



Annotation Based Configuration

By Rahul Barve



Objectives

- Introduction to Spring's Annotation Support
- Bean Configuration
- Using Various Annotations



Spring Annotations

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Spring Annotations

- Spring Framework provides support for Annotation Based Metadata to handle RAD.
- Developers may discard XML totally and take full advantage of Spring Annotations.



Spring Annotations

- In Annotation based configuration, there are further 2 options:
 - Java Based Configuration
 - Pure Annotation Based Configuration



Configuring Beans



Configuring Beans

- To configure beans, Spring provides 2 basic annotations:
 - `@Configuration`
 - `@Bean`



***@*Configuration**



@Configuration

- Applied at the class level to introduce a class as a Configuration Unit.
- Classes annotated with `@Configuration` act as entry points of the spring configuration unit.



***@*Bean**



@Bean

- Applied at the method level to indicate that a method is a Bean Creation Method.
- Objects returned by methods annotated with @Bean are treated as managed components in the Spring Environment.



Retrieving Beans

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Retrieving Beans

- Beans registered in the annotation based configuration unit are obtained using a class `AnnotationConfigApplicationContext`.



AnnotationConfigApplicationContext



AnnotationConfigApplicationContext

- A class used to register the configuration specific class so that beans can be obtained against their identities.



Components



Components

- `@Bean` annotation can be used to configure beans in the configuration unit.
- However, developer needs to create these objects explicitly.



Components

- To enable Spring to create Java Objects using Reflection API, Spring provides a stereotype annotation `@Component`.



Components

- @Component

Applied at the class level to mark that class as a Component class.



Scanning Components



Scanning Components

- Once a component is declared, it is to be scanned in the configuration unit and that is accomplished by an annotation `@ComponentScan`.



Let's Summarize

- Spring's Annotation Support
- Bean Configuration
- Component Scanning
- Using Various Annotations