Day7 Spring Framework

Agenda – What is Framework

Why Framework

Spring

IoC

DI

Creating a Spring Boot Application using STS.

What is Framework –

Library & Framework – Library is mainly used for a single task, where-as framework helps to build enterprise application.

Framework – It simplify the task. I can focus on the business logic without worrying about the tools and environment, libraries needed for it.

Spring Framework – It’s a popular Java based Framework, used to create enterprise application using Java/JVM based languages.. (Groovy, Kotlin)

Loosely coupled Enterprise application.

Types of Application

1. Stand-alone Application (Download & install) [jar]
2. Web Application (Runs in browser – No Installation is needed) [war]
3. Enterprise Application [ear]

Tightly vs loosely coupled – Monolith vs Micro-service.

<https://Spring.io>

STS – <https://spring.io/tools>

Client Server concept. & Web Service.

Client (Customer) -🡪 server (Providers) Arch. [ Request & Response]

Client send request object to server. (with expected resource)

Server Check the request & process it. Provide response back to client.

Web Application [ Client & Server Arch] (Browser , Web Server )

DB Application [ Client & Server Arch] ( CLI/GUI Client/ DB Server) MySQL Workbench

Protocol – Set of Rules (http, ftp, pop, smtp…)

Types of Server

1. Web Server ( HTTP – Hyper Text Transfer Protocol ) 80, 8080
2. DB Server mysql-3306, oraclexe-8080, postgres-5432 mssql-1433

Web Service – It’s service offered by web (Internet) [Machine to Machine] – XML/JSON format. API.

API – End points (URI)

<https://gmail.com> – URL ( Uniform Resource Locator) – HTML data.

URI – API End points (It will provide the data in the form of XML/JSON)

Types of Web-Service

1. SOAP – Simple Object Access Protocol
2. REST – Representational State Transfer

First Spring Boot REST ful Web-Service

1. Open STS
2. Create a Spring Starter project

Spring Initializr - <https://start.spring.io>

Spring Boot Application Folder Structure

-src (user created code) [main/test]

-target (Compiled source code & jar files) – Auto Generated codes

Pom.xml (backbone of Maven Project)