

## **@SpringBootApplication Annotation in Spring Boot**

The `@SpringBootApplication` annotation is a **convenience annotation** in Spring Boot that combines several commonly used annotations for configuring a Spring application.

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### **Full Form:**

```
@SpringBootApplication = @Configuration + @EnableAutoConfiguration +  
@ComponentScan
```

#### ◆ **@Configuration**

- Marks the class as a source of bean definitions.
- Enables Java-based configuration instead of using XML.

#### ◆ **@EnableAutoConfiguration**

- Enables Spring Boot's **auto-configuration mechanism**.
- Automatically configures Spring application based on the JAR dependencies in the classpath.
- Example: If `spring-boot-starter-web` is present, it configures Spring MVC and embedded Tomcat.

#### ◆ **@ComponentScan**

- Scans the current package and sub-packages for Spring components:
- `@Component`
- `@Service`
- `@Repository`
- `@Controller`
- Enables **dependency injection**.

### **Example Usage**

```
@SpringBootApplication  
public class MyApp {  
    public static void main(String[] args) {  
        SpringApplication.run(MyApp.class, args);  
    }  
}
```

## Key Points

- `@SpringBootApplication` is placed on the **main application class**.
  - It acts as the **entry point** of the Spring Boot application.
  - Reduces boilerplate code by combining three annotations into one.
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This annotation is fundamental for bootstrapping and launching a Spring Boot application with minimal configuration.