Spring Framework: Spring is an open source layer architecture or onion architecture framework.

Spring framework provided n number of layer or module to improve all types of application.

Spring modules

1. Spring core
2. Spring context
3. Spring mvc : spring MVC model centric framework
4. Spring rest api
5. Spring dao
6. Spring orm
7. Spring aop
8. Spring micro service
9. Spring cloud
10. Spring security
11. Spring testing
12. Spring boot
13. Spring integration

Spring Core and Spring Context

IOC: Inversion of Control

IOC is design pattern or programming design pattern. According to IOC in place of creating or maintaining any resources like object creation, database connection, file handling, security etc. explicitly allow to create and maintain by container. If container it maintain properly. Whenever we need any resource pull from container use it and leave it. The life of the resource taken care by container.

IOC is a concept.

Container : run time environment for type of application (JRE)

If we want to run Servlet and JSP we need web container. Web container is an engine part of Web Server ie Tomcat.

If we want to run EJB program we need EJB container. EJB container is a part of Application server.

Spring Framework provided light weighted container part of xml file and jar file.

DI : Dependency Injection

DI is an implementation of IOC. Using the DI container inject resource to programmer or developer

Types of DI

Constructor base DI

Setter base DI

To achieve constructor or setter base DI we need to do configuration

1. Using XML
2. Using annotation