**Spring Framework and Spring boot**

Spring is an open source framework which provided lot of modules or layer to develop any type of application.

Spring core

Spring context

Spring MVC

Spring Dao

Spring ORM

Spring boot

Spring micro service

Spring cloud

Spring security

Spring MVC : Model View Controller

Spring MVC without taking help of Spring boot.

Spring boot = all spring modules + few annotation – no xml file + in build web server ie tomcat or jetty etc.

Spring MVC without taking the help of spring boot

Index.html or index.jsp ----🡪web.xml (inside this file we need to configure front controller --🡪 it will pass the request to spring configuration file (xml or Java classes). --🡪 pass controller class @Controller or @RestController

Write more than one method with annotation as @RequestMapping or @GetMapping or @PostMapping etc. and base upon path we can redirect to specific view.

View and Controller

IOC and DI :

Inversion of Control : it a design pattern or programming pattern. Allow to create by container. If container will create it create properly as well as maintain properly.

We have to pull, use it and leave it. Any resources like database object, file resource, normal class object. IOC is a concept.

Dependency Injection : DI is an implementation of IOC.

Type of DI

1. Constructor base DI
2. Setter base DI

@Component

class Employee { POJO

private int id;

private String name;

private float salary;

@Autowired

private Address add;

}

@Component

class Address {

private String city;

private String state;

}

We need to configure using xml file or using annotation.

@Controller : if we use then view must jsp or html

@RestController : if my controller is rest controller then my view can be any technologies like Angular, React, Python, Asp.net, Php etc.

In Spring Boot we can connect database using

1. Using JDBC
2. Using ORM (Hibernate or JPA)
3. Using Spring Data