Autowiring

Autowiring in the Spring framework can inject dependencies automatically. The Spring container detects those dependencies specified in the configuration file and the relationship between the beans. This is referred to as Autowiring in Spring. Autowiring cannot be used to inject primitive and string values. It works with references only.

We have two ways to use autowiring

1. XML

   ## Modes of Autowiring

   - No - This mode tells the framework that autowiring is not supposed to be done. It is the default mode used by Spring.

   - byname - It uses the name of the bean for injecting dependencies. However, it requires that the name of the property and bean must be the same. It invokes the setter method internally for autowiring.

   - byType - It injects the dependency according to the type of the bean. It looks up in the configuration file for the class type of the property. If it finds a bean that matches, it injects the property. If not, the program throws an error. The names of the property and bean can be different in this case. It invokes the setter method internally for autowiring.

➢ Constructor - It injects the required dependencies by invoking the constructor. It works similar to the "byType" mode but it looks for the class type of the constructor arguments. If none or more than one bean are detected, then it throws an error, otherwise, it autowires the "byType" on all constructor arguments.

➢ Autodetect - The autodetect mode uses two other modes for autowiring – constructor and byType. It first tries to autowire via the constructor mode and if it fails, it uses the byType mode for autowiring. It works in Spring 2.0 and 2.5 but is deprecated from Spring 3.0 onwards.

2. Annotation - To enable Autowiring in the Spring application we should use @Autowired annotation

Advantages

➢ Autowiring requires less code because we don't need to write the code to inject the dependency explicitly.
➢ It reduces develop time by removing the necessity of specifying properties and constructor arguments.

Disadvantages of Autowiring

➢ No control of programmer.
➢ Explicit dependencies in constructor-argument and property settings always override autowiring. You cannot autowire simple properties such as primitives, Strings, and Classes.