Overview of Spring Boot Software Patterns

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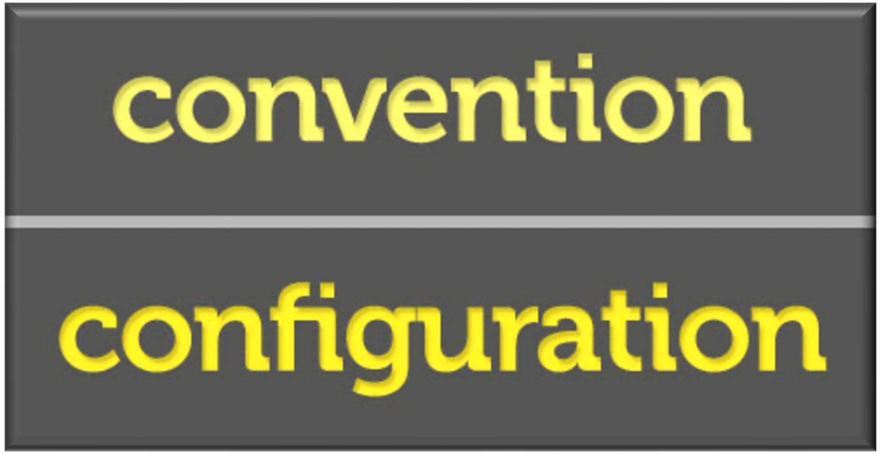
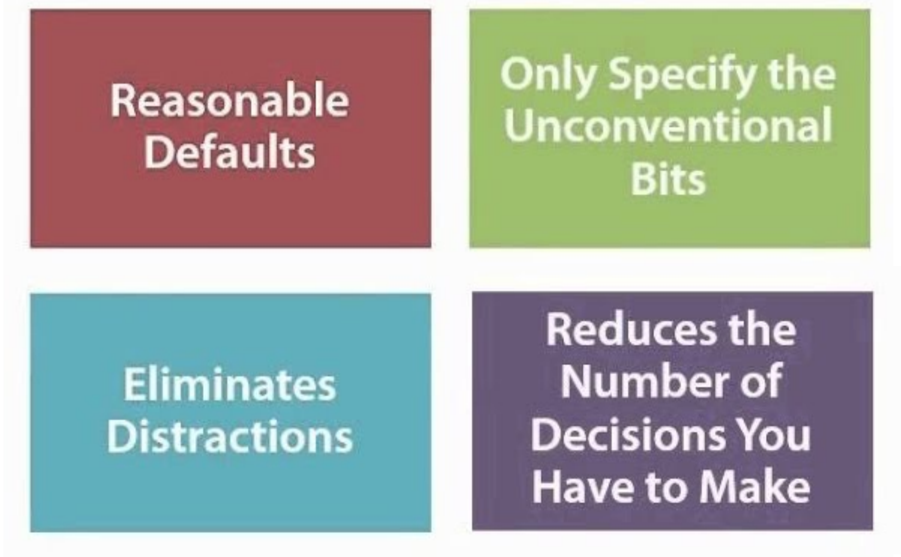
Learning Objectives in this Lesson

- Recognize Spring Boot's key design approach

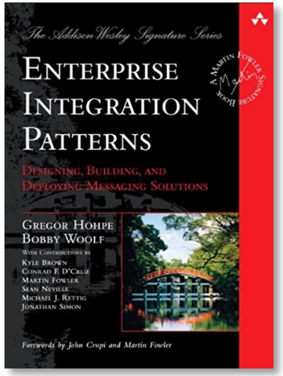



Reasonable Defaults
Only Specify the Unconventional Bits
Eliminates Distractions
Reduces the Number of Decisions You Have to Make

See en.wikipedia.org/wiki/Convention_over_configuration

Learning Objectives in this Lesson

- Recognize Spring Boot's key design pattern
- Be aware of other patterns implemented by Spring Boot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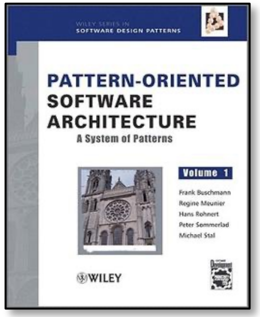

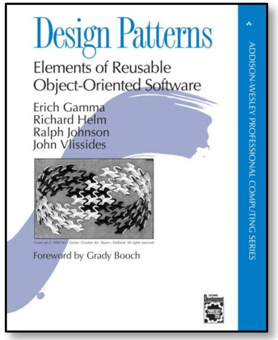
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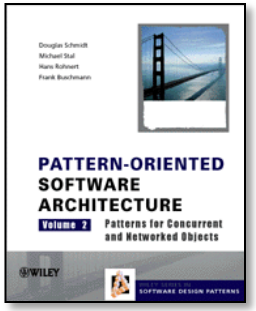
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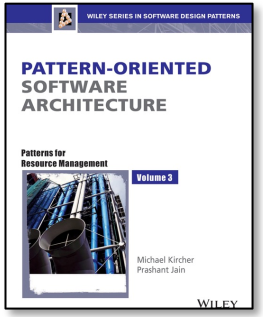
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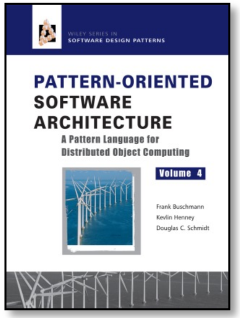
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Overview of Spring Boot’s Design Approach

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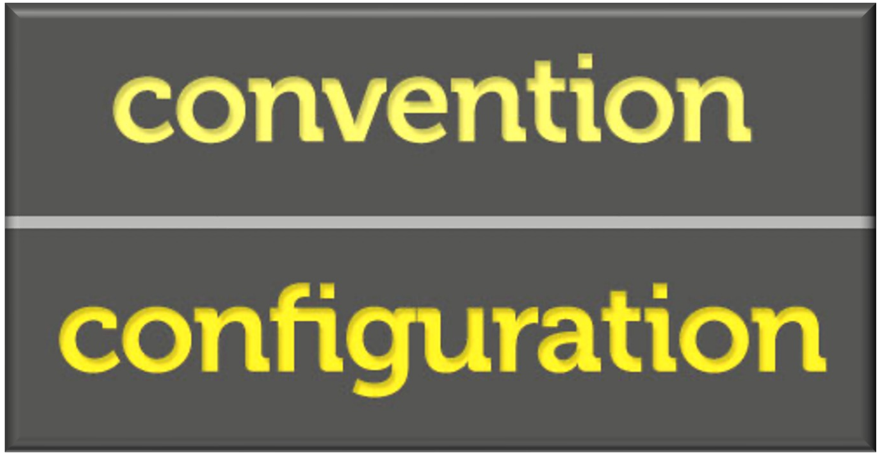
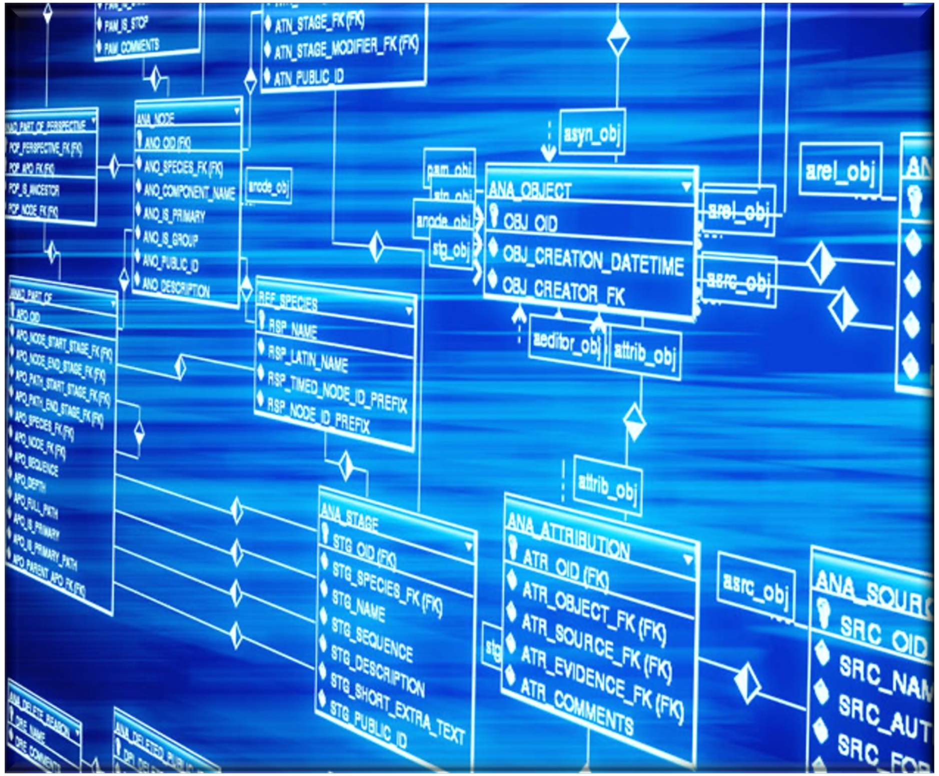
- Spring Boot applies the "Convention-over-configuration" software pattern



See en.wikipedia.org/wiki/Convention_over_configuration

Overview of Spring Boot's Design Approach

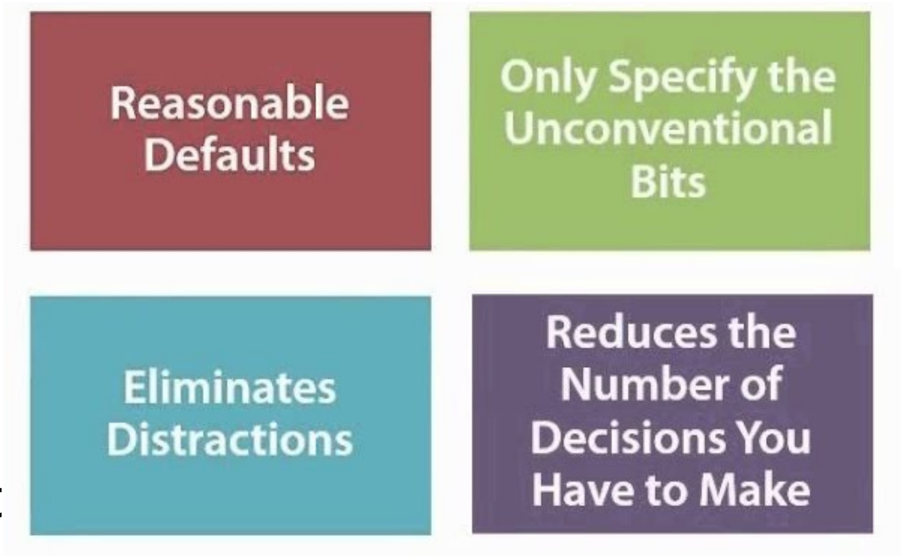
- Spring Boot applies the "Convention-over-configuration" software pattern
  - The goal is to create web apps by refining a general reusable "blueprint"



See www.ibm.com/docs/en/wasdtfe?topic=specification-osgi-blueprint-container

Overview of Spring Boot's Design Approach

- Spring Boot applies the "Convention-over-configuration" software pattern
  - The goal is to create web apps by refining a general reusable "blueprint"
  - Software frameworks use this pattern to decrease the number of decisions developers using the framework must make, without sacrificing flexibility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    - Also known as "Opinionated" defaults configuration..

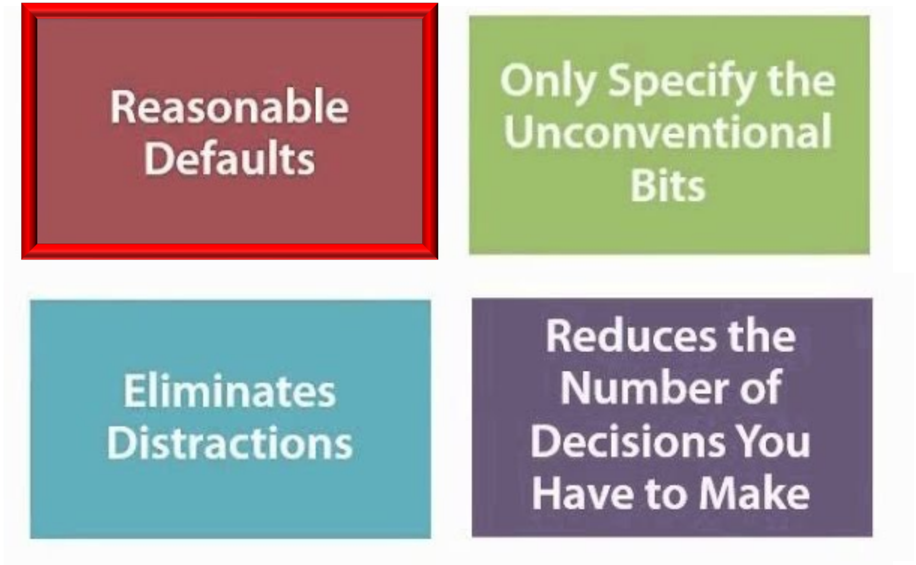
What is Spring-Boot's Opinionated Strategy?

Spring-Boot's Opinionated Defaults Configuration is more of a strategy to eliminate boilerplate and configurations meant to improve unit testing, development, and integration test procedures. It decides the defaults to use for configuration and the packages to install based on the dependencies requirement.

See www.fusion-reactor.com/blog/technical-blogs/what-is-spring-boot

Overview of Spring Boot’s Design Approach

- Reasonable defaults
  - e.g., if there is a class Sales in the model, the corresponding table in the database is called "sales" by default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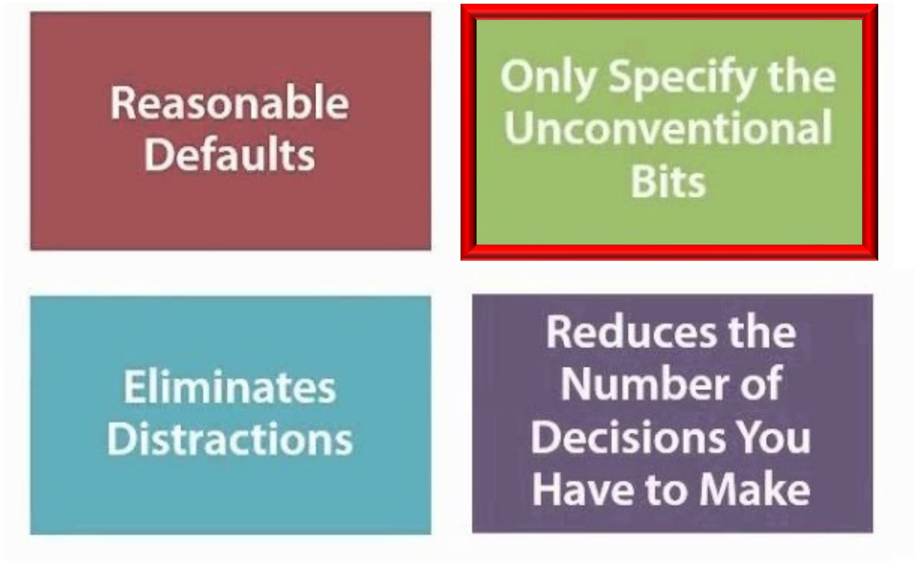
- Only specify the unconventional bits
  - e.g., if there’s a deviate from conventions, it’s necessary to write code regarding these divergent names
    - Such as calling a table "product sales” instead of “sales”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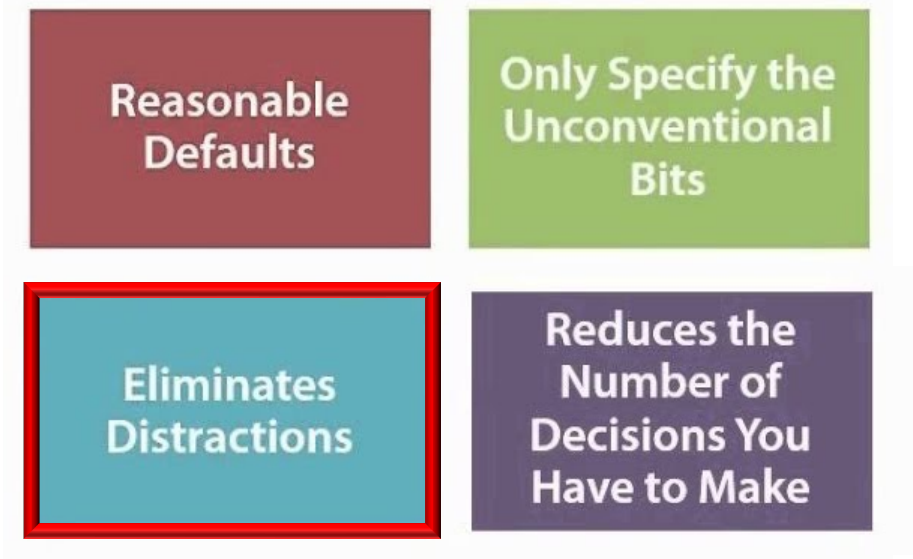
Overview of Spring Boot's Design Approach

- Eliminates distractions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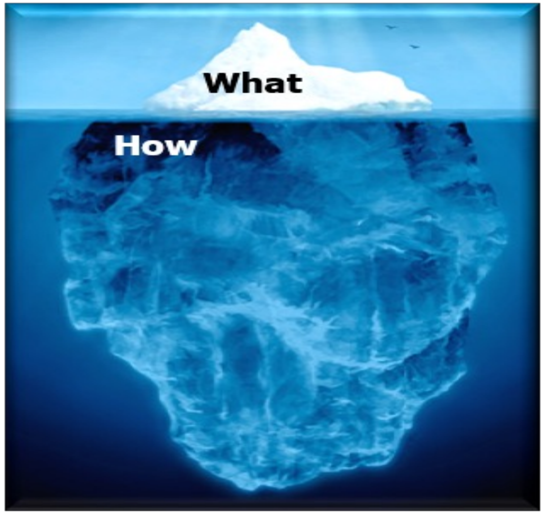
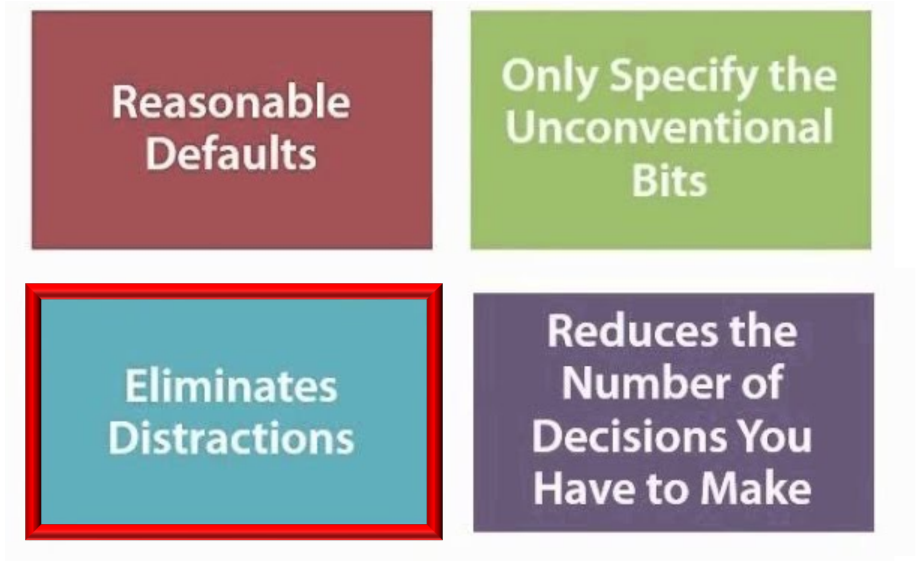
Overview of Spring Boot's Design Approach

- Eliminates distractions, e.g.,
  - There's no need to program low-level network details directly
    - Instead leverage declarative configuration mechanisms

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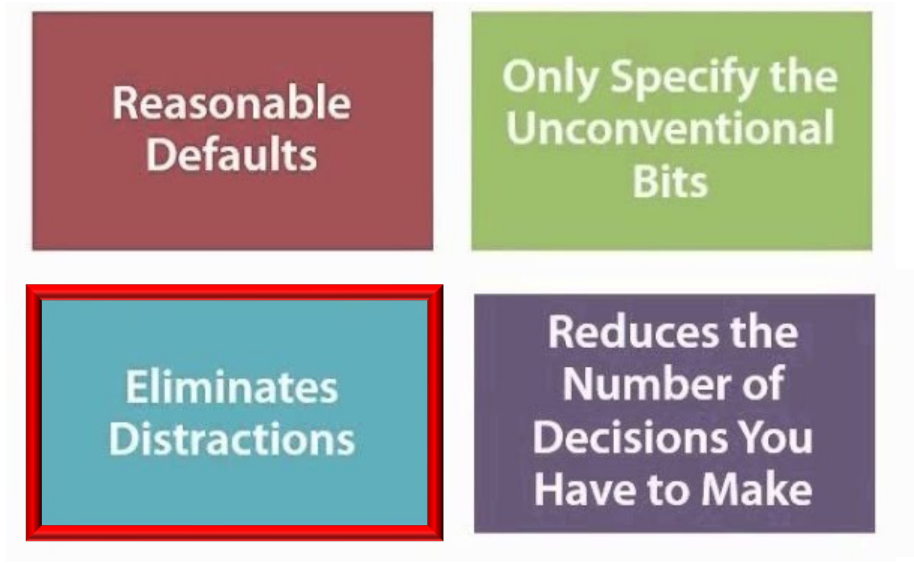
- Eliminates distractions, e.g.,
  - There's no need to program low-level network details directly
  - Have the infrastructure manage the event loop(s) via IoC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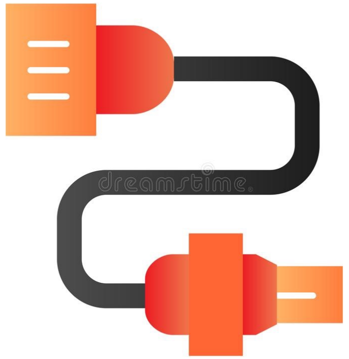
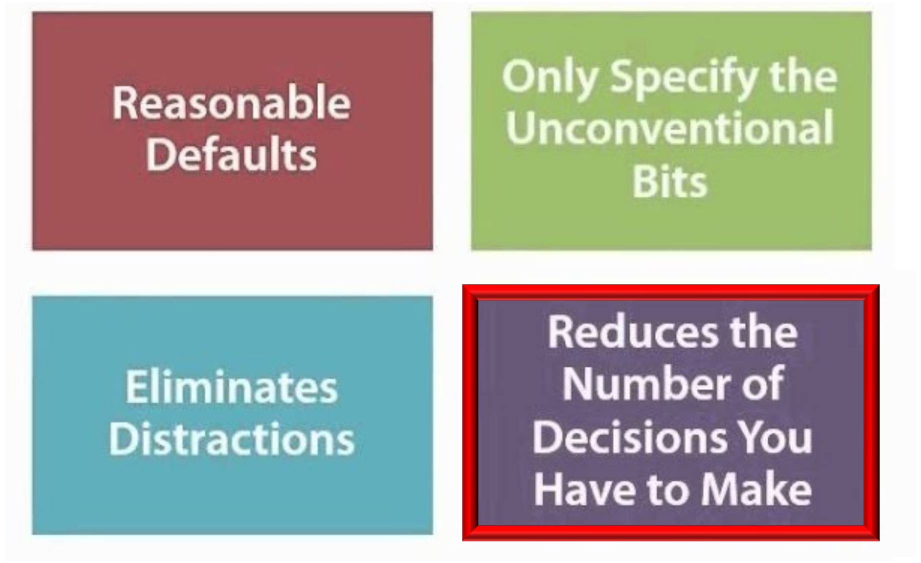
See en.wikipedia.org/wiki/Inversion_of_control

Overview of Spring Boot's Design Approach

- Reduces the # of decisions you have to make
  - e.g., the auto-wiring of fields to their implementations is handled automatically

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See www.baeldung.com/spring-autowire

Overview of Spring Boot’s Other Patterns

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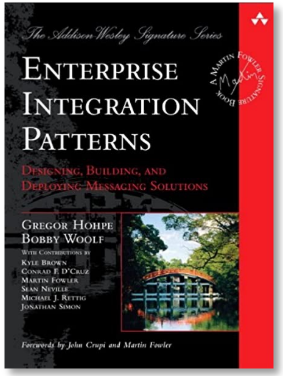
- Spring Boot also implements many other software patterns documented in the literature
  - e.g., Broker, Proxy, Factory Method, Resource Pool, Component Configurator, Model-View-Controller, etc.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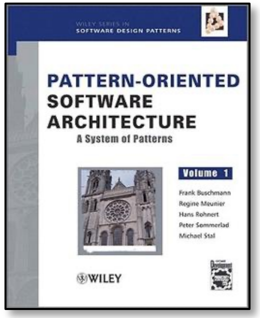

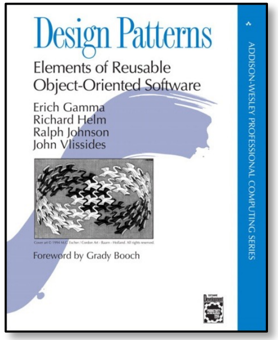
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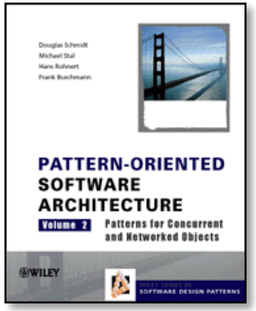

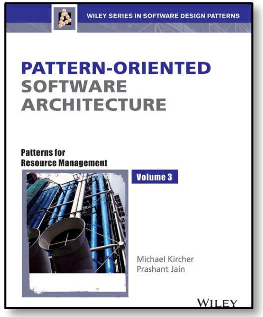
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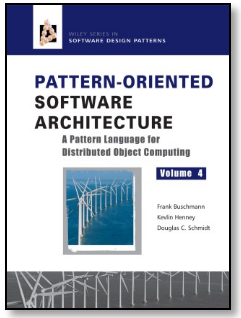
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End of Overview of Spring Boot Software Patterns