SPRING CORE

Spring is a lightweight framework. It can be thought of as a framework of frameworks because it provides support to various frameworks such as hibernate. The Spring framework comprises several modules such as IOC, AOP, DAO, Context, ORM, WEB MVC etc.

It was **developed by Rod Johnson in 2003**.

IoC Container

The IoC container is responsible to instantiate, configure and assemble the objects. The IoC container gets informations from the XML file and works accordingly. The main tasks performed by IoC container are:

* to instantiate the application class
* to configure the object
* to assemble the dependencies between the objects

There are two types of IoC containers. They are:

1. **BeanFactory**
2. **ApplicationContext**

**BeanFactory** and **ApplicationContext**  interfaces acts as the IoC container. The ApplicationContext interface is built on top of the BeanFactory interface. So it is better to use ApplicationContext than BeanFactory.

ApplicationContext context =

**new** ClassPathXmlApplicationContext("applicationContext.xml");

**Dependency Injection in Spring**

Dependency Injection (DI) is a design pattern that removes the dependency from the programming code so that it can be easy to manage and test the application. Dependency Injection makes our programming code loosely coupled.

Spring framework provides two ways to inject dependency

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By Constructor and By Setter method

We can inject the dependency by constructor. The **<constructor-arg>** subelement of **<bean>** is used for constructor injection. Here can inject

1. primitive and String-based values
2. Dependent object (contained object)
3. Collection values etc.

We can inject the dependency by setter method also. The **<property>** subelement of **<bean>** is used for setter injection. Here we are going to inject

1. primitive and String-based values
2. Dependent object (contained object)
3. Collection values etc.