Overview of Spring & Spring Boot

Douglas C. Schmidt
d.schmidt@vanderbilt.edu
www.dre.vanderbilt.edu/~schmidt

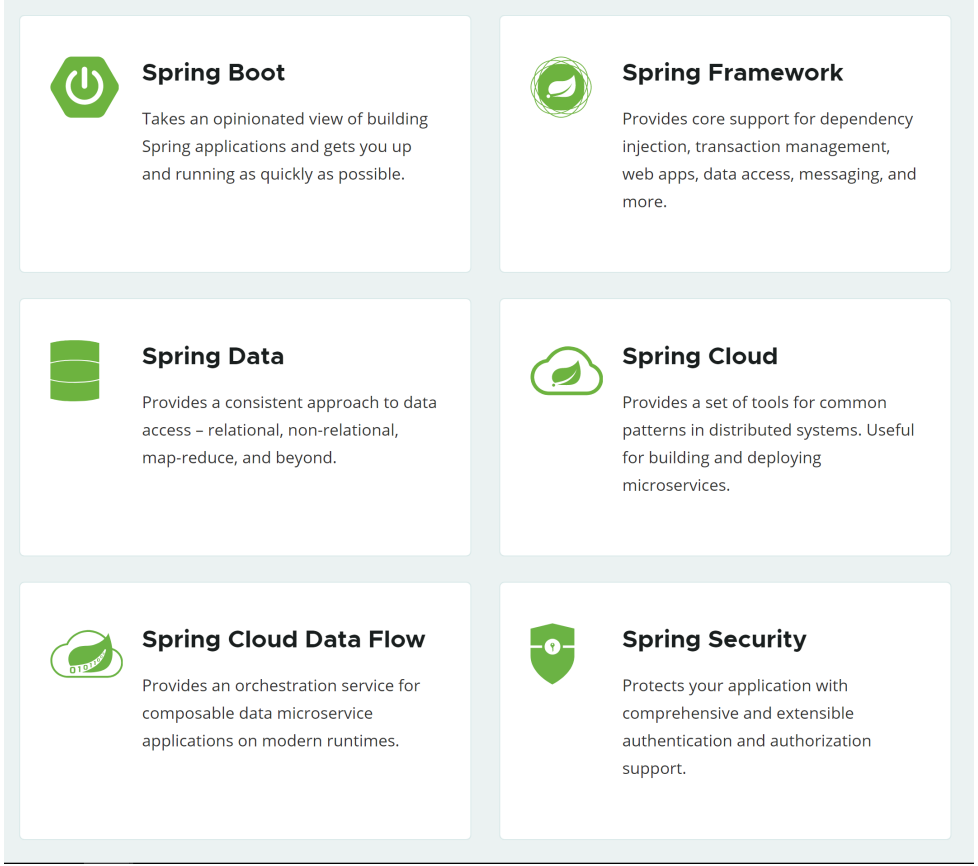
Professor of Computer Science

Institute for Software Integrated Systems

Vanderbilt University
Nashville, Tennessee, USA

Learning Objectives in this Lesson

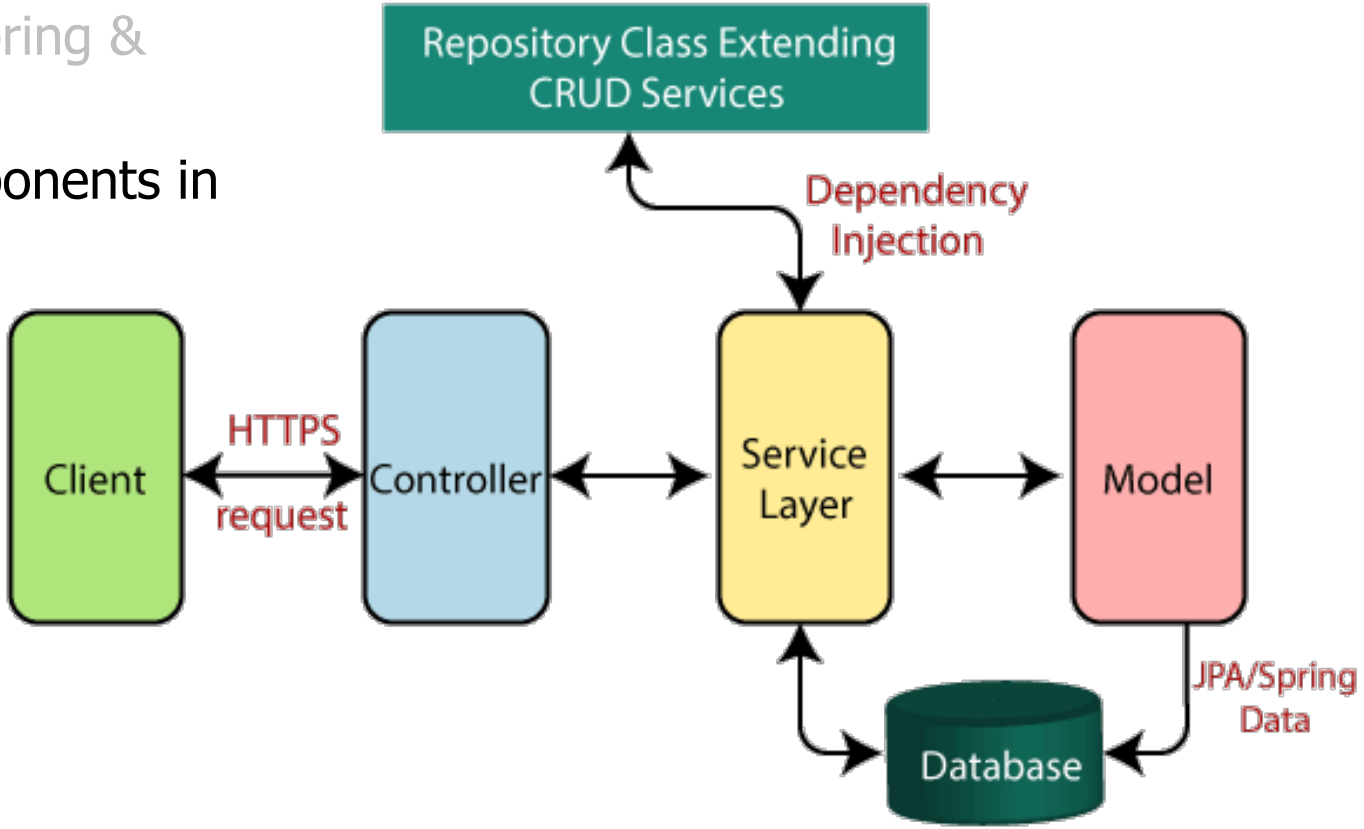
- Understand what Spring & Spring Boot are



See spring.io/projects

Learning Objectives in this Lesson

- Understand what Spring & Spring Boot are
- Recognize key components in Spring Boot



See spring.io/projects/spring-boot

Overview of Spring & Spring Boot

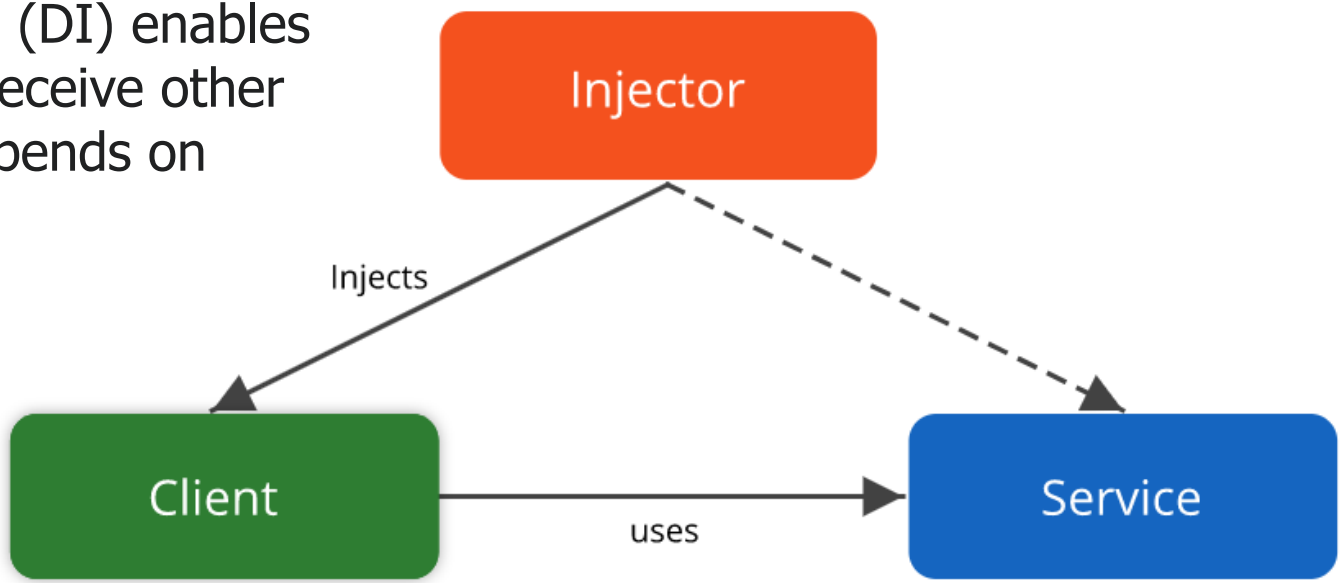
Overview of Spring & Spring Boot

- Spring is a dependency-injection framework & an inversion of control container for developing web apps on the Java platform

See spring.io

Overview of Spring & Spring Boot

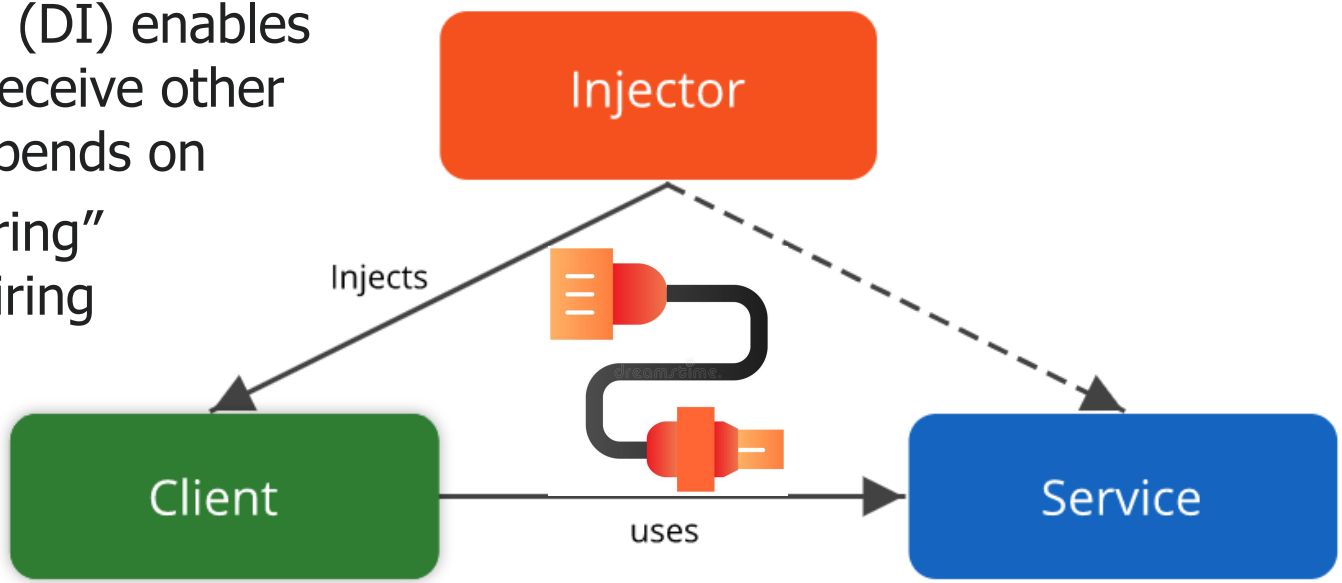
- Dependency injection (DI) enables an object/service to receive other objects/services it depends on



See en.wikipedia.org/wiki/Dependency_injection

Overview of Spring & Spring Boot

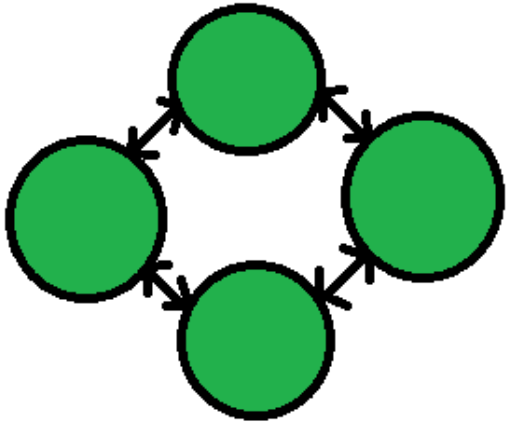
- Dependency injection (DI) enables an object/service to receive other objects/services it depends on
  - DI enables "autowiring" in lieu of manual wiring



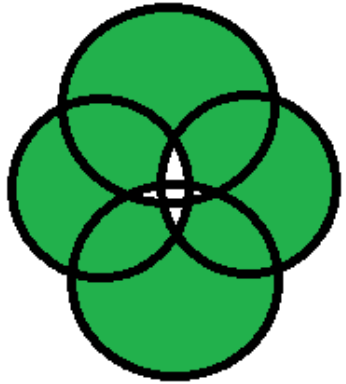
See www.baeldung.com/spring-autowire

Overview of Spring & Spring Boot

- Dependency injection (DI) enables an object/service to receive other objects/services it depends on
  - DI enables "autowiring" in lieu of manual wiring
  - Separates the concerns of constructing objects & using them, leading to loosely coupled programs



Loose coupling:
1. Less Interdependency
2. Less coordination
3. Less information flow



Tight coupling:
1. More Interdependency
2. More coordination
3. More information flow

See www.geeksforgeeks.org/coupling-in-java

Overview of Spring & Spring Boot

- With inversion of control (IoC) the framework runs the main execution thread(s)

See en.wikipedia.org/wiki/Inversion_of_control

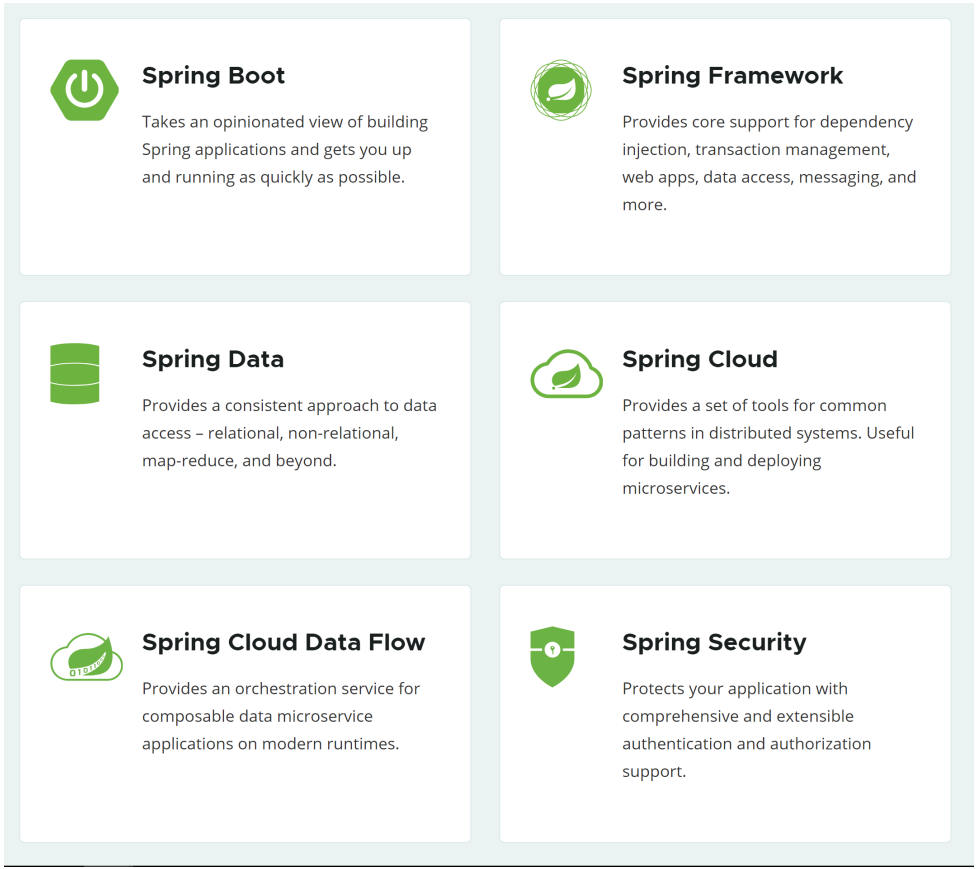
Overview of Spring & Spring Boot

- With inversion of control (IoC) the framework runs the main execution thread(s)
  - Implements the "Hollywood Principle"

See www.dre.vanderbilt.edu/~schmidt/Coursera/articles/hollywood-principle.txt

Overview of Spring & Spring Boot

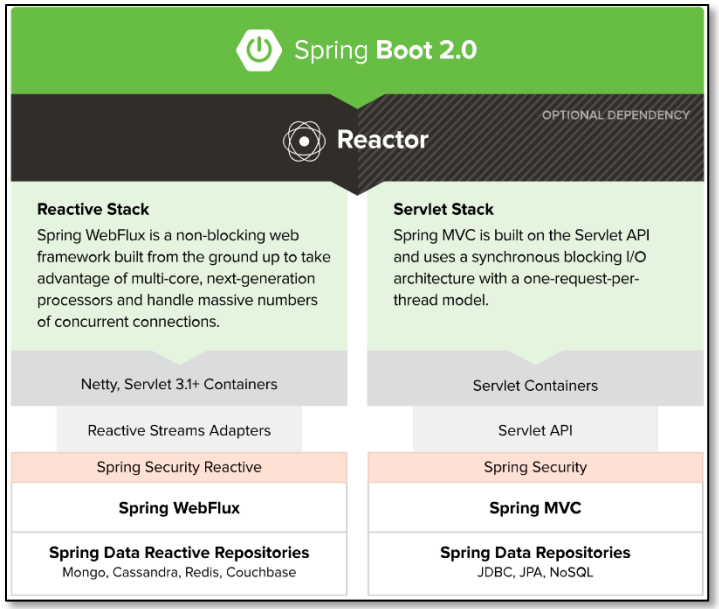
- Spring contains various projects

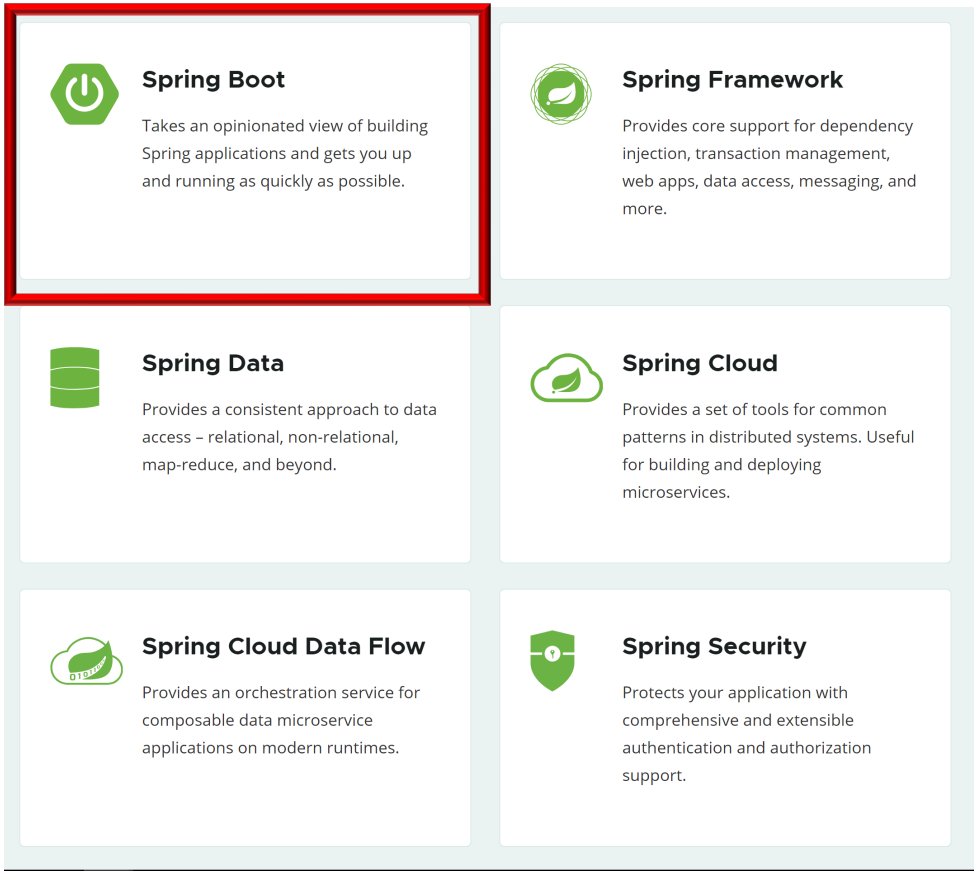


See spring.io/projects

Overview of Spring & Spring Boot

- Spring contains various projects
  - We focus on Spring Boot 2.0





See www.baeldung.com/new-spring-boot-2

Key Components in Spring Boot

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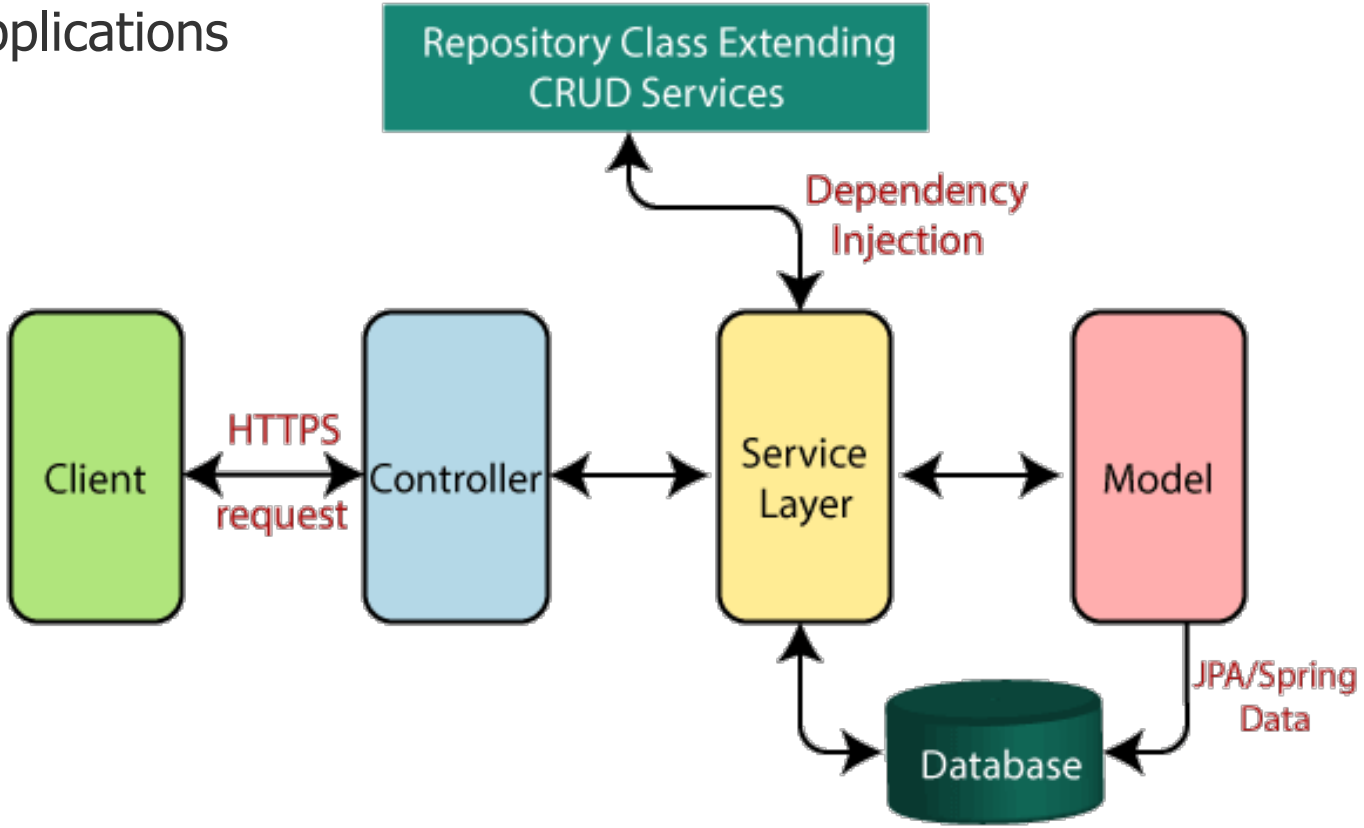
- The Spring Boot project makes it easy to create stand-alone, production-grade Web-based applications



See spring.io/projects/spring-boot

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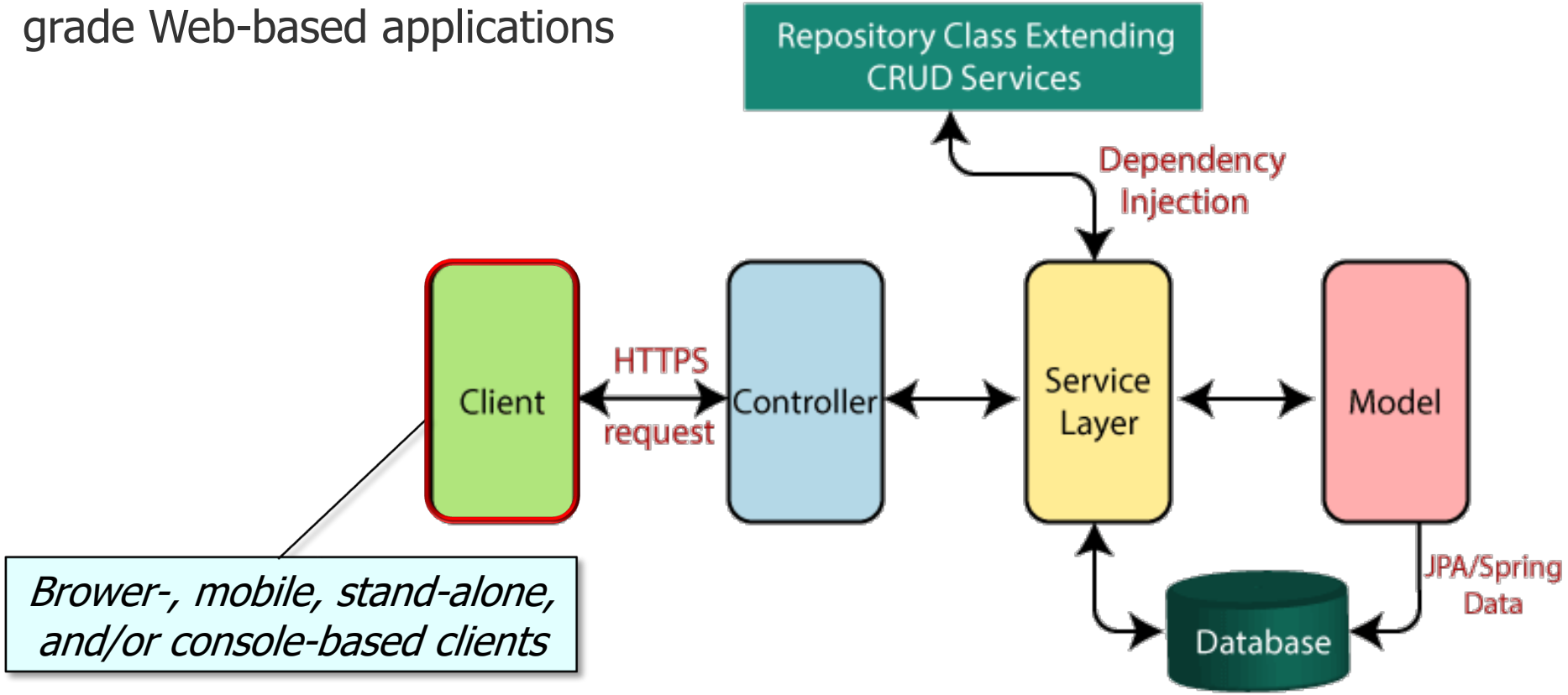

See en.wikipedia.org/wiki/Client_(computing)

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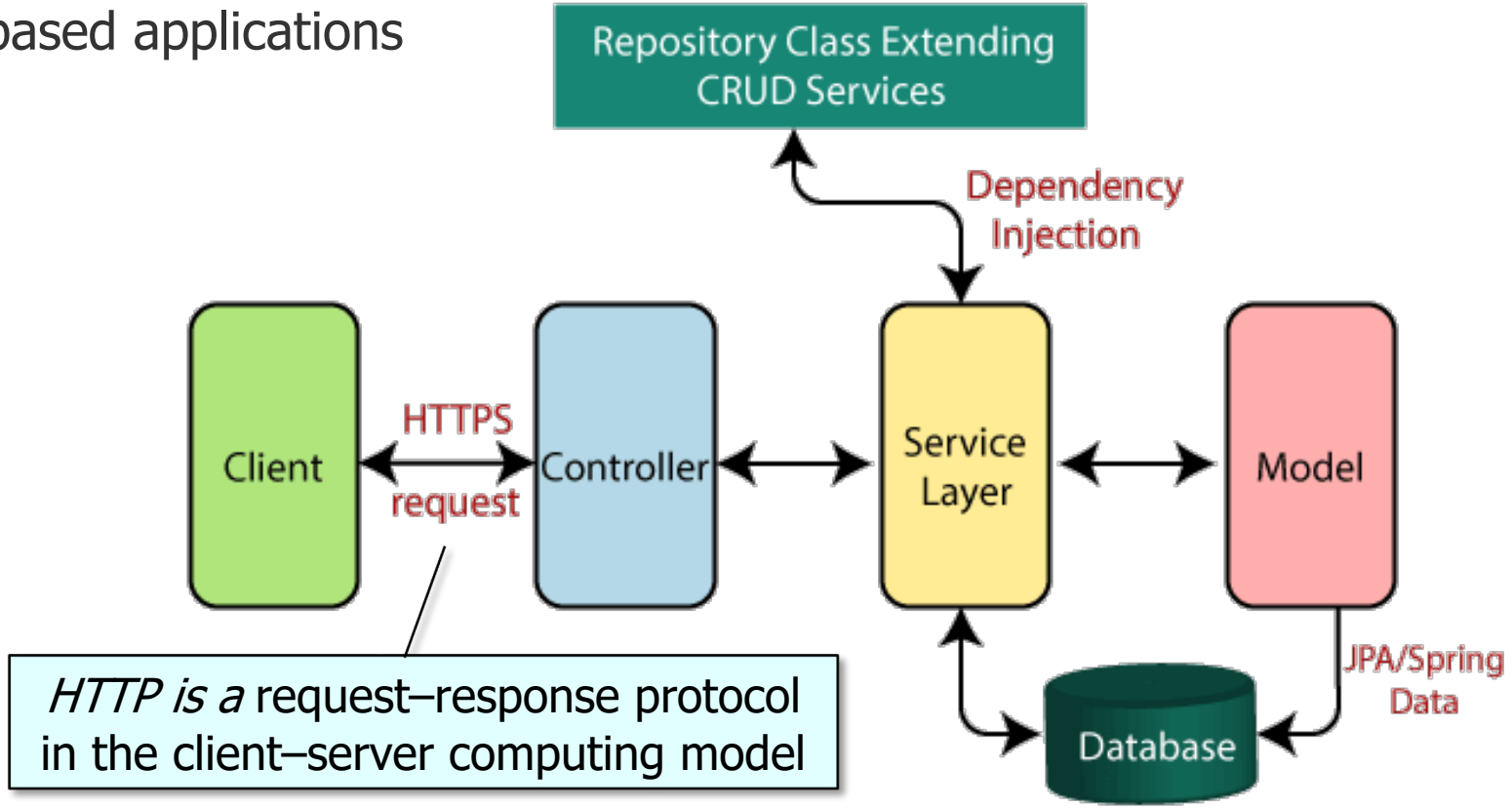

See en.wikipedia.org/wiki/Hypertext_Transfer_Protocol

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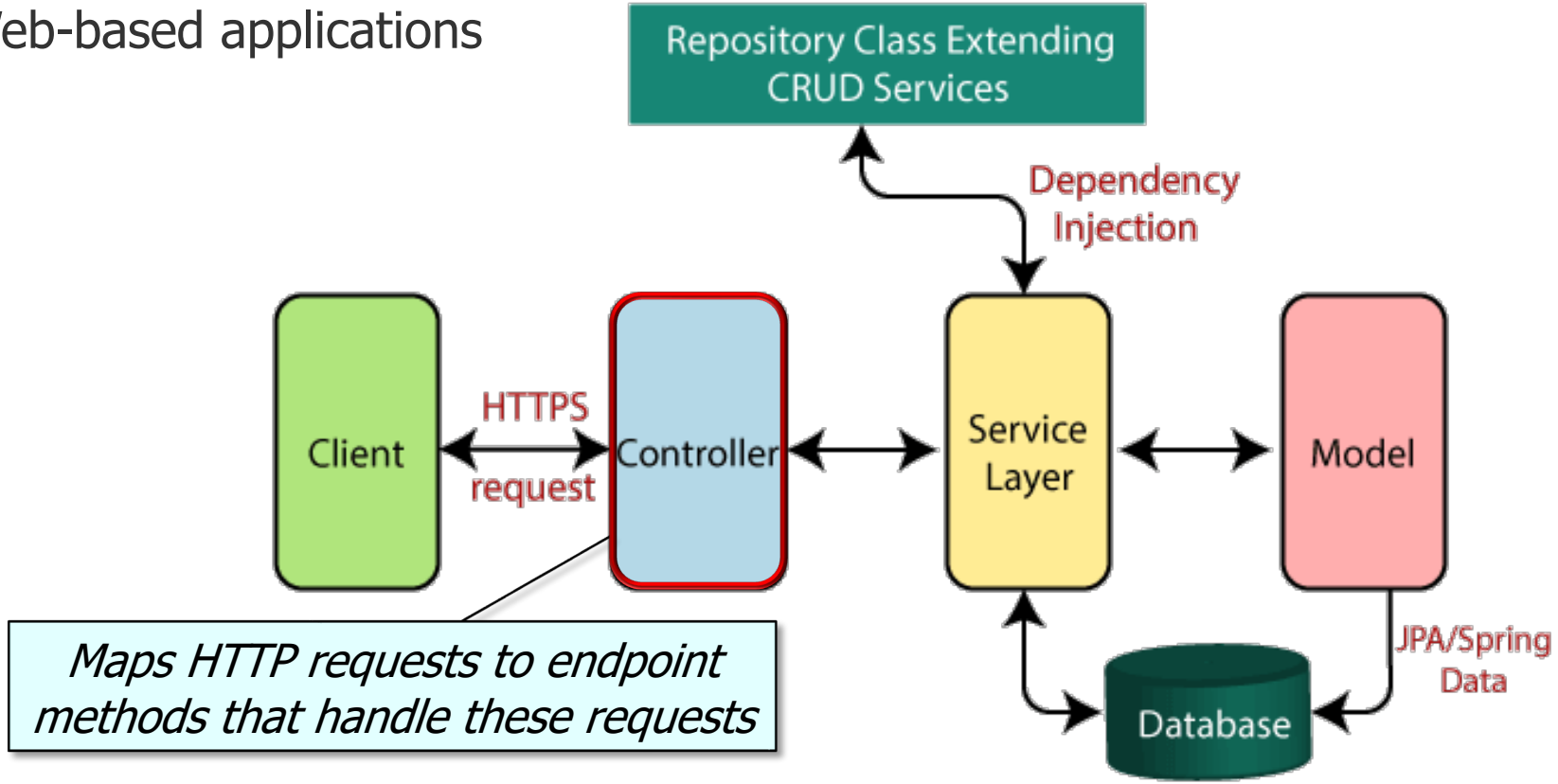

See spring.io/guides/gs/rest-service

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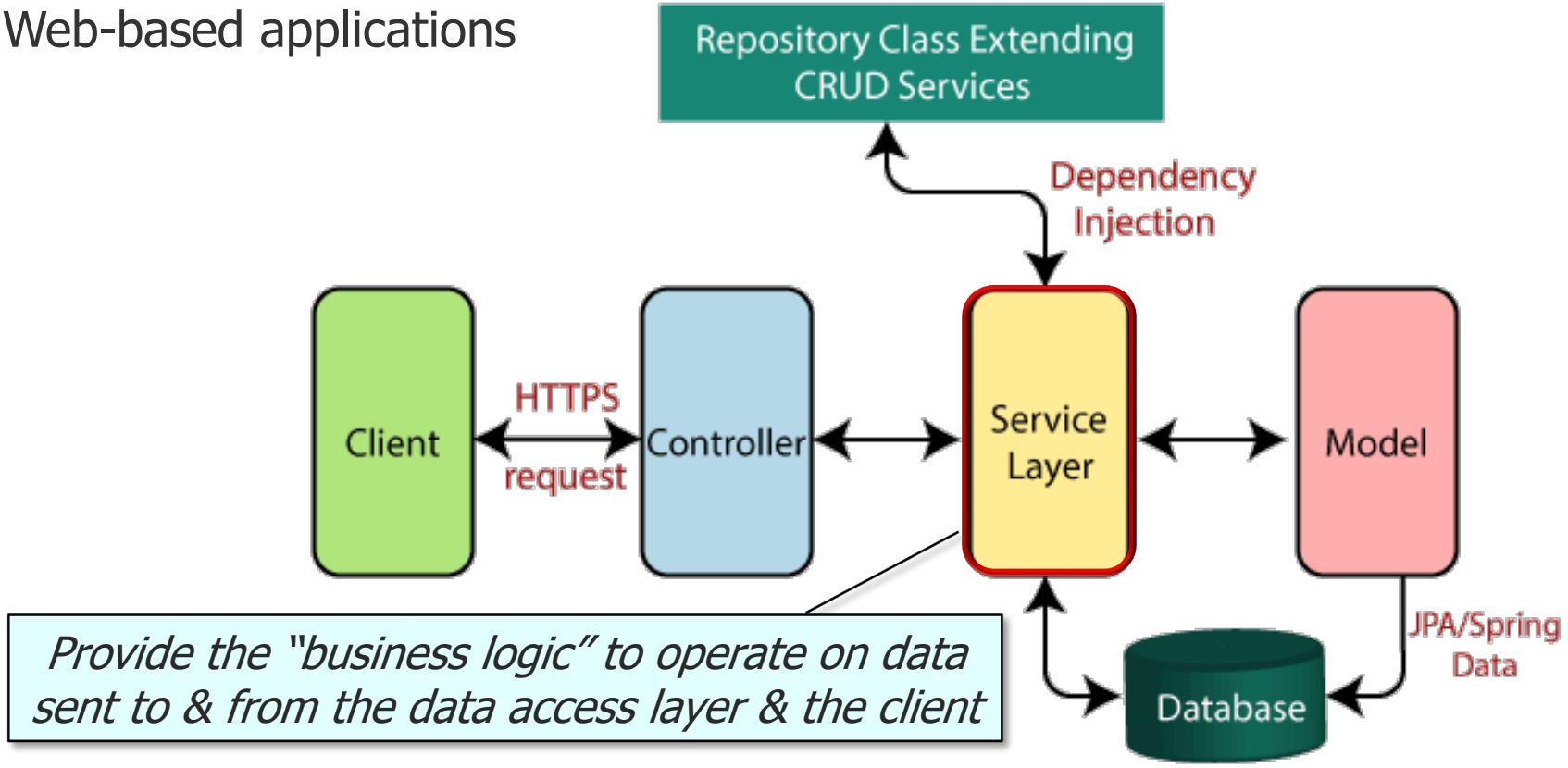

See medium.com/stackavenue/why-to-use-service-layer-in-spring-mvc-5f4fc52643c0

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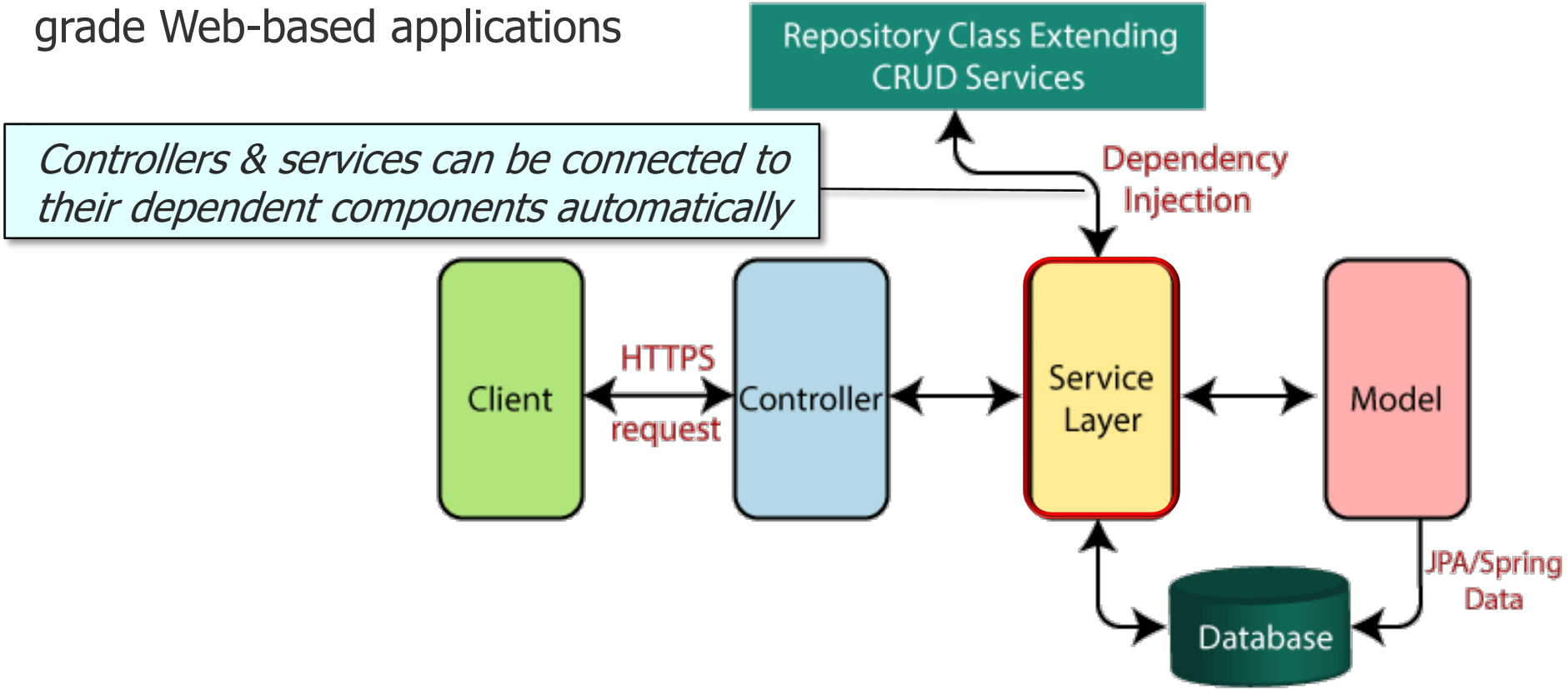

See en.wikipedia.org/wiki/Dependency_injection

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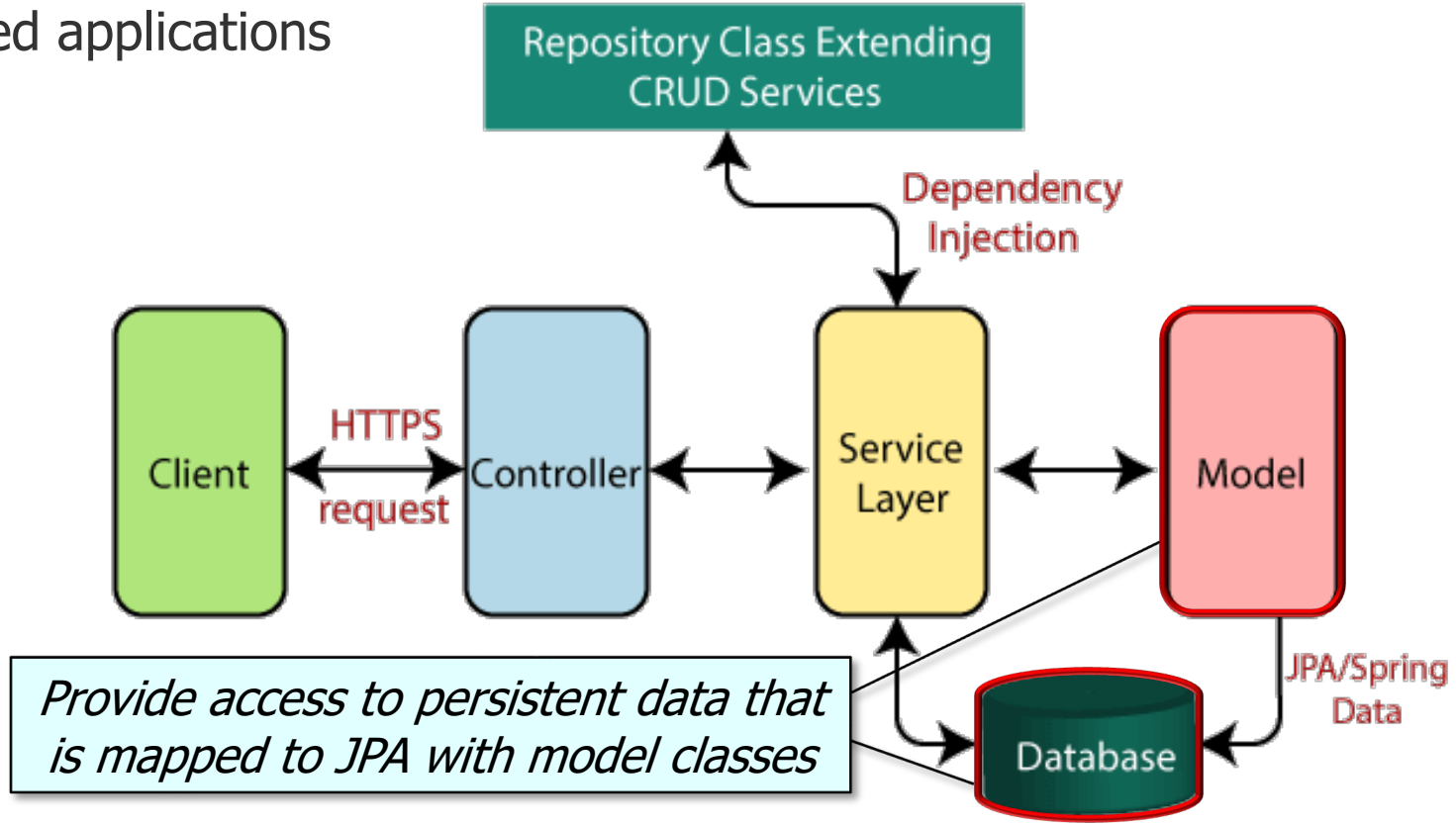

See www.javaguides.net/2020/07/three-tier-three-layer-architecture-in-spring-mvc-web-application.html

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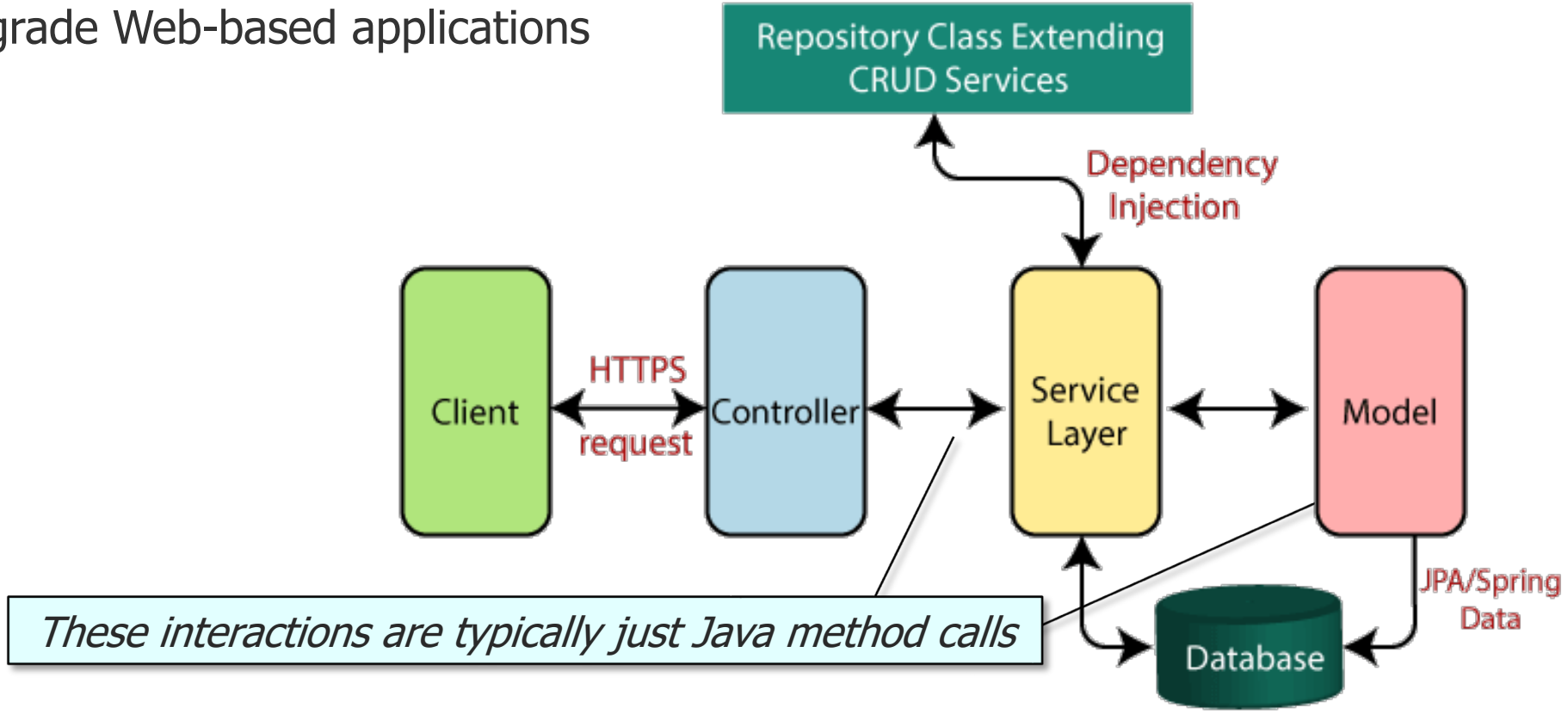

See blogs.oracle.com/javamagazine/mastering-the-mechanics-of-java-method-invocation

End of Overview of Spring & Spring Boot