Introduction to Spring Boot

Overview

The Spring Framework is a widely used open-source Java framework that supports building enterprise-level applications. It is based on Inversion of Control (IoC) and Dependency Injection (DI) principles, which help to make the code more modular, reusable, and easier to maintain.

Spring Boot is a Spring Framework module that helps simplify the process of building Spring applications by providing pre-configured settings and a set of default dependencies. It eliminates the need for repetitive boilerplate code and allows developers to focus on the business logic of their applications.

Spring Boot has gained widespread adoption in the industry due to its ease of use, flexibility, and robustness. It is used by many well-known companies and organisations, including Netflix, Target, and Alibaba, to name a few.

Advantages of using Spring Boot

There are several advantages of using Spring Boot for building Java applications:

- Faster Development: Spring Boot provides a set of pre-configured dependencies and auto-configuration features that reduce the amount of boilerplate code needed for setting up a project. This lets developers focus on building business logic rather than worrying about infrastructure, resulting in faster development times.

- Simplified Configuration: Spring Boot provides a simple and intuitive way to configure the application, making it easier for developers to manage configuration files and settings.

- Embedded Server: Spring Boot includes an embedded web server, allowing developers to run and test their applications locally without deploying to a separate server. This speeds up the development process and reduces the time and effort required for deployment.

- Modular Architecture: Spring Boot provides a modular architecture allowing developers to choose the components they need for their projects. This provides greater flexibility and allows developers to create lightweight applications with only the necessary components.

- Cloud Support: Spring Boot provides out-of-the-box support for cloud deployment, making it easy to deploy applications to popular cloud platforms like AWS, Google Cloud, and Microsoft Azure.

- Large Community: Spring Boot has a large and active community of developers and users, which means there is a wealth of resources available, including documentation,

forums, and tutorials. This makes it easier for developers to find solutions to their problems and stay up-to-date with the latest best practices.

Spring vs Spring Boot

Spring and Spring Boot are popular frameworks for building Java applications but differ in their approach and functionality. Here are a few key differences between the two:

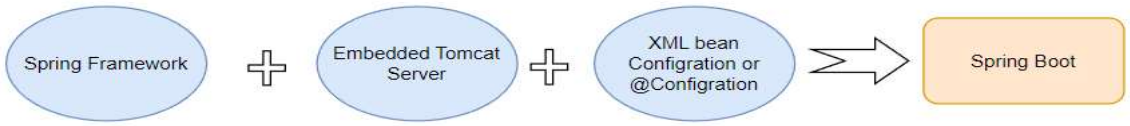
- Configuration: In Spring, you must manually configure everything from scratch, including the application server, dependencies, and other components. However, with Spring Boot, you can use pre-configured dependencies and auto-configuration features that save you time and effort.

- Convention over Configuration: Spring Boot follows a "Convention over Configuration" approach, providing default configurations and settings for various components. This approach reduces the need for manual configuration, thus making development faster and more efficient.

- Ease of Use: Spring Boot is designed to make application development faster and easier. It provides an embedded web server, auto-configuration, and other features that simplify development. Spring, on the other hand, requires more manual setup and configuration.

- Dependency Management: Spring Boot simplifies dependency management by providing a set of pre-configured dependencies that you can use in your application. Spring, on the other hand, requires you to manage dependencies manually.

- Scope: Spring is a comprehensive framework that covers a wide range of functionalities, including dependency injection, data access, web development, and more. Spring Boot, on the other hand, is a lightweight framework that focuses mainly on web development.



Overall, Spring Boot simplifies the development process by providing pre-configured dependencies and auto-configuration features. On the other hand, Spring offers more flexibility and control but requires more manual setup and configuration.