </c:when> // 조건이 맞으면 실행.

  <c:otherwise"> // 조건 예외 처리.
    <a href="${contextPath }/login">로그인</a>
  </c:otherwise>
<c:choose>
```

- 완성.헤더.jsp