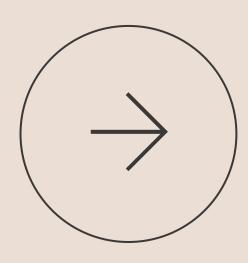
# Core Concept of Spring boot

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# 1. Spring Boot Auto-Configuration

SPRING BOOT AUTO-CONFIGURATION IS A POWERFUL FEATURE THAT AUTOMATICALLY CONFIGURES YOUR SPRING APPLICATION BASED ON THE DEPENDENCIES PRESENT ON THE CLASSPATH.

- HOW IT WORKS: AUTO-CONFIGURATION CLASSES ARE DEFINED IN THE SPRING-BOOT-AUTOCONFIGURE MODULE. THESE CLASSES USE CONDITIONS (E.G., IF A SPECIFIC CLASS IS PRESENT ON THE CLASSPATH) TO CONFIGURE BEANS AUTOMATICALLY.
- **EXAMPLE:** IF SPRING-BOOT-STARTER-WEB IS ON THE CLASSPATH, SPRING BOOT AUTO-CONFIGURES A DISPATCHERSERVLET, RESOURCEHANDLERS, AND OTHER BEANS NEEDED TO SET UP A WEB APPLICATION.

# 2. Spring Boot Starter Dependencies

Spring Boot Starters are a set of convenient dependency descriptors that you can include in your application. They bring a set of transitive dependencies to your project, making it easy to get started with various Spring technologies.

- 1 ) Purpose: To simplify dependency.
- 2) **Example**: spring-boot-starter-web includes dependencies for building web applications, such as Spring MVC, Tomcat, Jackson, etc.

# 3. Spring Boot CLI

Spring Boot Command Line Interface (CLI) is a command-line tool that allows you to quickly prototype with Spring. It uses Groovy scripts for fast development.

#### Features:

- 1) Quick Prototyping
- 2) Testing and automation

# 4. Spring Initializr

Spring Initializr is a web-based tool to bootstrap your Spring Boot project with the necessary dependencies and configurations. It generates a Maven or Gradle project with your specified settings.

### Summary

- Auto-Configuration: Minimizes manual configuration by providing defaults based on dependencies.
- **Starters**: Pre-configured dependency sets for various functionalities.
- **CLI**: Command-line tool for quick prototyping with Spring.
- Initializr: Web-based tool to generate Spring Boot projects.
- **Embedded Server**: Runs applications standalone with embedded servers.
- Testing: Facilitates testing with annotations and tools.
- **Security**: Integrates with Spring Security for application security.

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