

70 Android interview questions to ask when hiring developers

Questions

1. What is the Android architecture and what are its main components?
2. Can you explain the difference between an Activity and a Fragment?
3. What are Intents in Android and how are they used?
4. How do you handle screen orientation changes in an Android application?
5. What is the purpose of the AndroidManifest.xml file?
6. How can you improve the performance of an Android application?
7. What are the different types of storage options available in Android?
8. Explain the concept of services in Android and their use cases.
9. What is the role of the Gradle build system in Android development?
10. Can you describe the lifecycle of an Activity in Android?
11. How do you implement user input validation in an Android app?
12. What is a ContentProvider and when would you use one?
13. How do you manage background tasks in Android?
14. What are some common security best practices for Android applications?
15. Explain the concept of dependency injection in Android development.
16. What testing frameworks or tools have you used for Android app testing?
17. What is the importance of the Context class in Android?
18. Explain what a BroadcastReceiver is and give an example of its use.
19. How would you optimize an Android app to reduce memory usage?
20. Can you explain what a ViewModel is and why it's useful?
21. What is the role of the LayoutInflater in Android development?
22. Describe the difference between AsyncTask and Thread in Android.
23. What are the benefits of using Android Jetpack libraries?
24. How do you handle permissions in Android?
25. How would you implement data binding in an Android application?
26. Explain the concept of coroutines in Kotlin and their benefits in Android development.
27. What is the purpose of the ConstraintLayout and how does it differ from other layout types?
28. How do you implement push notifications in an Android app?
29. Describe the differences between LiveData and RxJava for reactive programming in Android.
30. What are the key components of the MVVM architecture pattern in Android?
31. How would you implement offline caching in an Android app?
32. Explain the concept of custom views in Android and when you would create one.
33. What are the best practices for handling API responses in Android?
34. How do you implement deep linking in an Android application?
35. Describe the process of creating and using a custom Gradle plugin.
36. What are the key considerations when developing for different Android screen sizes and densities?
37. How do you implement data encryption in an Android app?
38. Explain the concept of WorkManager and its advantages over other background processing methods.
39. How would you optimize battery usage in an Android application?
40. What are the best practices for implementing in-app purchases in Android?
41. How do you handle multi-threading in Android, and what are the potential pitfalls?
42. Describe the process of creating and publishing an Android library.
43. Can you explain the difference between implicit and explicit intents in Android?
44. What are the advantages and disadvantages of using RecyclerView over ListView?
45. How would you handle data persistence in an Android application?
46. What is ProGuard, and how do you use it in Android development?
47. Can you explain how the Android system manages app processes and memory?
48. What is the difference between View.GONE and View.INVISIBLE in Android?
49. How do you implement localization in an Android app?
50. Can you explain the difference between a foreground and background process in Android?
51. How does Android handle process priority, and what are the different priority levels?
52. What is the purpose of the Application Not Responding (ANR) dialog, and how can it be prevented?
53. Describe the concept of process lifecycle in Android and its relation to app components.
54. How does Android manage memory allocation for different processes?
55. What is the significance of the 'onTrimMemory()' callback, and how would you use it?
56. Explain the concept of task affinity in Android and its impact on app behavior.
57. How does Android handle task management for multi-window or split-screen scenarios?
58. What are the implications of using 'android:process' attribute in the manifest file?
59. How does the Android system decide which process to terminate when it needs to free up memory?
60. Describe the purpose and implementation of AsyncTask in Android. What are its limitations?
61. How would you implement a long-running background task that survives process death?
62. You're working on an app that suddenly starts crashing on certain devices. How would you approach diagnosing and fixing this issue?
63. A client wants to add a new feature to their app, but it might impact the app's performance. How would you balance the client's request with maintaining app quality?
64. Your team is debating whether to use a third-party library or build a custom solution for a complex UI component. How would you approach this decision?
65. You've discovered a security vulnerability in a live app. What steps would you take to address this issue quickly and effectively?
66. The app you're working on needs to support both online and offline modes. How would you design the data synchronization process?
67. Your app is experiencing slow load times on older devices. What strategies would you employ to improve its performance?
68. A new Android version has been released with significant API changes. How would you plan the app's transition to support the new version while maintaining backward compatibility?