

-----day 2.28

Spring Based Questions:

1. What is Spring Framework?

Spring is a layered Java SE/EE application full-stack lightweight open-source framework, with IoC (Inverse Of Control) and AOP (Aspect Oriented Programming) as the core

2. What are the features of Spring Framework?

IoC Container, AOP, Core container, Data Access Framework, Spring MVC Framework, Transaction Management, Spring Web Service, JDBC

3. What is a Spring configuration file?

XML configuration file format **provides an open-source framework for flexibly wiring together the different parts of an application, each of which is represented by a bean.**

4. What do you mean by IoC (Inversion of Control) Container?

Inversion of Control (IoC) is **a design principle that allows classes to be loosely coupled and, therefore, easier to test and maintain.** IoC refers to transferring the control of objects and their dependencies from the main program to a container or framework.

5. What do you understand by Dependency Injection?

DI is the method of providing the dependencies. **supplying the DEPENDENCY through the class's constructor when creating the instance of that class.**

6. Explain the difference between constructor and setter injection?

Setter injection in Spring uses setter methods like setDependency() to inject dependency on any bean managed by Spring's IOC container.

constructor injection uses the constructor to inject dependency on any Spring-managed bean.

7. What are Spring Beans?

any object in the Spring framework that we initialize through Spring IoC container **XML <bean/>**

8. How is the configuration meta data provided to the spring container?

**XML-Based configuration:** In Spring Framework, the dependencies and the services needed by beans are specified in configuration files which are in XML format.

9. What are the bean scopes available in Spring?

1) **singleton:** Returns a single bean instance per Spring IoC container.

2) **prototype:** Returns a new bean instance each time when requested.

3) **request:** Returns a single instance for every HTTP request call.

4) **session:** Returns a single instance for every HTTP session.

5) **global session:** global session scope is equal as session scope on portlet-based web applications.

10. Explain Bean life cycle in Spring Bean Factory Container.

Container start → Bean init → dependency Injected → custom init → custom utility → custom destroy

11. What do you understand by Bean Wiring.

Bean wiring is **the process of combining beans with Spring container.** The required beans are to be informed to the container and how the container should use dependency injection to tie them together, at the time of wiring the beans.

12. What is autowiring and name the different modes of it?

Autowiring feature of spring framework enables you to inject the object dependency implicitly. It internally uses setter or constructor injection.

No --- It is the default autowiring mode. It means no autowiring by default.

ByName--- The byName mode injects the object dependency according to name of the bean

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.

Constructor-- The constructor mode injects the dependency by calling the constructor of the class. It calls the constructor having large number of parameters.

13. What are the limitations of autowiring?

**We cannot autowire simple properties such as primitives, Strings, and Classes.** Overriding possibilities: We can define dependencies using property or constructor-args tag which will always override autowiring