52 Kotlin Interview Questions to Hire Top Developers

Questions

1. Can you explain the primary differences between Kotlin and Java?
2. What are extension functions in Kotlin, and how are they used?
3. How does Kotlin handle null safety compared to Java?
4. What is a data class in Kotlin, and what are its benefits?
5. How do you implement a singleton in Kotlin?
6. Explain the use of coroutines in Kotlin for asynchronous programming.
7. Can you discuss the advantages of using Kotlin over other JVM languages?
8. How would you manage state in a Kotlin-based Android application?
9. What are sealed classes, and where would you use them?
10. Can you describe the difference between 'val' and 'var' in Kotlin?
11. What are the key features of Kotlin that make it a preferred language for Android development?
12. How does Kotlin's type inference improve code readability?
13. Can you explain what smart casts are and how they are used in Kotlin?
14. What is the difference between òpeǹ and f̀inal̀ keywords in Kotlin?
15. How do you handle exceptions in Kotlin?
16. What are higher-order functions in Kotlin and why are they useful?
17. What is destructuring in Kotlin and how is it useful?
18. Can you explain the concept of lazy initialization in Kotlin?
19. What is the purpose of the 'companion object' in Kotlin, and how is it different from static methods in Java?
20. How does Kotlin achieve interoperability with Java? Can you provide an example?
21. Can you explain the role of the 'in' keyword in Kotlin, especially in relation to generics?
22. What are the main differences between regular interfaces and functional interfaces in Kotlin?
23. How would you implement a custom exception in Kotlin? Provide a brief example.
24. What is the significance of the 'lateinit' modifier in Kotlin, and when should it be used?
25. Can you describe the process of creating a DSL (Domain Specific Language) in Kotlin?
26. What are inline functions in Kotlin, and how do they enhance performance?
27. How do you perform dependency injection in a Kotlin application?
28. Can you explain the concept of type aliases in Kotlin and when you might use them?
29. What is the difference between a suspend function and a regular function in Kotlin?
30. How do you use the 'apply' and 'with' functions in Kotlin? Can you provide examples?
31. What is the purpose of the 'by' keyword in Kotlin, especially in delegation?
32. How do you manage collections in Kotlin? What are the key collection types?
33. Can you explain the use of 'object expressions' and 'object declarations' in Kotlin?
34. What are coroutines in Kotlin, and why are they useful?
35. How does a coroutine differ from a traditional thread?
36. What is the role of 'suspend' keyword in Kotlin coroutines?
37. Can you explain the difference between 'launch' and 'async' in Kotlin coroutines?
38. What is a coroutine scope and why is it important?
39. How can you handle exceptions in Kotlin coroutines?
40. What is 'structured concurrency' in the context of Kotlin coroutines?
41. Can you explain what a lambda expression is in Kotlin and provide an example?
42. How do you use higher-order functions in Kotlin? Can you give a practical example?
43. What is the purpose of the 'it' keyword in Kotlin lambdas?
44. How does Kotlin support functional programming concepts like immutability?
45. Can you describe how 'fold' and 'reduce' operations work on collections in Kotlin?
46. What are inline functions in Kotlin and why are they beneficial in functional programming?
47. Explain the concept of tail recursion in Kotlin and how it optimizes recursive function calls.
48. How does Kotlin's 'let' function work and when would you use it?
49. What is the difference between 'map' and 'flatMap' in Kotlin?
50. Can you explain the use of 'filter' and 'filterNot' functions in Kotlin?
51. How would you use 'associateBy' and 'groupBy' functions in Kotlin for transforming collections?