

SPRING BOOT INTERVIEW QUESTIONS

(PART-1)

1) What is Spring Boot?

It is a Spring module which provides RAD (Rapid Application Development) feature to Spring framework. It is used to create stand alone spring based application that you can just run because it needs very little spring configuration. Spring Boot automatically configures required classes depending on the libraries on its class path.

2) What are Advantages of Spring Boot ?

- Create stand-alone Spring applications that can be started using java -jar.
- No requirement for XML configuration in Spring Boot Projects.
- Spring Boot uses application.properties file.
- Spring Boot supports Embed Tomcat Server, Jetty And it supports Embed Data Base like H2 DataBase, HSQL DB and Derbyetc.....
- Spring Boot supports Dev tools. This Service is given Spring Boot which perform post development operations automatically when code changes are done in project.
- Dev tool will perform following tasks like
- Compile→Packing→Build→Deploy→.java to .class → .jar → .war → place in Server and Run.
- Spring Boot Actuator Provides production read endpoints

3) What is the use of @SpringBootApplication annotation?

Spring Boot use this annotation for Auto-Configuration, Component Scan and be able to define extra configuration on our "Application class".

A single @SpringBootApplication annotation can be used to enable those three features, that is:

@EnableAutoConfiguration: enable Spring Boot's auto-configuration mechanism.

@ComponentScan: enable @Component scan on the package where the application is located .

@Configuration: allow to register extra beans in the context or import additional configuration classes.

4) What is Spring Boot Starter?

Spring Boot provides a number of "Starters" that makes easy to manage dependencies for our project. Spring Boot starters makes developer easier to add jars to classpath.

5) What is spring-boot-starter-parent?

The spring-boot-starter-parent is a special starter that makes Maven or Gradle dependency-management easier by adding jars to our classpath.

Example:Maven Project like.

```
<parent>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-parent</artifactId>
<version>2.0.2</version>
</parent>
```

6)What is the configuration file name used by Spring Boot?

The configuration file used in spring boot projects is application.properties. This file is very important where we would over write all the default configurations. Normally we have to keep this file under the resources folder of the project.

7) What is application.properties?

This file is input to Spring Container. Here Spring Boot Provides default Configuration for all concepts i.e <bean/> tags so Programmer is not required to write any <bean/> tags for Common Concepts like Email, DataBase Connection, JMS, Log4J, ViewResolver etc...

“application.properties” must be created under “src/main/resources”.

It Stores Data in Key=Value format. Here all Keys are pre-defined.

Symbol “#” indicates Comment in “.properties” file.

8) How to configure External Databases in Spring Boot?

We can configure Database details using “DataSource” & “JPA” properties.

Here Programmer not required to write code for “DataSource” & “SessionFactory” implemented class Objects these will be auto configured by Spring Boot.

We should only provide input details using (key=value) application.properties file.

Spring Boot provides by default “Connection-Pool” using Apache Tomcat server.

Ex: application.properties

```
## DataSource
spring.datasource.driver-class-name=oracle.jdbc.OracleDriver
spring.datasource.url=jdbc:oracle:thin:@localhost:1521:xe
spring.datasource.username=username
spring.datasource.password=pwd
```

```
## HibernateJpaAutoConfiguration(SessionFactory)
```

```
spring.jpa.database-platform=org.hibernate.dialect.Oracle10gDialect
spring.jpa.show-sql=true
spring.jpa.hibernate.ddl-auto=update
spring.jpa.properties.hibernate.format_sql=true
```

```
## Connection Pooling- ref PoolProperties
spring.datasource.tomcat.initial-size=5
spring.datasource.tomcat.max-active=20
spring.datasource.tomcat.max-idle=10
spring.datasource.tomcat.min-idle=5
```

9) What is “Swagger”?

It is a third party tool provided by “Spring-fox” to generate UI in HTML format for all Rest-Services in our application.

It provides complete API in simple HTML screen that contains Urls, Operation Names, Input & Output of Operations ,sample input/output formats ,provider details & Contact information etc...

This Ui is called as “Docket”.

To Create this we must provide :

API base-package.

Common path for all RestControllers in application

API information & contact details also called as “MetaData”.

10) What is Spring Boot Actuator?

This is a Pre-defined Web-services defined by Spring Boot ,which supports at “Production Environment” . i.e “Production Ready Endpoints”.

EndPoint:

Here Endpoint means URL path to one (Web) Services which is developed & added to one Application also running in server.

Example of Actuator Endpoints:

url/beans= To see Object Created in Spring Container & their details like Name, Scope, Dependencies etc...

url/health=To know status of supporting services like: Db Status, Email Services Etc...

11) What is Profile in Spring Boot?

application.properties provides complete Environment details.

Instead of deleting all details for new Environment just we link to new application.properties file.

Ex: cloud.properties

12) Write a code for RestController?

It is used to develop ReST Webservices application in Spring Boot. It is used for Integration layer. It can be integrated with any client (http client) . It also supports all HTTP operations like GET, POST, PUT, DELETE etc.. It supports auto conversion for @ResponseBody for JSON

13) What is Spring Boot Auto Configuration?

Spring Boot looks at a) Frameworks available on the CLASSPATH b) Existing configuration for the application. Based on these, Spring Boot provides basic configuration needed to configure the application with these frameworks. This is called Auto Configuration.

14) How spring boot handles error in application?

Spring Boot provides an “/error” mapping by default that handles all errors in a sensible way, and it is registered as a ‘global’ error page in the servlet container.

15) How to write custom log configuration in spring boot?

You can force Spring Boot to use a particular logging system using the “org.springframework.boot.logging.LoggingSystem” system property. The value should be the fully-qualified class name of a LoggingSystem implementation. You can also disable Spring Boot’s logging configuration entirely by using a value of none.

16)What is the default Multipart File Uploads size in spring boot?

By default Spring Boot configures Spring MVC with a maximum file of 1MB per file and a maximum of 10MB of file data in a single request.

17)What is Hot swapping in spring boot?

Reloading the changes without restarting the server is called hot swapping, Modern IDEs (Eclipse, IDEA, etc.) all support hot swapping of bytecode, so if you make a change that doesn’t affect class or method signatures it should reload cleanly with no side effects. It can be done using DevTools here

18)How do you Switch off the Spring Boot security configuration?

If you define a @Configuration with @EnableWebSecurity anywhere in your application it will switch off the default webapp security settings in Spring Boot.

19) What is caching? Have you used any caching framework with Spring Boot ?

A cache is an area of local memory that holds a copy of frequently accessed data that is otherwise expensive to get or compute.

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