

## Java + Spring Boot+ Micro Services Interview Questions: 2021

1. What is Apache Kafka?
2. What are the advantages of using Apache Kafka?
3. What is the difference between traditional messaging system and Apache Kafka?
4. What is Optional in Java8?
5. Write a program to use stream api to filter employee based on age?
6. Write a program using HashMap to store the employee based on age in descending order?
7. Difference between git pull and git fetch?
8. What is generics in Java8 explain?
9. How @EnableAutoConfiguration works in SpringBoot?
10. How @SpringBootApplication works in SpringBoot?
11. Implement a post api using Spring Boot?
12. How to deploy git repository using jenkins?
13. Difference between Comparable and Comparator?
14. What are the new features were added in java8?
15. What is a Method Reference?
16. Describe some of the functional interfaces in the standard library?
17. What is singleton class and Write a singleton class program?
18. What is Design Pattern?
19. Can you explain some of the design patterns with you have worked?
20. Where can we use prototype pattern?
21. Write a program for a linked list without using the predefined method insert and display the elements?
22. What is racing condition in java?
23. What is failSafe and failFast iterator in java?
24. What is the difference between Monolithic and Microservice architecture?
25. Explain the join, innerjoin, outerjoin, Left outer join, right out join?
26. How to delete one record in the sql table?
27. What is springBoot starter?
28. How to disable the default web browser in Spring Boot?
29. How to handle the exceptions in java?
30. Asynchronous controller in Spring Boot?
31. What is the use of Map.Entry?
32. Get the Employee details based on the Salary ascending order?
33. What is the internal mechanism of Map?
34. What is the use of Hibernate? Why we need?
35. Spring MVC flow?
36. Spring Flow?
37. Spring Boot Actuator?
38. What is the use of Docker containers?
39. Dependency Injection?
40. Dispatcher Servlet?
41. How to create two same tables in different schema's by using single configuration file?
42. What is the difference between save and Persist?
43. Java program to count the total number of characters in a String?
44. Java program to count the total vowels and Constants in a String?

45. Java program to divide a String in N equal parts?
46. How will you read all the path params in your project?
47. Explain Rest Controller?
48. How java convert (or) know to give the Json object response in RestController?
49. Is NumberFormatException is a checkedException or UncheckedException?
50. How to convert date in to the String Format?
51. R u using any @Binding annotation in your project?
52. What kind of collections you have used in your project and explain?
53. How will you implement Comparable interface?
54. What is the difference between Comparable and Comparator?
55. Internal mechanism of HashMap?
56. Can we assign key as Employee as key in HashMap?
57. Write a program to {14,12,23,42,52,34,1,233} to find the largest element?
58. What is the time complexity of this program?
59. Which Sorting technique is better?
58. What is Finally?
59. What is Racing Technique?
60. Explain about the Factory Pattern?
61. Will java support multiple inheritance?
62. What is the First Level Cache and Second Level Cache in Hibernate?
63. Which Cache mechanism you have used in your project?
64. R u using any error monitoring tool?
65. How are you communicating between the micro services?
66. How will you verify whether all the microservices are consumed by consumer?
67. Can you write pom.xml for spring boot?
68. How will you map the database columns in your microservices?
69. Explain your project architecture?
70. Explain about spring-boot-actuator?
71. How are you securing your application?
73. Write a code for JWT token?
74. How are you sending the alerts in your application? Any scheduler is used? If yes, how are you doing the scheduling?
75. What is the server which you have used to sent the email notifications?
76. How will you configure the server port in spring boot?
77. How will you deploy the docker image?
78. What is the queue size in the Kafka?
79. How to check the running docker image?
80. Can you write a docker file?
81. What is the command to kill the docker container?
82. What are the actuator end points that you have used?
83. Is there any other default web servers in Spring Boot?
84. How are you using db for fallback? Is there any static db for fallback?
85. How are you connecting to db in your application?
86. What is the difference between decoding and encoding?
87. What is the difference between authentication and authorization?
88. Difference between static and singleton?
89. What are the different ways to break singleton behavior of class?

90. What is the purpose of constructor in abstract class?
91. Can we write any code after throw?
92. Can we catch more than one Exception in catch block?
93. Create a thread by implementing Runnable interface?
94. Hashtable Vs HashMap?
95. TreeSet Vs HashSet?
96. ArrayList Vs LinkedList?
97. Explain about ConcurrentHashMap? When we have HashMap and Hashtable why it came into the picture?
98. What is the importance of serialVersionUID?
99. What is SpringBoot and its importance?
100. What is Swagger?
101. How to create standalone springboot application?
102. How did you handle exceptions in your application?
103. What is @ControllerAdvice?
104. How did you integrate Apache Kafka?
105. How you have handled transactions in your application?
106. How you handle the transactions in db or in your queries?
107. What are the advantages when you compared the springBoot with Spring?
108. What is the use of starters in spring Boot?
109. Which starter has default web server?
110. What is spring boot starter parent?
111. What annotations are present in @SpringBootApplication?
112. What is @ComponentScan?
113. When we are using @ComponentScan in SpringBoot application in @SpringBootApplication what is the default base package?
114. Did you use JPA?
115. Is there any naming Configuration?
116. Spring Security?
117. What is @Controller and @RestController annotation?
118. What will be the response it will provide?
119. If I want xml as response. So, what changes you have to in your rest endpoints method?
120. What are the http methods you have used?
121. Do you use @PathVariable annotation and @RequestParam annotation?
122. Give me an example to get the students? Id path variable, name should request param. Tell me the url how it looks like?
123. Have you worked on DispatcherServlet?
124. What is the concept you will use to identify the jsp (viewResolver)? What is viewResolver you will use to give suffix and prefix?
125. Which version of java you have used?
126. Can you explain java 8 over the java 7?
127. Consider an array of random numbers and I want second largest number from that array?
128. Example of checkedException and uncheckedException?
129. Tell me what is the cache level 2 in Spring & JPA or Hibernate?
130. What is the difference between interfaces and Abstract class?
131. What is the main reason to use Spring?

132. What is the Dependency Injection?
133. Have used AOP?
134. Lets say we have a website? Why we use https?
135. How does it protect from hacker?
136. What are the down stream services which actually connect to the device are they developed in java or in any other technology?
137. Can you tell me what kind of api you have used to connect Kafka?
138. How are you testing your microServices?
139. How are you integrating the splunk with your microservices?
140. How are you checking the performance of the microservice?
141. What is SOLID principle?
142. HTTP status codes?
143. String is immutable or mutable?
142. How to make a class as immutable? Write a program?
143. What is the difference between List & Set?
144. What is static method and static block?
145. Write a program to reverse a String?
146. How to remove the duplicates of the two lists and give a final list using java 8? Example List1 = {"orange", "banana", "orange", "papaya"} List2={"orange", "pine-apple", "watermelon"}
147. What is the difference between final and finally?
148. What is the use of microservices?
149. What is webService?
150. Explain CI/CD pipelines?
151. What are the spring bean scopes?
152. What is the difference between Query param and path param(URI param) which one is better?
153. How to resolve collision in HashMap?
154. Use of design Pattern?
155. Docker build command?
156. What is the difference between ConcurrentHashMap and SynchronizedHashMap? Which one is better in performance?
157. How to find the 5<sup>th</sup> highest salary of an Employee?
158. How to find the employees whose names contains first four letters Vija?
159. How to employees max salary based on the department?
160. Write a program for pair of numbers whose sum is 16?
161. Write a program for triplets of the numbers whose sum is 35?
162. Write a program to find the count of the duplicate elements of list?
163. What is parallel Stream?
164. What are the stream operations?
165. What is the return type of Stream in java8?
166. List few differences between overloading and overriding?
167. Tell me the different ways to create an object in java?
168. Can we override the Default methods?
169. What are generics in java?
170. What are Enumerations in java? Example?
171. Explain the use of Lambda expression in java8?
172. Write a program to remove consecutive duplicate characters in a string?

- 173. What is the internal mechanism of String concat , '+'?
- 174. What is the internal mechanism of String?
- 175. How to disable the default web browser in spring boot?
- 176. Explain upcasting and downcasting in java?
- 177. What are executors in java?
- 178. What is serialization in java?
- 179. What final in java?
- 180. What are class loader?
- 181. List different hibernate object type?
- 182. What is multithreading in java?
- 183. What is collection framework?
- 184. What are the different types of class loaders available in java?
- 185. What is Functional Interface? What is the use of it?
- 186. What are the access modifiers in java?
- 187. Explain string buffer in java?
- 188. What is indexing in sql? What is the use of it?
- 189. What is @Primary annotation?
- 190. what are the database normalization? Explain types of it?
- 191. Explain IOC how to implement it?
- 192. How will you provide security for your pages?
- 193. How are you doing validations in your project? Are u using any kind of validators?
- 194. What is the out put of the following program?

```
String s = new String("Test");  
String s1 = "Test";  
String s2 = "Test";  
System.out.println(s==s1);  
System.out.println(s1==s2);  
System.out.println(s.equals(s1));
```

- 195. What are the levels of Exception?
- 196. What will be the out put?

```
class A{  
    void m1(){  
        System.out.println("A");  
    }  
}
```

```
class B extends A{  
    super.m1();  
    void m1(){  
        Sytem.out.println("B");  
    }  
}
```

```
public static void main(String args[]){
```

```
    B b = new A();
```

```
b.m1();
```

```
}  
}
```

O/P:

```
class A{  
    void m1(){  
        System.out.println("A");  
    }  
}
```

```
class B extends A{  
    super.m1();  
    void m1(){  
        Sytem.out.println("B");  
    }  
}
```

```
public static void main(String args[]){
```

```
    A a = new B();  
    a.m1();
```

```
}  
}
```

O/P:

```
class A{  
    void m1(){  
        int i= 4/0;  
        System.out.println("A");  
    }  
}
```

```
class B extends A{  
    super.m1();  
    void m1(){  
        Sytem.out.println("B");  
    }  
}
```

```
public static void main(String args[]){
```

```
    B b = new A();  
    b.m1();
```

```
}  
}
```

O/P:

```
197. final List<Integer> l1 = new ArrayList<>();  
l1.add(1);  
l1.add(2);
```

what kind of exception?

198. When we handle the `ArrayOutOfBoundsException` in the class A and `IndexOutOfBoundsException` in the Class B when we are extending the Class A in the Class B? Is it allowed or not?

199. What is the difference between `get()` and `load()` in hibernate?

200. What is Association, Aggregation? Which one is better?

201. What is the internal mechanism of `@Transactional` annotation?

202. How can you handle when the microservice is down?

203. How are you writing the fallback in microservices?

204. How are you maintaining the databases for the multiple microservices?

205. Can we have multiple main methods in the same class?

206. Can we define a class as static? Explain?

207. How to remove the duplicates of a list using java8? Without using map or any other list?

208. How will you make sure that your microservices are independent?

209. Explain how to integrate the docker containers in AWS?

210. Find first unique character in a string?

211. Function to check if a single linked list is polindrom?

212. Spring MVC context listener interface and its usage?

213. How URI Authentication works?

214. What is use of `OPTIONS` method in RestFul?

215. What is the use of `@Qualifier` in springboot?

216. What is the use of `@Autowired` annotation?

Managerial Round:

1. Tell me about your self?

2. Can you brief about your project?

3. Did you follow the Agile in your project?

4. What kind of Tools you have used to track your project?

5. What is sprint ban?

6. What is Zero sprint?

7. How will you estimate the story points?

8. How many days of sprint span you have?

9. Explain the JIRA work flow?

10. What are advantages and disadvantages of Agile Process?

11. What is sprint backlog?

12. What is spike in Agile?
13. What is the difference between Agile methodology and traditional methodology?
14. What do you mean by velocity in Agile?
15. What is a Sprint Planning Meeting, Sprint Review Meeting and Sprint Retrospective Meeting?
16. What is scrum and what are the advantages?
17. What are the disadvantages of agile?
18. How will you handle when customer found a bug in the production environment?
19. How will you handle when you dont meet the timelines? How can you justify?
20. What are the different roles in scrum?
21. What are the important tools that are used in a scrum project?
22. Explain the term “impediments” in Scrum?
23. Differentiate between “Sprint Planning Meeting” and “Sprint Retrospective Meeting.”
24. What is Kanban?