Day 4 – 20 Mar 2024

Spring Framework or Adv Spring Framework

40 hours training

Spring boot, Spring reactive modules, spring web client, spring with hibernate.

Spring transaction management, spring security etc.

Spring micro service

jdbc use SQL language. It is database dependent.

select \* from product; product is table name and it is not a case

sensitive. \* means retrieve all columns. Here we get the output as string format.

select pid from product; only pid retrieve

select pname from product only pname retrieve

select pname,price from product pname and price

select \* from product where price > 40000

JPA use JPQL language. It is database independent.

Select p from Product p; here Product is entity class name and p is object. p help us to retrieve all variables part of Product entity class. here we get all object.

select p.pid from Product p; p object of Product entity class and pid is variable name.

select p.pname from Product p;

select p.pid, p.pname from Product p;

select p from Product p where p.price > 40000

Spring framework provided lot of modules. Each modules is use to improve the functionality of specific layer or code.

Core

Context

Spring mvc

Spring jdbc

Spring orm

Spring boot : Spring boot is a type of spring framework module which is not use to improve any layer or functionality.

Limitation of Spring framework

1. Huge framework.
2. We need to add dependencies manually.
3. We need to keep the track about version of dependencies.
4. Spring mvc with 3.1.6 version which support with Hibernate 4.2.12 version
5. We need add configuration files manually.
6. We need add web server or application server.

Spring boot : spring boot is like a bootstrap for all spring modules.

Spring framework is like CSS

Spring boot is like bootstrap

Spring boot = all spring modules – no xml file + few annotation + in built web server it tomcat or jetty. Etc

Ant, maven and Gradle

If we want to develop spring boot application we need to mandatory build tool.

1. Spring boot with Maven : pom.xml file. Xml base. Is part of maven build tool.
2. Spring boot with Gradle : build file. Xml less. Json format.

Spring boot itself is a standalone or core java project( which contains main method in development mode). But it help to create any type of projects.

Spring boot makes it easy to create stand alone or desktop application , production grade . using main method we can run the application.

Spring boot components.

1. Spring boot starter : the main responsibility of spring boot starter is use to combine more than one common or related jar file or dependencies using one dependencies tags.
2. Spring boot auto configuration : before spring boot base upon type of application we are/were developing we need to configuration those all details using xml with annotation.

The main responsibility of spring boot auto configuration to reduce spring configuration using xml. No XML file. Base upon type of starter we added in our project spring boot automatically provide or inject those resource. We need to pull it and use it.

In spring boot we need to configure database details, port number details, security information in application.properites or application.yml

Spring boot provide new annotation ie

@SpringBootApplication = @Configuration + @ComponentScan + @EnableAutoConfiguration

This annotation we need to write on main class.

1. Spring boot CLI (Command Line interface). We can run spring boot application using IDE or using command line. Test or run the application using command prompt.
2. Spring boot actuator : it is a type of starter which help to provide health of the application. Which is responsible to provide Http request and responsible object. etc. help run the application default port number 8080.

View :

JSP :

Thymeleaf :

Spring boot view as Thymeleaf.

Thymeleaf : It is a Java – Based Library use to create web application or web page It provide good support of html/html5/xhtml. Thymeleaft support dynamic html template features.