Managed Bean Scopes

Topics

- Define scopes for managed beans

- Application Scope

- Session Scope

- Request Scope

Scopes - Lifecycle

Request Scope (per web request)

Session Scope (per user)

Application Scope (shared by ALL users)

other scopes…

Scopes

Scope	Description
Request	New bean is created for every request. Short-lived
Session	Bean is created once for user's browser session. Unique for this user
Application	Bean is created once for application and shared by ALL users.
View	Same bean is used while user is on same page. Best for Ajax requests
Flow	Same bean is used while user is on same SET of pages. For wizard type pages
Flash	Same bean will survive a page redirect.
Custom	Bean is stored in a map and the developer controls the lifecycle
None	Bean is not placed in any scope. Useful when used by other scoped beans

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Application Scope

✤ Bean is created once for application and shared by ALL users.

✤ Commonly used to share an instance of a utility class.

✤ For example a database utility class. We'll actually use this in later videos

✤ Next slide will demonstrate how Application Scope is shared by all users

Application Scope - Code Example

✤ Create a form to interact with the bean

Counter value: 0

Increment

```
Counter value: #{counterTwo.value}

<br/><br/>

<h:form>
    <h:commandButton value="Increment"
                     action="#{counterTwo.increment()}" />
</h:form>
```

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Application Scope - Code Example

✤ Bean is created once for application and shared by ALL users.

File: CounterTwo.java

```java
import javax.faces.bean.ApplicationScoped;

@ManagedBean
@ApplicationScoped
public class CounterTwo {

    private int value = 0;

    public String increment() {
        value++;

        return "student_two";
    }
}
```
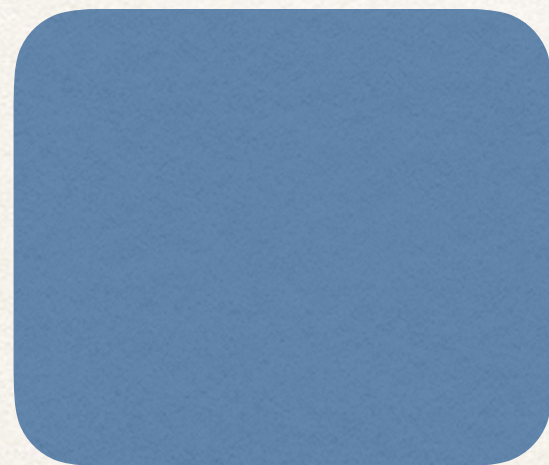
Application Scope - Demo

Session Scope

✤ Bean is created once for user's browser session. Unique for this user.

✤ Commonly used when you need to keep track of the user's actions

Shopping Cart

Online Banking

Online Exam

Session Scope - Code Example

✤ Create a form to interact with the bean

Counter value: 0

Increment

```
Counter value: #{counterOne.value}

<br/><br/>

<h:form>
    <h:commandButton value="Increment"
                     action="#{counterOne.increment()}" />
</h:form>
```

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Session Scope - Code Example

✤ Bean is created once for user's browser session. Unique for this user

File: CounterOne.java

```java
import javax.faces.bean.ManagedBean;

@ManagedBean
@SessionScoped
public class CounterOne {

    private int value = 0;

    public String increment() {
        value++;

        return "counter_one";
    }
}
```

Session Scope - Demo

Request Scope - Code Example

✤ New bean is created for every request. Short lived.

✤ Commonly used for submitting form data …. one time use.

✤ *Note: This is the DEFAULT scope if none is specified.*

Request Scope - Code Example

✤ Create a form to interact with the bean

Counter value: 0

Increment

```
Counter value: #{counterThree.value}

<br/><br/>

<h:form>
    <h:commandButton value="Increment"
                     action="#{counterThree.increment()}" />
</h:form>
```

Request Scope - Code Example

✤ New bean is created for every request. Short lived.

File: CounterThree.java

```java
@ManagedBean
@RequestScoped
public class CounterThree {

    private int value = 0;

    public String increment() {
        value++;

        return "counter_three";
    }
}
```

Request Scope - Demo

Summary

- Defined scopes for managed beans

- Application Scope

- Session Scope

- Request Scope