Phase 3 :

8 classes

Spring framework and Spring boot

Creating Rest Full Web Service using Spring framework as well as Spring boot.

Junit testing using 5.x

MVC :

View -🡪 JSP or HTML

Controller 🡪 Servlet

Model 🡪 Java Bean link with table

Service class pure business logic

Dao class : using jdbc or hibernate.

Resource class : database connectivity

JSP is a type of servlet when we run jsp program internally it will convert to servlet.

JSP and Servlet object creation taken care by web container. It is a part of server ie tomcat server.

Issue with Model

EJB : Enterprise Java Bean

View -🡪 html or jsp

Controller -🡪 servlet

Model -🡪 EJB

JEE : Servlet, JSP and EJB

To run EJB program we require EJB container. Which is part of Application server. Jboss, Web Logic, Glashfish server.

Application server is heavy.

EJB is very complex to the develop the application.

Spring framework is replacement of EJB Application.

Spring Framework Vs EJB

Java technologies

.net framework

Framework : framework contains lot of pre-defined classes and interfaces which internally connected to each other to perform specific task. Framework internally follow standard. Framework also known as implementation of design pattern. Design pattern means best practice or solution of repeating problem.

Framework is not a final product it is a protocol or template. So if we develop any application using framework 70 to 80% task done by framework. We have to write 20 to 30% code to make final product.

Collection framework is like a data structure.

Html template

Struts : Struts is type of open source framework provided by apache (tomcat) which is also known as web framework . which internally follow MVC architecture. Provided lot of API for view layer, model layer and controller layer.

Struts is known as Controller centric framework.

JSF : Java Server Faces. JSF is a open source framework provided oracle. Which internally follow MVC architecture. JSF is replacement of JSP.

JSF is known as View centric framework.

Hibernate : Hibernate framework is use to improve DAO layer. Hibernate is a replacement of JDBC.

Spring Framework: spring framework is open source light weighted framework which is also known as layer architecture framework or onion architecture framework. Which help to improve all layer in the application.

Spring provide lot of pre-defined module which help to improve layer like

1. Spring core
2. Spring context
3. Spring MVC : spring MVC is known as Model Centric framework.
4. Spring DAO : Data Access object
5. Spring ORM
6. Spring REST
7. Spring AOP
8. Spring boot
9. Spring security
10. Spring cloud
11. Spring micro service
12. Spring integration

Etc

Spring core and Spring context

IOC : Inversion of control : IOC is a concept. It is also known as programming design pattern. In place of creating or maintaining any resource like object explicitly allow to create and maintain by container. Pull from container whenever require and use it and leave it.

Web Container will create the object of those classes if the class is type of servlet or jsp it will not create the object for normal classes like java bean, server or dao.

EJB container. It will create the object of classes only if those class are type ejb.

Spring framework is light weighted framework not a part of any server and it will create the object normal class that class is known as in spring framework as POJO (plain old java object).

DI : Dependency Injection : DI is a implementation of IOC.

We can do totally 3 types of DI

1. Constructor Base DI
2. Setter Base DI
3. Interface DI

Spring framework support 2 types of DI ie constructor base and setter base DI.

We can do DI in spring framework using two ways

1. Using XML file configuration
2. Using Annotation