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Learning Objectives in this Lesson

 Understand what Spring & Spring Boot are



See <u>spring.io/projects</u>

Learning Objectives in this Lesson



See <a href="mailto:spring-boots/spring-spring-boots/spring-spr

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





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 - 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

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 - Dependency injection (DI) enables an object/service to receive other objects/services it depends on
 - With inversion of control (IoC) the framework runs the main execution thread(s)



See en.wikipedia.org/wiki/Inversion_of_control

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 - Dependency injection (DI) enables an object/service to receive other objects/services it depends on
 - With inversion of control (IoC) the framework runs the main execution thread(s)
 - Implements the "Hollywood Principle"

Don't call us, we'll call you



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

Spring contains various projects





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



Spring Boot

Takes an opinionated view of building Spring applications and gets you up and running as quickly as possible.



Spring Framework

Provides core support for dependency injection, transaction management, web apps, data access, messaging, and more.

Spring Data

Provides a consistent approach to data access – relational, non-relational, map-reduce, and beyond.



Spring Cloud

Provides a set of tools for common patterns in distributed systems. Useful for building and deploying microservices.



Spring Cloud Data Flow

Provides an orchestration service for composable data microservice applications on modern runtimes.



Spring Security

Protects your application with comprehensive and extensible authentication and authorization support.

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

• The Spring Boot project makes it easy to create stand-alone, productiongrade Web-based applications Repository Class Extending **CRUD** Services Dependency Injection HTTPS Service Client Controller Model Layer request JPA/Spring Data Database See spring.io/projects/spring-boot



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





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

• The Spring Boot project makes it easy to create stand-alone, productiongrade Web-based applications Repository Class Extending CRUD Services Dependency Injection HTTPS Service Client Controller Model Layer request JPA/Spring Provide the "business logic" to operate on data Data sent to & from the data access layer & the client Database

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



• The Spring Boot project makes it easy to create stand-alone, productiongrade Web-based applications Repository Class Extending CRUD Services Dependency Injection HTTPS Service Client Controller Model Layer request JPA/Spring Provide access to persistent data that Data is mapped to JPA with model classes Database

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

• The Spring Boot project makes it easy to create stand-alone, productiongrade Web-based applications Repository Class Extending CRUD Services Dependency Injection HTTPS Service Client Controller Model Layer request JPA/Spring Data These interactions are typically just Java method calls Database See blogs.oracle.com/javamagazine/mastering-the-mechanics-of-java-method-invocation

End of Overview of Spring & Spring Boot