

# Spring Autowiring



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# Autowiring

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## ★ Spring Bean Autowiring.

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- ★ Wiring a bean means configuring a bean along with its dependencies into an xml file like previous concepts, by default autowiring is disabled in spring framework. It means the programmer has to explicitly wire the bean properties into an xml file.
- ★ If autowiring is enabled then spring container will take care about injecting the dependencies, programmer no need to configure into an xml file explicitly. Autowiring is only supported if the dependancies are in the form of objects only, to enable autowiring, we should add autowire attribute to the bean element [or] bean tag, autowire has the following values

1] byName 2] byType 3] Autotectect 4] constructor 5] default

## ★ Autowiring modes.

### Autowiring Modes

There are many autowiring modes:

No.	Mode	Description
1)	no	It is the default autowiring mode. It means no autowiring by default.
2)	byName	The byName mode injects the object dependency according to name of the bean. In such case, property name and bean name must be same. It internally calls setter method.
3)	byType	The byType mode injects the object dependency according to type. So property name and bean name can be different. It internally calls setter method.
4)	constructor	The constructor mode injects the dependency by calling the constructor of the class. It calls the constructor having large number of parameters.
5)	autodetect	It is deprecated since Spring 3.

## ★ Example.

In case of byName autowiring mode, bean id and reference name must be same.

It internally uses setter injection.

```
<bean id="b" class="org.sssit.B"></bean>  
<bean id="a" class="org.sssit.A" autowire="byName"></bean>
```

In case of byType autowiring mode, bean id and reference name may be different. But there must be only one bean of a type.

It internally uses setter injection.

```
<bean id="b1" class="org.sssit.B"></bean>  
<bean id="a" class="org.sssit.A" autowire="byType"></bean>
```

### 3) constructor autowiring mode

In case of constructor autowiring mode, spring container injects the dependency by highest parameterized constructor.

If you have 3 constructors in a class, zero-arg, one-arg and two-arg then injection will be performed by calling the two-arg constructor.

```
<bean id="b" class="org.sssit.B"> </bean>  
<bean id="a" class="org.sssit.A" autowire="constructor"> </bean>
```

### 4) no autowiring mode

In case of no autowiring mode, spring container doesn't inject the dependency by autowiring.

```
<bean id="b" class="org.sssit.B"> </bean>  
<bean id="a" class="org.sssit.A" autowire="no"> </bean>
```

Thank you

