1)What is spring framework

**Spring Framework** is an open-source framework for building web applications with Java as a programming language. It is powerful and lightweight yet easy to use, and it provides support for developing Java applications easily. Spring is a lightweight framework which can be thought of as a framework of frameworks because it also offers support for various frameworks such as hibernate, struts, tapestry, and JSF.

It has features like

* Loose coupling
* Lightweight
* Fast development
* Powerful abstraction
* Offers an array of resources
* Declarative support
* Offers comprehensive tools

2)Explain Dependency Injection.

The Dependency Injection is a design pattern that removes the dependency of the programs. In such case we provide the information from the external source such as XML file. It makes our code loosely coupled and easier for testing. In such case, instance of Address class is provided by external souce such as XML file either by constructor or setter method.

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Two ways to perform Dependency Injection in Spring framework

Spring framework provides two ways to inject dependency

By Constructor and by Setter method

3)What is IOC Container

The **Spring IoC container** is at the core of the **Spring** Framework. The **container** will create the objects, wire them together, configure them, and manage their complete life cycle from creation till destruction. The **Spring container** uses dependency injection (DI) to manage the components that make up an application.

There are two types of IoC containers. They are:

BeanFactory and ApplicationContext

4)What is BeanFactory?

This is the simplest container providing the basic support for DI and defined by the org.springframework.beans.factory.BeanFactory interface. The BeanFactory and related interfaces, such as BeanFactoryAware, InitializingBean, DisposableBean, are still present in Spring for the purpose of backward compatibility with a large number of third-party frameworks that integrate with Spring.

There are a number of implementations of the BeanFactory interface that are come straight out-of-the-box with Spring. The most commonly used BeanFactory implementation is the XmlBeanFactory class. This container reads the configuration metadata from an XML file and uses it to create a fully configured system or application.The BeanFactory is usually preferred where the resources are limited like mobile devices or applet-based applications. Thus, use an ApplicationContext unless you have a good reason for not doing so.

5)Explain Autowiring?

Autowiring feature of spring framework enables you to inject the object dependency implicitly. It internally uses setter or constructor injection.Autowiring can't be used to inject primitive and string values. It works with reference only.

Advantage of Autowiring :

It requires the less code because we don't need to write the code to inject the dependency explicitly.Disadvantage of Autowiring :No control of programmer.It can't be used for primitive and string values.

6) Different types of autowiring?

The XML-configuration-based autowiring functionality has five modes – no, byName, byType, constructor, and autodetect. The default mode is no.