Day 9 Spring Boot with Data JPA

1. We created a Spring Boot starter project with following dependencies
   1. Spring web – REST ful Web Services
   2. Spring Devtools – Auto Restart the Dev (Tomcat) Server on coding changes.
   3. Spring Data JPA – Spring implementation of JPA framework (datasource)
   4. H2 – In-memory database (Embedded DB) – spring.datasource.url = jdbc:h2:mem:sampleh2db [application.properties]
   5. MySQL Driver
   6. Postgres Driver
   7. MS-SQL Driver
   8. Lombok – Boiler plate code generation tool
2. Must Have, Should have, Good to have package structure in your enterprise application. (model/entity/data, repo(dao), service(business-logic), controller [endpoints mapping])
3. Added a Entity Bean class, One Repo interface extending JpaRepo, EntityService, EntityController
4. Service layer (findAll, findById, save, update, delete) – CRUD operations
5. Controller Layer [define end points]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl No | Operation | HTTP Method | Input | Output |
| 1 | FindAll() | GET | Nil | List<Entity> |
| 2 | findById(int id) | GET | Id (Unique identifier) | Optional<Entity> |
| 3 | Save(Object entity) | POST | Entity object (without id) | Entity with ID |
| 4 | Update(int id, Object entity) | PUT | Entity Object with ID with required changes | Updated Entity Object reflecting the changes suggested |
| 5 | deleteById(int id) | DELETE | ID or unique filed value | Nil |

H2 is not a persistence storage. – If you restart the application all data is lost.

Swagger v3 – OAS – Open API Specification (External Dependency)

Swagger End point – Is called as API Documentation. (It’s a simplified way to test all the end points of the application from a single location)

Request Object (From Client)

Response Object (From Server) – Status Code (3 digit number 1xx- Informational, 2xx-Success, 3xx- redirection, 4xx- client side error, 5xx-server side error)

Hard Delete – Removes the record from the table. (Not recommended)

Soft Delete – Boolean status (true/false – active-inactive)