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Spring Boot

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-> Spring Boot is one approach to develop Spring Based applications with less configurations.

-> Using Spring Boot we can develop below types of applications

- 1) Standalone app
- 2) Web
- 3) Distributed (webservices)

-> We have below advantages with Spring Boot

1) Starter Pom (simplifies maven/gradle build configuration)

- > web-starter
- > datajpa-starter
- > security-starter
- > mail-starter

2) Auto Configuration (boot will identify required configs for our app)

- > Creating db connection pool
- > deploy web app in embedded server
- > Start IOC container
- > Component Scanning

3) Actuators (To monitor and manage our application)

- > how many beans loaded ?
- > How many url-patterns mapped
- > What configuration properties loaded ?
- > What is health of app?
- > Heap Dump
- > Thread Dump

4) Embedded Servers : It provides server to run our boot application

- > Apache Tomcat (default)
- > Jetty
- > netty

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Creating Spring Boot Application

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1) Initializr website (start.spring.io)

2) IDE

Note: IDE will internally connect with start.spring.io website to create SpringBoot application (Spring Starter Project)

Spring Boot =

Spring - xml configurations + Auto Config + Embedded Servers + Actuators

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What is Start Class in Spring Boot ?
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-> Start class is entry point for boot application execution.

-> Start class is also called as main class in Spring Boot.

Note: When we create boot app, start class will create by default

```
@SpringBootApplication
public class Application{

    public static void main(String... args){

        SpringApplication.run(Application.class, args);

    }

}
```

=> The @SpringBootApplication annotation is equal to below 3 annotations

- 1) @SpringBootConfiguration ----> @Configuration
- 2) @EnableAutoConfiguration
- 3) @ComponentScan

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How IOC starting in Spring Boot ?
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=> SpringApplication.run () method contains logic to start IOC container

boot-starter :: AnnotationConfigApplicationContext
web-starter :: AnnotationConfigServletWebServerApplicationContext
starter-webflux :: AnnotationConfigReactiveWebServerApplicationContext

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What is Banner in Spring Boot ?

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-> Spring Logo which is printing on console is called as banner

-> We have below 3 modes for banner

- 1) console (default) ---> prints on console
- 2) log ---> prints on log file
- 3) off ---> don't print banner

-> We can set banner mode in application.properties file

`spring.main.banner-mode=off`

-> We can customize banner text in spring boot by creating banner.txt file under src/main/resources folder.

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