

1. What is the Spring Framework?

Application development framework for enterprise Java(J2EE), but there are extensions for building web applications on top of the Java EE platform.

2. Advantages of Spring

- Lightweight
- Flexible - use DI or configured by XML or annotation-based style
- Loosely coupled – Dependency Injection
- Easy to Test (provides testing modules)

3. Spring vs Spring Boot

Spring :

- XML based configuration
- Application creation/execution takes more time
- More boiler plate code

SpringBoot:

- Annotation based
- Application creation/execution is quicker
- Reduced amount of boiler plate code

4. What is Autowiring?

Autowiring is process of injecting object dependencies. Object can be injected in setter or constructor of a class.

5. What is a IoC container?

A Framework used to create and inject dependencies automatically.

Types of IOC containers:

- BeanFactory – Simple container used for DI
`XmlBeanFactory factory = new XmlBeanFactory(new ClassPathResource("Beans.xml"));`
- ApplicationContext – Advanced container used for DI
`ApplicationContext context = new FileSystemXmlApplicationContext("beans.xml");`

Dependency Injection - Software design pattern that implements IOC pattern for resolving dependencies

6. Types of Autowiring Modes:

- byname – autowire by property name
- byType – autowire by datatype
- Constructor – autowire by constructor

7. What is Bean scopes?

Determines the type of bean instance that should be returned. (singleton, prototype, request, session, Global session)

8. What is a Bean ?

Object managed by Spring IoC container.

9. Annotations:

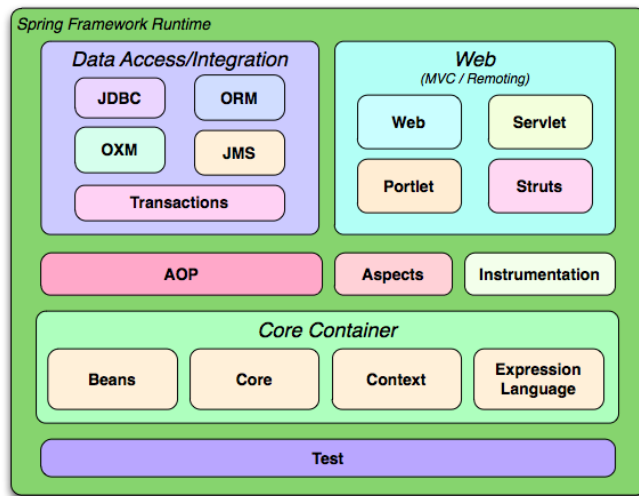
@Component - marks a class that will be registered in context as a bean

@Autowired – Spring auto-wire other beans in your class

@Controller – class is controller in Spring MVC

@RestController - mark a class as controller, when developing Restful webservice

@RequestMapping – map urls to a class or a handler method when developing Rest webservice applications



Spring Core

- Provide fundamental parts of Framework
- IoC and DI features

Data Access

- consist JDBC, ORM, OXM, JMS and Transaction Modules

Web

- Module related to web application development
- Web services , Web Servlet Module

AOP/Aspect/Instrumentation

- Module dedicated to Aspect Oriented Programming

Test

- Supports unit/integration testing using JUnit and TestNG
- Mock Objects (test code in isolation)

10. What is Spring MVC?

Component of Spring that enables implementation of MVC design pattern

How it work ?

HTTP Request-> DispatcherServlet-> Handler Mapping->DS->Controller->DS->ViewResolver->DS->View->DS->HTTP Response