Appendix

Version 5.2.8.BUILD-SNAPSHOT

Chapter 1. XML Schemas

This part of the appendix lists XML schemas for data access, including the following:

- The `tx` Schema
- The `jdbc` Schema

1.1. The `tx` Schema

The `tx` tags deal with configuring all of those beans in Spring's comprehensive support for transactions. These tags are covered in the chapter entitled Transaction Management.



We strongly encourage you to look at the `'spring-tx.xsd'` file that ships with the Spring distribution. This file contains the XML Schema for Spring's transaction configuration and covers all of the various elements in the `tx` namespace, including attribute defaults and similar information. This file is documented inline, and, thus, the information is not repeated here in the interests of adhering to the DRY (Don't Repeat Yourself) principle.

In the interest of completeness, to use the elements in the `tx` schema, you need to have the following preamble at the top of your Spring XML configuration file. The text in the following snippet references the correct schema so that the tags in the `tx` namespace are available to you:

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:aop="http://www.springframework.org/schema/aop"
    xmlns:tx="http://www.springframework.org/schema/tx" ①
    xsi:schemaLocation="
        http://www.springframework.org/schema/beans
https://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/tx
https://www.springframework.org/schema/tx/spring-tx.xsd ②
        http://www.springframework.org/schema/aop
https://www.springframework.org/schema/aop/spring-aop.xsd">

    <!-- bean definitions here -->

</beans>
```

① Declare usage of the `tx` namespace.

② Specify the location (with other schema locations).



Often, when you use the elements in the `tx` namespace, you are also using the elements from the `aop` namespace (since the declarative transaction support in Spring is implemented by using AOP). The preceding XML snippet contains the relevant lines needed to reference the `aop` schema so that the elements in the `aop` namespace are available to you.

1.2. The `jdbc` Schema

The `jdbc` elements let you quickly configure an embedded database or initialize an existing data source. These elements are documented in Embedded Database Support and Initializing a DataSource, respectively.

To use the elements in the `jdbc` schema, you need to have the following preamble at the top of your Spring XML configuration file. The text in the following snippet references the correct schema so that the elements in the `jdbc` namespace are available to you:

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:jdbc="http://www.springframework.org/schema/jdbc" ①
    xsi:schemaLocation="
        http://www.springframework.org/schema/beans
https://www.springframework.org/schema/beans/spring-beans.xsd
        http://www.springframework.org/schema/jdbc
https://www.springframework.org/schema/jdbc/spring-jdbc.xsd"> ②

    <!-- bean definitions here -->

</beans>
```

① Declare usage of the `jdbc` namespace.

② Specify the location (with other schema locations).