

06 - Ref Attribute

In Spring, the ref attribute is used in the <property> tag to assign reference-type values (i.e., objects of other beans) to a property.

- The ref attribute allows one bean to refer to another bean within the Spring container.
- The value of the ref attribute should be the id of another bean that you want to reference.
- For the reference injection to work, the referenced bean must be defined in the configuration file. Otherwise, Spring will throw an error during the container initialization.

Example:

Alien.java

The Alien class has a Laptop object as a dependency. A setter method is used to inject this dependency.

```
public class Alien {  
  
    private int age;  
  
    public Alien() {  
  
        System.out.println("Object Created");  
  
    }  
  
    public int getAge() {  
  
        return age;  
  
    }  
  
    public void setAge(int age) {    // Setter Injection
```

```
        System.out.println("Setter called");

        this.age = age;
    }

    public void code() {

        System.out.println("Coding");

    }

}
```

Laptop.java

A simple class with a compile() method.

```
public class Laptop {

    public Laptop() {

        System.out.println("Laptop object created");

    }

}
```

Spring.xml

```
<bean id="alien1" class="com.telusko.Alien">

    <property name="age" value="21"></property>

    <property name="lap" ref="lap1"></property>
```

```
</bean>

<bean id="lap1" class="com.telusko.Laptop">

</bean>
```

Here,

- The Alien bean (alien1) has a Laptop bean (lap1) injected into its lap property using the ref attribute.
- The name="lap" corresponds to the lap property in the Alien class, and ref="lap1" points to the bean with ID lap1.

App.java

```
public class App {

    public static void main( String[] args ) {

        ApplicationContext context = new
        ClassPathXmlApplicationContext("spring.xml");

        Alien obj1 = (Alien) context.getBean("alien1");

        System.out.println(obj1.getAge());

        obj1.code();

    }

}
```

Output:

```
Object Created  
Laptop object created  
Setter called  
21  
Coding  
Compiling
```

- If there are multiple beans of the same class, Spring differentiates them using the id attribute.
- Only the bean with the id specified in the ref attribute will be injected.

Code Link:

<https://github.com/navinreddy20/spring6-course/tree/c6690e4f2c70d8f530d70623f13d14ff0ffd7e7d/2%20Exploring%20Spring%20Framework/2.6%20Ref%20Attribute/Spring1>