Spring boot

Agenda

1. Introduction.
2. Architecture & Project Structure.
3. Flow of application.
4. Controller.
5. Repository.

Introduction

- Spring framework

Spring framework is an open-source application framework that provides a comprehensive programming and configuration model for modern Java-based enterprise applications - on any kind of deployment platform.

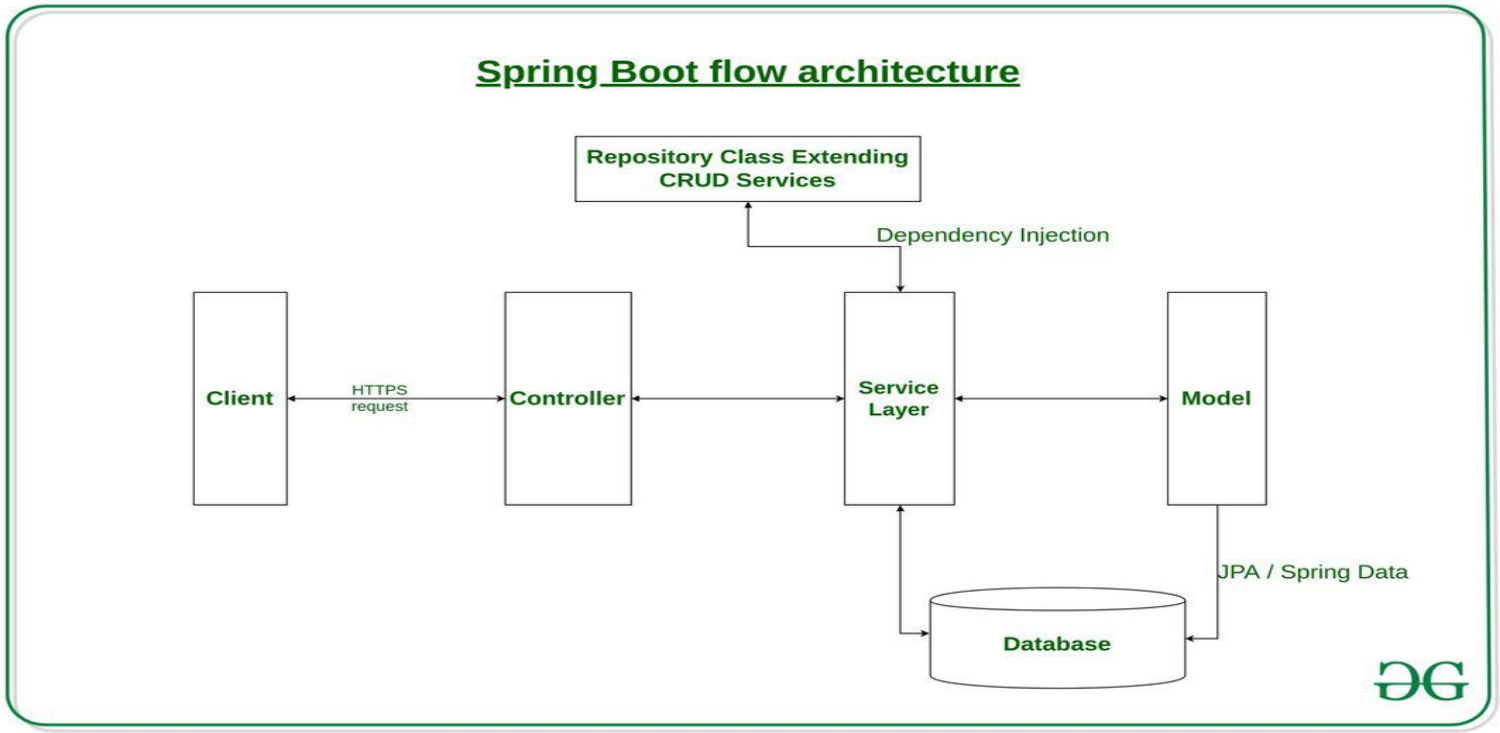
- Spring boot

Spring Boot makes it easy to create stand-alone, production-grade Spring based Applications that you can "just run".

Why using Spring boot

- Easy to build a stand-alone application.
- Less configuration.
- Running as a microservices.
- Embed Tomcat, Jetty or Undertow directly (no need to deploy WAR files)
- Provide production-ready features such as metrics, health checks, and externalized configuration

Architecture & Project Structure



Layers

- Presentation Layer
- Business Layer
- Persistence Layer
- Database Layer

Flow of application

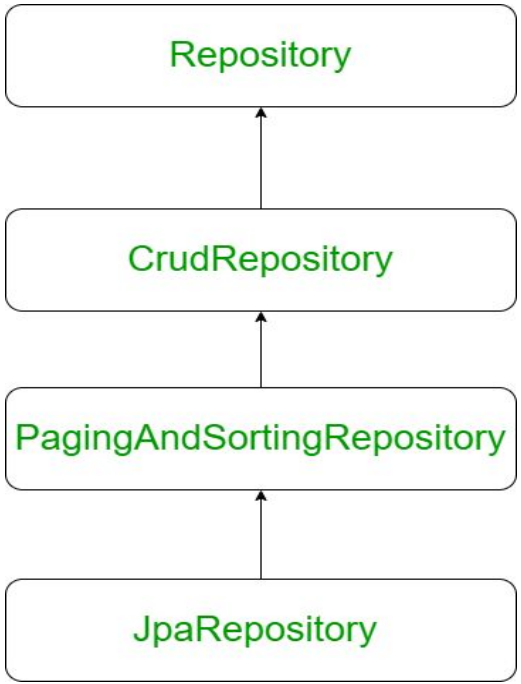
- https://start.spring.io/
- pom.xml
- ApplicationContext
- ComponentScan
- Bean: @Component, @Service, @Repository.

Controller

- @Controller
  - Return a View
  - Return JSON data with specific ResponseBody
- @RestController
  - @ResController = @Controller + @ResponseBody
  - database: product

Repository

- The goal of Spring Data repository abstraction is to significantly reduce the amount of boilerplate code required to implement data access layers for various persistence stores.
- The central interface in Spring Data repository abstraction is Repository (probably not that much of a surprise). It takes the the domain class to manage as well as the id type of the domain class as type arguments. This interface acts primarily as a marker interface to capture the types to work with and to help you to discover interfaces that extend this one.
- Repository, CrudRepository, PagingAndSortingRepository, JpaRepository.


Repository
CrudRepository
PagingAndSortingRepository
JpaRepository

BTVN

- Covert save() -> native query.
- Link db: https://drive.google.com/file/d/1lbK1GQ7c1I-IIsDeewnYZS1r89j0teQ_/view
- Tạo tất cả bảng trong schema.
- 1000 rows vào bảng products.
- 4 api crud products.
- api search product với điều kiện price > 50000, tên có chứa chữ ”áo”, có paging, sort giá giảm dần.