



Codementor Blog

18 Android Interview Questions to Ask an App Developer



Looking to hire an Android developer? If you're not an Android developer yourself, or if you're an entrepreneur or startup founder who's venturing into the world of hiring developers for the very

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behavioral interview questions for freelancers.

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Have an interview coming up, so that you know how your answers may be evaluated.



Let's jump right in, shall we?



Android Developer Interview Questions



1. What's the difference between an implicit and an explicit intent?

An **explicit intent** is where you tell the system which Activity or system component it should use to respond to this intent. **Implicit intents** allow you to declare the action you want to perform; the Android system will then check which components are registered to handle that action.

Here, you're looking for an understanding of when you should use each type of intent, as the vast majority of the time you'll use explicit intents to start components in your own application, while implicit intents are most commonly used to communicate with components from other third party applications.

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2. When should you use a Fragment, rather than an Activity?

This is still a much-debated topic, but the code

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any of the following use cases, where you'll

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- When you're working with UI components or behavior that you're going to use across multiple Activities.
- When you're using one of the navigational methods that are closely linked to fragments, such as swipe views.
- When your users would benefit from seeing two different layouts side-by-side.
- When you have data that needs to persist across Activity restarts (i.e you need to use retained fragments).

3. You're replacing one Fragment with another — how do you ensure that the user can return to the previous Fragment, by pressing the Back button?

This question provides an insight into the app developer's understanding of the lifecycle of dynamic fragments, as well as Fragment transactions, and the back stack.

If the "Back" button is going to return the user to the previous Fragment, then you'll need to save each Fragment transaction to the back stack, by calling `addToBackStack()` before you `commit()` that transaction.

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4. How would you create a multi-threaded Android app *without* using the Thread class?

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If you only need to override the `run()` method and no other Thread methods, then you should implement Runnable.

In particular, be on the lookout for an Android developer demonstrating an understanding that you should *only* extend from a class when you need to modify some of its functionality.

5. What is a ThreadPool? And is it more effective than using several separate Threads?

ThreadPool consists of a task queue and a group of worker threads, which allows it to run multiple parallel instances of a task.

Here, you're assessing the app developer's understanding of how multithreading has the potential to improve an app's performance, but

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lifecycle of an Activity? What problems can this result in, and how can these problems be avoided?

An **AsyncTask** is ~~not~~ tied to the lifecycle of the Activity that contains it. If the Activity is destroyed and a new instance of the Activity is created, the **AsyncTask** won't be destroyed. This can lead to a number of problems, but the major ones an Android developer ~~should~~ should be aware of are:

- Once the **AsyncTask** completes, it'll try to update the former instance of the Activity, resulting in an **IllegalArgumentException**.
- Since the **AsyncTask** maintains a reference to the previous instance of the Activity, that Activity won't be garbage collected, resulting in a memory leak.

The solution is to avoid using **AsyncTasks** for long-running background tasks.

7. How would you access data in a ContentProvider?

Start by making sure your Android application has the necessary read access permissions. Then, get access to the **ContentResolver** object by calling `getContentResolver()` on the Context object, and retrieving the data by constructing a

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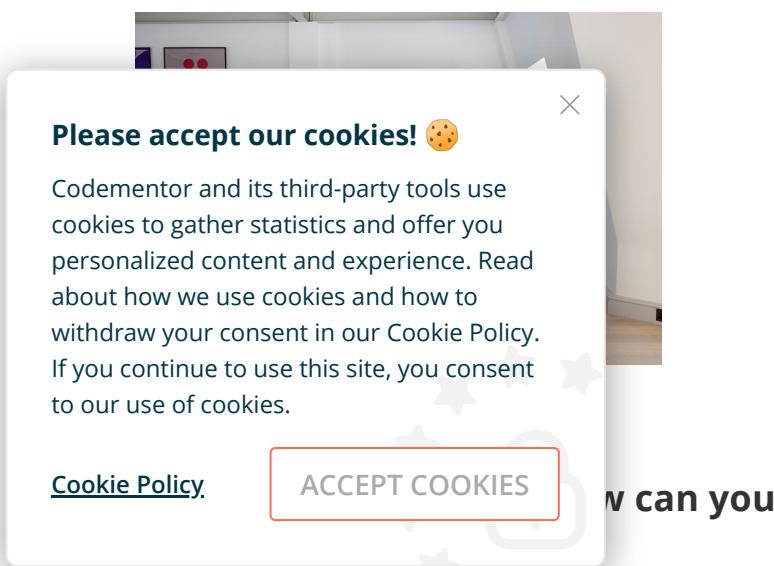
Serializable is a standard Java interface that's easy to integrate into your app, as it doesn't require any methods. Despite being easy to implement, Serializable uses the Java reflection API, which makes it a slow process that creates lots of temporary objects.

Parcelable is optimized for Android, so it's faster than Serializable. It's also fully customizable, so you can be explicit about the serialization process, which results in less garbage objects.

While the developer may acknowledge that implementing Parcelable does require more work, the performance benefits mean that they should advise using Parcelable over Serialization, wherever possible.

9. What is an Adapter?

Here, you're checking that the Android developer understands that you need an additional component to connect an AdapterView (such as ListView or GridView), to an external data source. An Adapter acts as this bridge, and is also responsible for converting each data entry into a View that can then be added to the AdapterView.



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This question checks whether the developer is aware of the **golden rule** of threading on Android: never perform lengthy or intensive operations on the **main thread**.

An ANR dialog  appears when your UI has been unresponsive for more than 5 seconds, usually because you've  blocked the main thread. To avoid encountering ANR errors, you should move as much work off the **main thread** as possible.

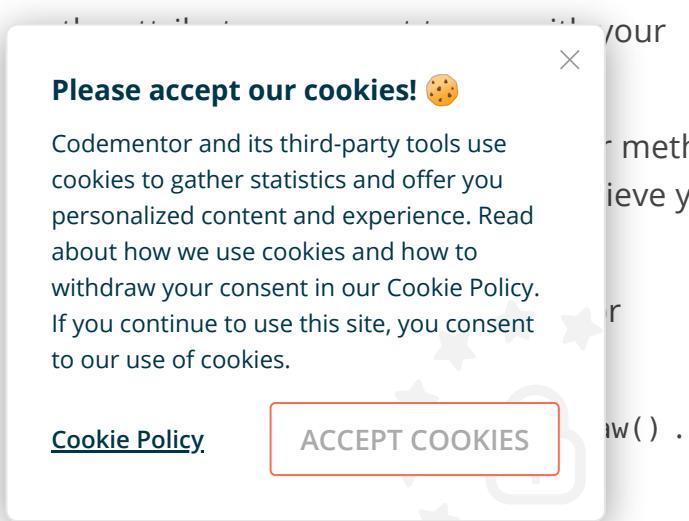
 Learn more about [common Android errors](#) with our infographic.

11. Outline the process of creating custom Views

This is a complex topic, so you're only looking for a high-level overview of the steps involved. However, the developer should make it clear that you should always subclass the View that most closely resembles the custom component you want to create — very rarely would you extend the View class.

After extending your class, you need to complete the following steps:

- Create a res/values/attrs.xml file and declare



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Build types define properties that Gradle uses when building and packaging your Android app.



This question allows you to check that the developer can differentiate between product flavors, build variants, and build types, as these are very similar concepts that are a common source of confusion.

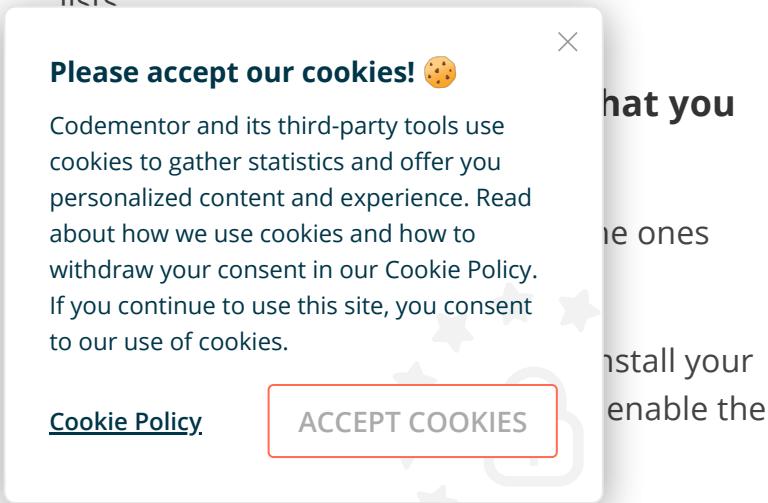


- A **build type** defines how a module is built, for example whether ProGuard is run.
- A **product flavor** defines what is built, such as which resources are included in the build.
- **Gradle** creates a build variant for every possible combination of your project's product flavors and build types.

13. What are the major difference between ListView and RecyclerView?

There are many differences between ListView and RecyclerView, but the Android developer should be aware of the following in particular:

- The ViewHolder pattern is entirely optional in ListView, but it's baked into RecyclerView.
- ListView only supports vertical scrolling, but RecyclerView isn't limited to vertically scrolling lists.



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Hierarchy Viewer tool.

- Measuring how long it takes each View to complete the  Measure, layout, and draw phases. You can also use Hierarchy Viewer to identify any parts of the rendering pipeline that you need to optimize.

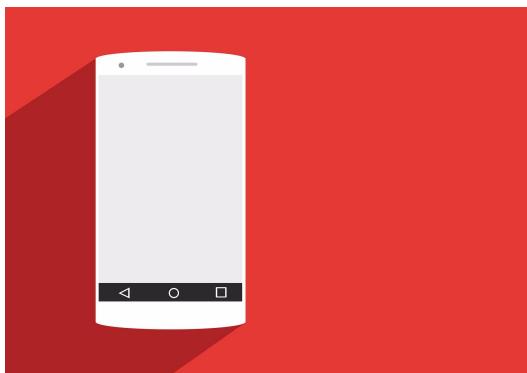


15. What is a Handler typically used for?

You use **Handler** to communicate between threads, most commonly to pass an action from a background thread to Android's main thread.



This question allows you to check that the developer understands another fundamental concept of multithreading in Android: you cannot update the UI from any thread other than the main thread.



16. What are the steps involved in creating a bound service through

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get directory.

- Implement this interface, by extending the generated Binder interface and implementing the methods inherited from the .aidl file.
 
- Extend Service and override `onBind()` to return your implementation of the Stub class.
 

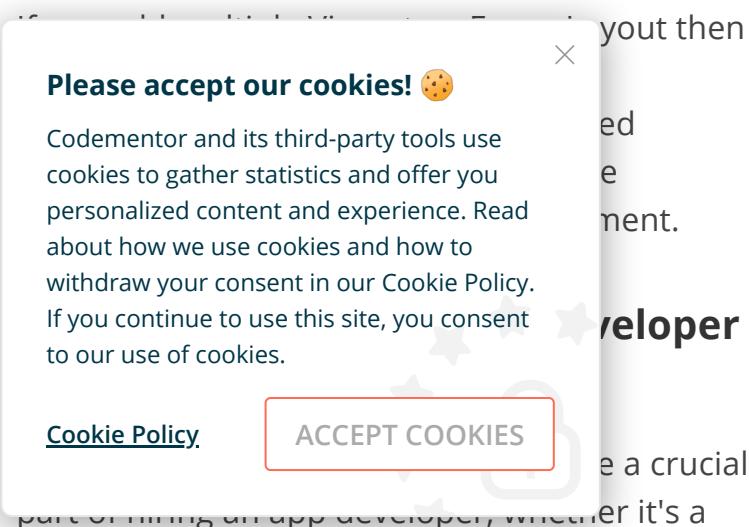
17. What's the difference between `onCreate()` and `onStart()`?

The `onCreate()` method is called once during the Activity lifecycle, either when the application starts, or when the Activity has been destroyed and then recreated, for example during a configuration change.

The `onStart()` method is called whenever the Activity becomes visible to the user, typically after `onCreate()` or `onRestart()`.

18. When might you use a FrameLayout?

Here, you're looking for an understanding that you should **always use the simplest layout possible** for what you want to achieve, as FrameLayouts are designed to contain a single item, making them an efficient choice when you need to display a single View.



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FOR BOTH OPERATING SYSTEMS. WITH THESE INTERVIEW questions, you'll be able to properly vet your candidates' technical skills in Android development — even if you are not rehearsed with the technology.

For more general interview questions to kick-off your assessment, take a look at our [interview questions](#) for software engineers, with a mix of technical and behavioral interview questions. If you want to ask Java-specific interview questions, you can find those [here](#). Good luck!

Have a good Android interview question that we missed? Let us know below!

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of the top technical interview questions to ask Java developers. Get insights on how to answer these questions from Java experts.

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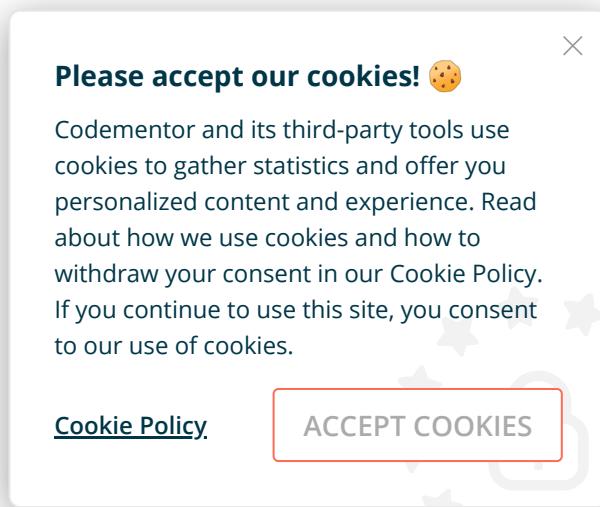
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Thanks for sharing the nice interview question and their answers. These all question and answer are very helpful to me and my friend because these all are very interesting and informative. It is also improving my knowledge. Thank you again for valuable content.

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Steven Parker • 7 months ago

Yes, There is a huge demand for Android Application developers and it is one of the highly paid jobs too. Android developers work in a field that is in a constant state of change and there are always new updates about what is to come and where the Android market is going. Reading regularly, you will get to know the latest and greatest happenings in the Android.

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d. If you're using Android Studio 3.1 or later, you can use the Layout Inspector tool to inspect your app's view hierarchy at runtime. To inspect the layout of your app's views, open the Layout Inspector window and select the View Hierarchy tab. You can then use the View Hierarchy pane to see the structure of your app's layout and the View Details pane to inspect the properties of individual views. You can also use the View Hierarchy pane to find specific views in your layout and the View Details pane to inspect the properties of those views.



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