

Interview Questions on Android:

1. Describe Android Application Architecture?

Services – like Network Operation

Intent - To perform inter-communication between activities or services

Resource Externalization - such as strings and graphics

Notification signaling users - light, sound, icon, notification, dialog etc.

Content Providers - They share data between applications

2. How will you record a phone call in Android? How to get a handle on Audio Stream for a call in Android?

Permissions.PROCESS_OUTGOING_CALLS: Allows an application to monitor, modify, or abort outgoing calls.

3. What is APK format?

The (Android Packaging Key) APK file is compressed format of the AndroidManifest.xml file, application code (.dex files), resource files, and other files. A project is compiled into a single .apk file.

4. Describe Intents and its type?

A class (Intent) will describes what a caller desires to do. The caller will send this intent to Android's intent resolver, which finds the most suitable activity for the intent. E.g. opening a PDF document is an intent, and the Adobe Reader apps will be the perfect activity for that intent(class).

Two types of intent:

- Explicit Intents : Explicit intent specifies the particular activity that should respond to the intent. They are used for application internal messages.
- Implicit Intents : In case of Implicit Intent, an intent is just declared. It is for the platform to find an activity that can respond to it. Since the target component is not declared, it is used for activating components of other applications.

5. How do you declare 4 components of android in manifestfile?

- <activity>
- <service>
- <receiver>
- <provider>

6. What are intent filters?

Intents filter are used to register activity, services, broadcast receiver as being capable of performing an action on a particular kind of action.

7. What is a Sticky Intent?

sendStickyBroadcast() performs a sendBroadcast (Intent) known as sticky, i.e. the Intent you are sending stays around after the broadcast is complete, so that others can quickly retrieve that data through the return value of registerReceiver (BroadcastReceiver, IntentFilter). In all other ways, this behaves the same as sendBroadcast(Intent).

8. What is Orientation?

Orientation decides if the LinearLayout should be presented in row wise or column wise fashion. The values are set using setOrientation().The values can be HORIZONTAL or VERTICAL.

9. What is a resource?

A user defined JSON, XML, bitmap, or other file, injected into the application build process, which can later be loaded from code.

10. What is AIDL?

AIDL is the abbreviation for Android Interface Definition Language. It handles the interface requirements between a client and a service to communicate at the same level through interprocess communication. The process involves breaking down objects into primitives that are Android understandable.

11. What is nine-patch image?

The Nine-patch in the image name refers to the way the image can be resized: 4 corners that are unscaled, 4 edges that are scaled in 1 axis, and the middle one that can be scaled into both axes.A Nine-patch image allows resizing that can be used as background or other image size requirements for the target device.

12. What is a Toast Notification?

A toast notification is a message that pops up on the surface of the window. It only fills the amount of space required for the message and the user's current activity remains visible and interactive. The notification automatically fades in and out, and does not accept interaction events.

13. What is ViewGroup?

A ViewGroup is a special view that can contain other views (called children.) The view group is the base class for layouts and views containers. This class also defines the class ViewGroup.LayoutParams which serves as the base class for layouts parameters.

14. What is service?

A Service is an application component representing either an application's desire to perform a longer-running operation while not interacting with the user or to supply functionality for other applications to use. Services run without a dedicated GUI, but, like Activities and Broadcast Receivers, they still execute in the main thread of the application's process. A

Service could be, facility for an application to expose some of its functionality to other applications.

15. What is the importance of XML-based layouts?

The use of XML-based layouts provides a consistent and somewhat standard means of setting GUI definition format. In common practice, layout details are placed in XML files while other items are placed in source files.

16. What is adb?

Adb is short for Android Debug Bridge. It allows developers the power to execute remote shell commands. Its basic function is to allow and control communication towards and from the emulator port.

17. What is ANR?

ANR is short for Application Not Responding. This is actually a dialog that appears to the user whenever an application have been unresponsive for a long period of time.

18. What is the importance of settings permissions in app development?

Permissions allow certain restrictions to be imposed primarily to protect data and code. Without these, codes could be compromised, resulting to defects in functionality.

19. What is portable Wi-Fi hotspot?

Portable Wi-Fi Hotspot allows you to share your mobile internet connection to other wireless device. For example, using your Android-powered phone as a Wi-Fi Hotspot, you can use your Laptop to connect to the Internet using that access point.

20. What is a Fragment?

A fragment is a part or portion of an activity. It is modular in a sense that you can move round or combine with other fragments in a single activity. Fragments are also reusable.

21. What is a content provider?

A content provider makes a specific set of the application's data available to other applications. The content provider extends the ContentProvider base class to implement a standard set of methods that enable other applications to retrieve and store data of the type it controls. However, applications do not call these methods directly. Rather they use a ContentResolver object and call its methods instead.

22. How the data will be stored in Android? types of data stored in Android ?

1. Internal Storage
2. Connecting to a network
3. General preferences
4. SQLite database
5. External Storage

23. What is the latest version of Android?

Android 4.4 [KitKat]

24. Explain transfer to Android?

Data from one language can be changed to another language using Google Translator XMPP data. You can write your message in English and select the language that is easy to understand the locals for their own posts.

25. What is a Dalvik ?

The name of Android's virtual machine. The Dalvik VM is an interpreter-only virtual machine that executes files in the Dalvik Executable (.dex) format, a format that is optimized for efficient storage and memory-mappable execution. The virtual machine is register-based, and it can run classes compiled by a Java language compiler that have been transformed into its native format using the included "dx" tool.

26. What is an DDMS ?

Dalvik Debug Monitor Service, a GUI debugging application shipped with the SDK. It provides screen capture, log dump, and process examination capabilities.

27. What is Drawable?

A compiled visual resource that can be used as a background, title, or other part of the screen. It is compiled into an android.graphics.drawable subclass.

28. What is an Intent Receiver?

An application class that listens for messages broadcast by calling Context.broadcastIntent.

29. Can I write code for Android using C/C++?

Yes, but need to use NDK Android applications are written using the Java programming language. Android includes a set of core libraries that provides most of the functionality available in the core libraries of the Java programming language.

30. How to call a subactivity?

```
Intent intent = new Intent(this, SubActivity.class); //to pass data  
addintent.putExtra(name, value);  
startActivityForResult(intent, int);
```