

8 Important Spring Modules



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1. Spring Boot

- This module makes it easy and quick to create stand-alone, production-grade Spring based applications that you can "just run".
- Example Use:- A RESTful service with self-contained server.

2. Spring Cloud

- Provides tools for developers to quickly build some of the common patterns of distributed systems.
- Libraries for service registration and discovery, circuit breaker, load balancing etc. are available.
- Example Use:- Ecommerce application built using microservices.

3. Spring Security

- This is the de-facto standard for securing spring-based applications.
- Provides authorization and authentication for java applications.
- Example Use:- A bank application that needs authentication and authorization for various user roles.

4. Spring Web

- Provides Spring MVC implementation for web modules – where a view can be built using template engines like JSP, Velocity, FreeMarker or Thymeleaf -- OR the response can directly be written as a JSON (for a RESTful service)
- Provides features like multi-part file upload,
- Example use – Restful service, Bank application login form

5. Spring AOP

- Aspects enable the modularization of concerns that cut across multiple types and objects. (cross-cutting concerns of an application)
- Example uses – Transaction management using `@Transactional` annotation , logging, security

6. Spring Batch

- This module is used to build batch applications that need to recurrently process large volumes of data.
- Features: Chunk based processing, retry, skip
- Example Use:- Everyday, read data of daily trades from database and update the credit on customer's accounts.

7. Spring Data

- Provides a spring based programming model for accessing data.
- This module has very powerful features and supports wide range of databases.
- Example Use:- Read, Write data from PostgreSQL for your application.

8. Spring Test

- Supports testing Spring components using JUnit or TestNG.
- It provides consistent loading of Spring ApplicationContexts and caching of those contexts for your integration tests.
- It also contains a number of Mock objects that are useful in many testing scenarios to test your code in isolation.

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