# Restrict Access Based on Roles

# Our Example

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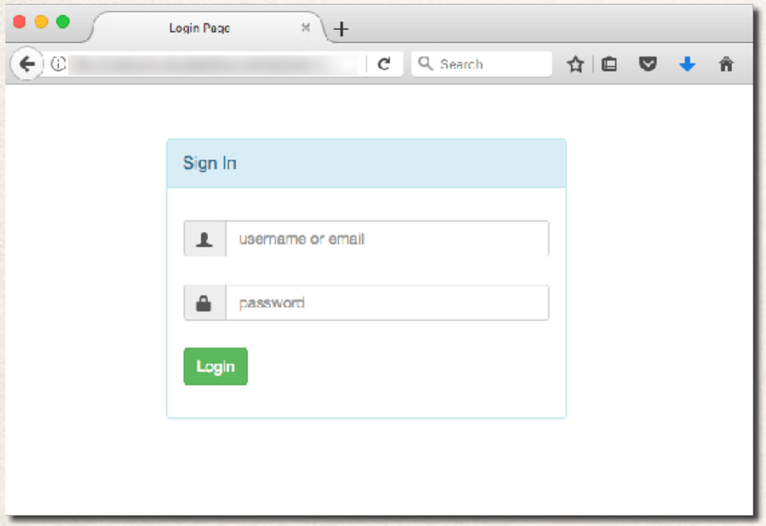

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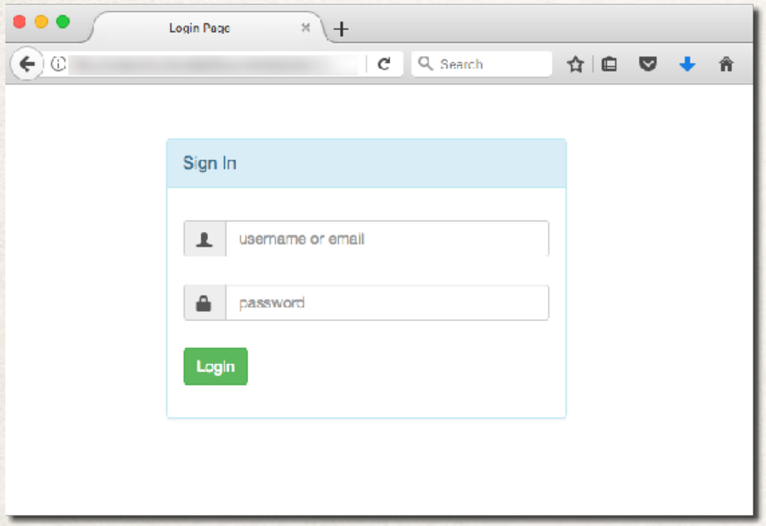


/

Home Page

role: EMPLOYEE

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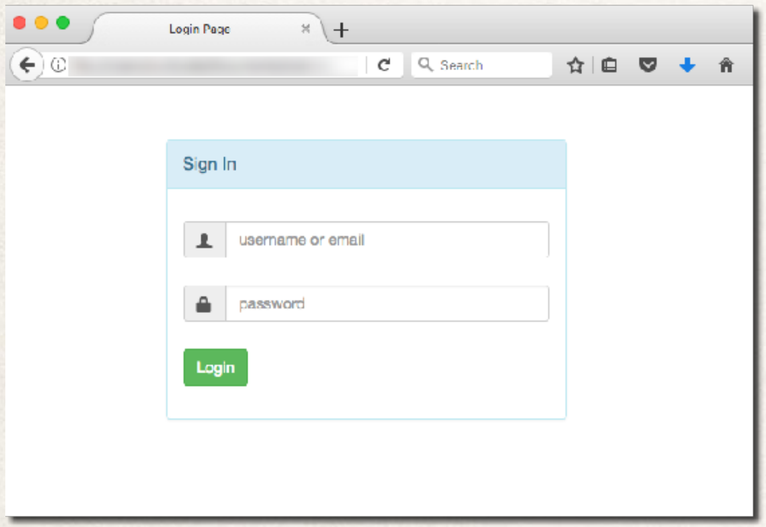


/

Home Page

role: EMPLOYEE

/leaders

Leadership Retreat Page

role: MANAGER

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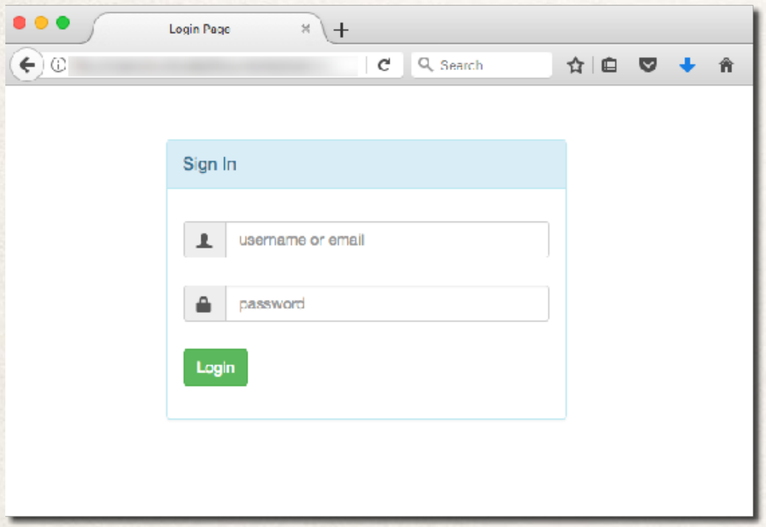


/

Home Page

role: EMPLOYEE

/leaders

Leadership Retreat Page

role: MANAGER

/systems

Admin Holiday Cruise

role: ADMIN

# Development Process

Step-By-Step

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# Step 1: Create Supporting Controller code and View Pages

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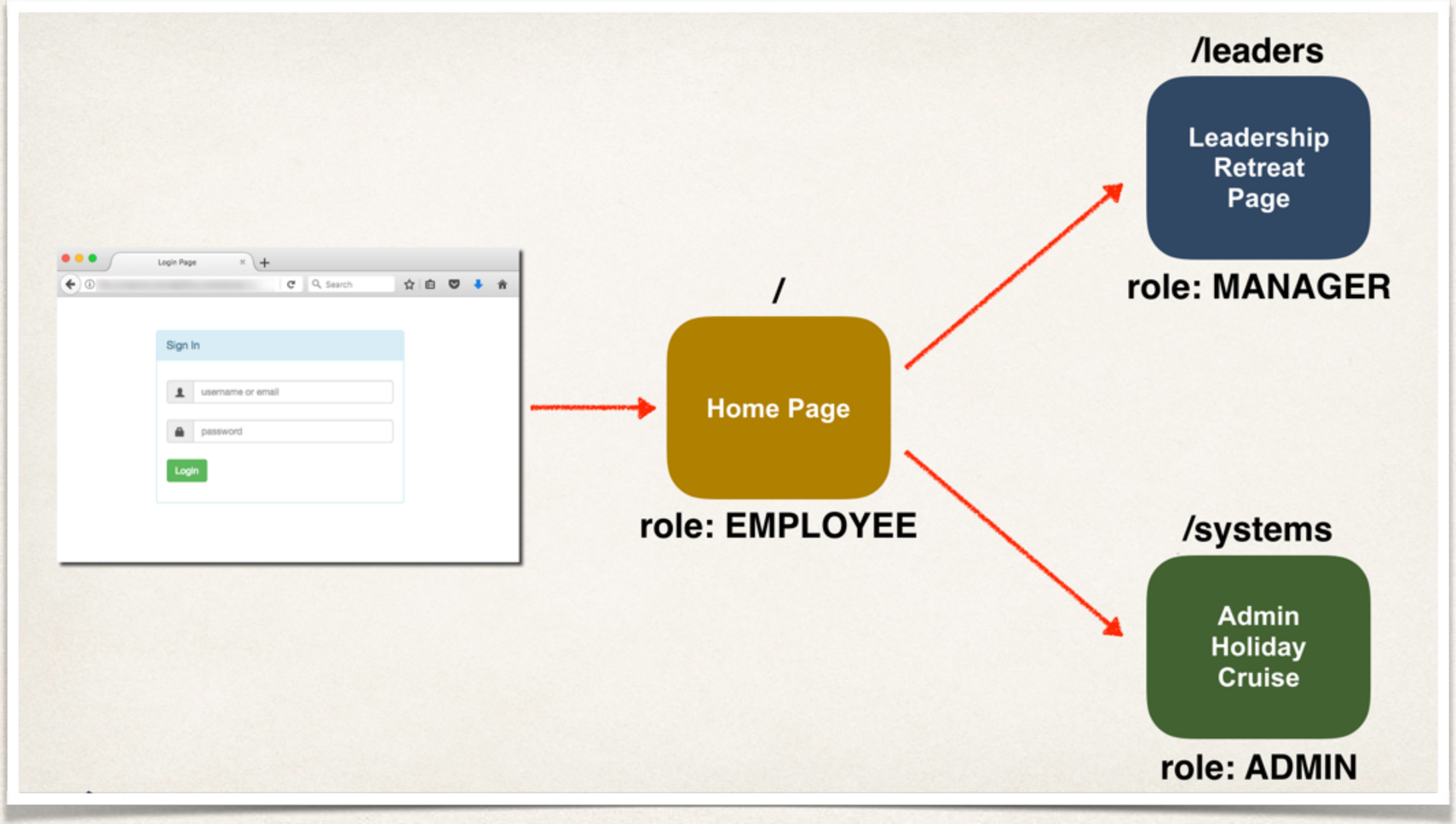

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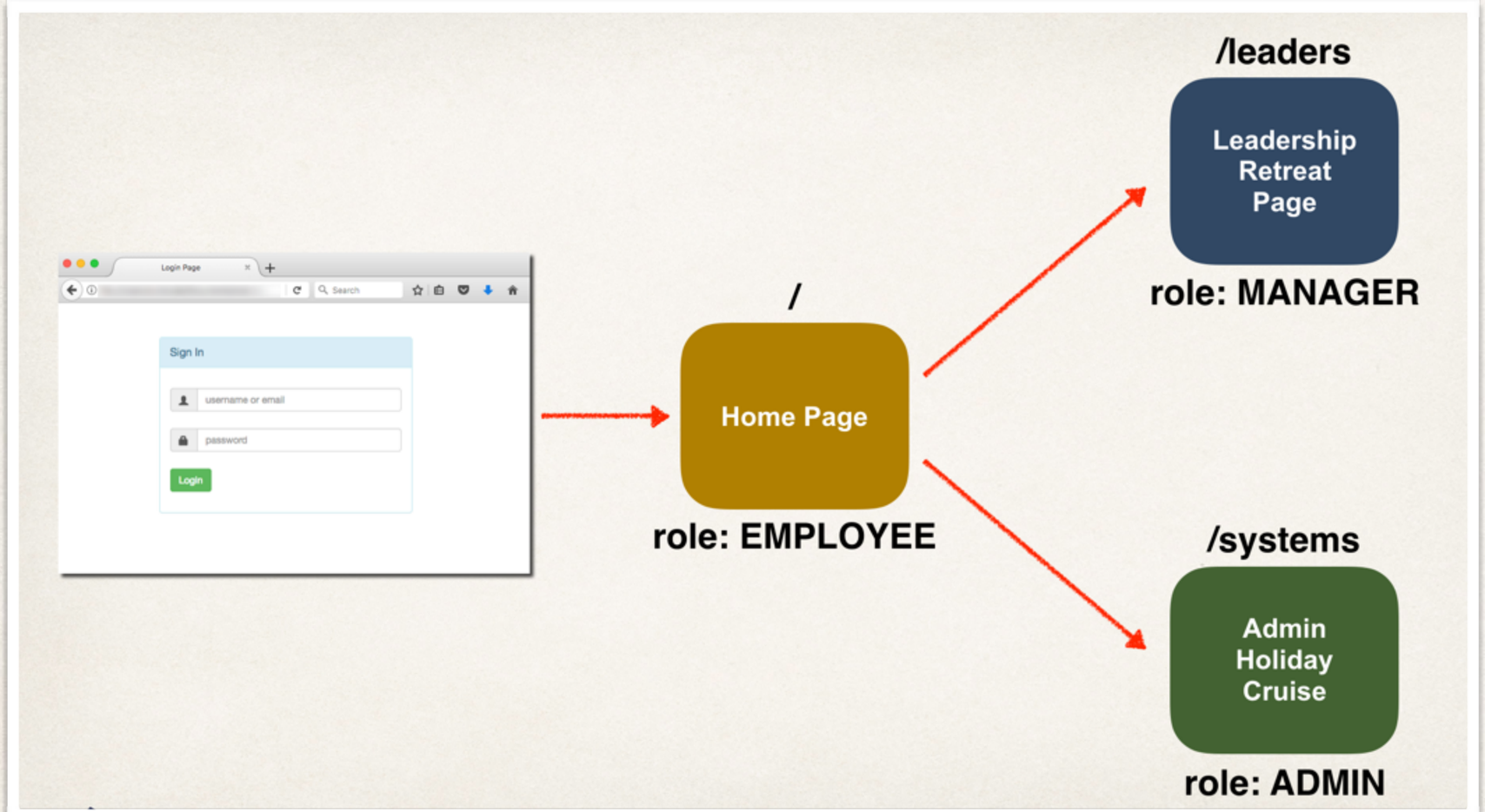


Cover these steps in the video

# Step 2: Update Our User Roles

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| User ID | Password | Roles |
| --- | --- | --- |

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|---|---|---|
| `john` | `test123` | `EMPLOYEE` |

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| john | test123 | EMPLOYEE |
| mary | test123 | EMPLOYEE, MANAGER |

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| susan | test123 | EMPLOYEE, ADMIN |

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| susan | test123 | EMPLOYEE, ADMIN |

We can give ANY names for user roles

# Step 2: Update Our User Roles

**File: DemoSecurityConfig.java**

```
@Override
protected void configure(AuthenticationManagerBuilder auth) throws Exception {

  // add our users for in memory authentication





}
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  auth.inMemoryAuthentication()
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Single role

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- Update your Spring Security Java configuration file (.java)
- General Syntax

Single role

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antMatchers(<< add path to match on >>).hasRole(<< authorized role >>)
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Restrict access to a given path "/systems/**"

"ADMIN"

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```
antMatchers(<< add path to match on >>).hasAnyRole(<< list of authorized roles >>)
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Any role in the list, comma-delimited list

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"ADMIN", "DEVELOPER", "VIP", "PLATINUM"

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antMatchers("/").hasRole("EMPLOYEE")
```

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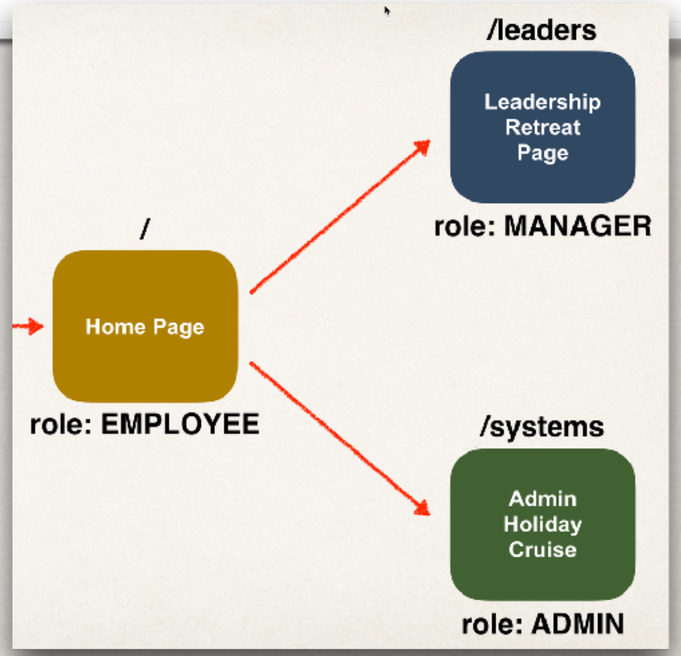

# Restrict Path to EMPLOYEE

```
antMatchers("/").hasRole("EMPLOYEE")
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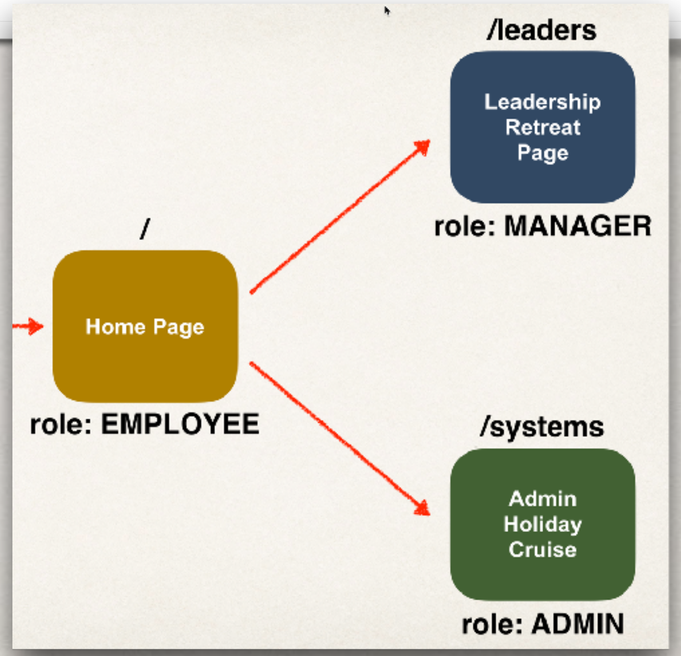
**Match on root path: /**



# Restrict Path /leaders to MANAGER

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antMatchers("/leaders/**").hasRole("MANAGER")
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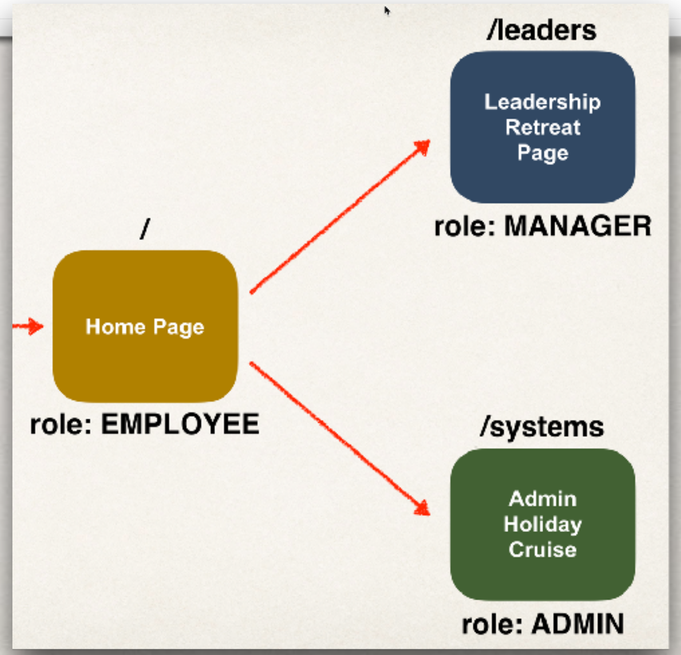
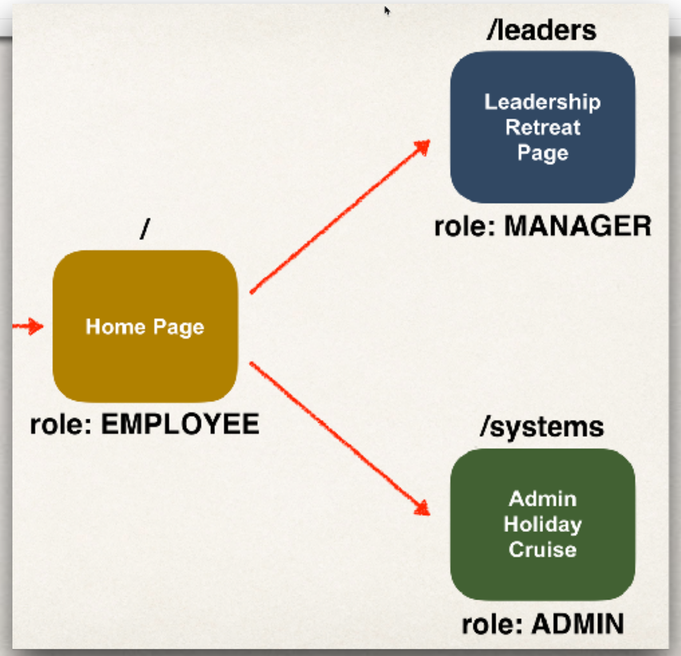


# Restrict Path /leaders to MANAGER

```
antMatchers("/leaders/**").hasRole("MANAGER")
```

**Match on path: /leaders**
**And all sub-directories (**)**



# Restrict Path /systems to ADMIN

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```
antMatchers("/systems/**").hasRole("ADMIN")
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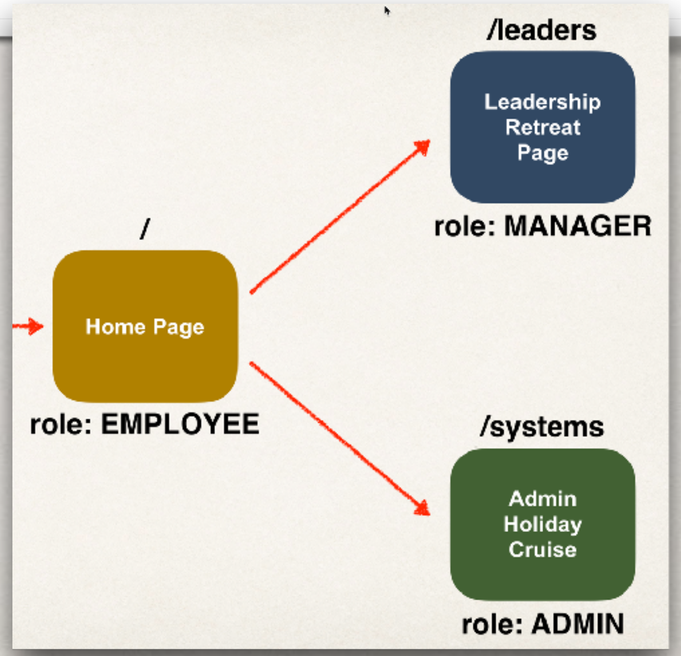

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```
antMatchers("/systems/**").hasRole("ADMIN")
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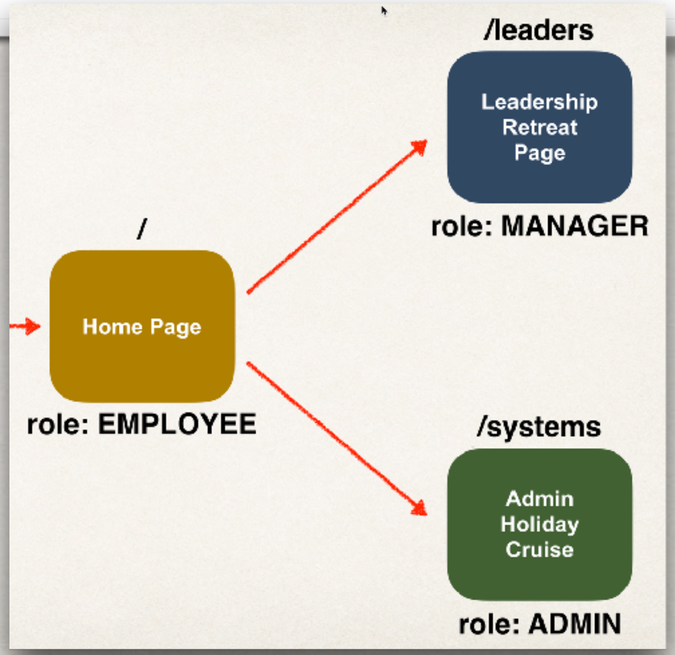
**Match on path: /systems**
**And all sub-directories (**)**



# Pull It Together

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protected void configure(HttpSecurity http) throws Exception {

  http.authorizeRequests()
    .antMatchers("/").hasRole("EMPLOYEE")
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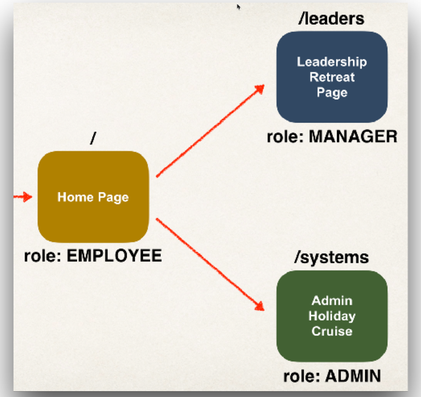
    .antMatchers("/systems/**").hasRole("ADMIN")
    .and()
    .formLogin()
   …
}
```



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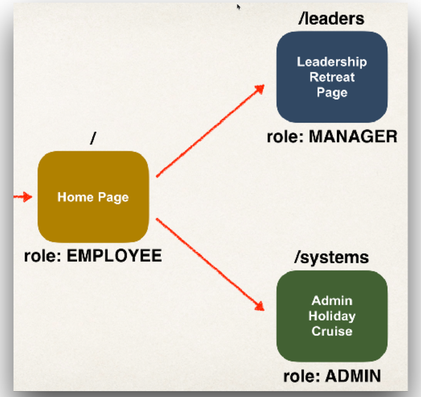


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