# Sample Questions

1. What is the difference in a hash map versus a hash table?

HashMap is non-syncrhonized, not thread safe. Hashtable is synchronized and therefore thread-safe.

2. Why should you generally override the equals and hashCode methods?

Equals is just the reference to an object and hashcode can be the same for different objects.

3. How does a factory design pattern work?

4. How does Java Garbage Collection Work?

5. What is the difference in a HashMap vs a HashTable?

6. What is a sparse Array?

7. What is the difference in an ArrayList and List?

8. What is the difference in comparator vs comparable?

1. Define the following terms: View, ViewGroup, View Hierarchy.

2. Explain in detail how the following layouts render, and what unique items each has that must be implemented: ConstraintLayout, LinearLayout, CoordinatorLayout, GridLayout and RelativeLayout?

3. How does Java garbage collection work?

4. What are the main components of an Android application?

5. Explain lifecycle methods of an Activity.

1. What is a bundle? What can a bundle contain?

2. What is the difference between onPause and onStop?

3. How to start an activity for getting a result back?

4. Which callback is used get the result back in the above case?

5. What are difference types of Intent? What are the difference between them? When do we use each of them?

6. How to communicate data between activities?

7. How to add data to an intent?

8. What kind of data can be added to an intent?

9. How to get the data sent from activity one in activity two?

10. What is context?

11. Name different kinds of layouts in Android?

12. How to send an object through an Intent?

13. What is Serializable?

14. What is Parcelable?

15. Which is better and why?

16. How can an object class be Serializable or Parcelable? Explain in detail the methods to implement if any?

17. Can we avoid implementing methods using Parcelable?

18. What are launch modes? Explain each one of them in detail.

19. What is back stack?

1. What are Broadcast receivers?

2. What are static and dynamic broadcast receiver?

3. How to send a broadcast?

4. How to make sure other apps can’t listen to your broadcasts?

5. How to create a broadcast receiver? Explain step by step.

6. How to identify a broadcast?

7. What is an intent filter?

8. What are the ways you can add an action to the intent/intentFilter?

9. What are System Broadcasts?

10. Can you add multiple action while sending a broadcast?

11. Can you add multiple actions to the intentFilter while receiving a broadcast? How would you handle that?

1. What are services?

2. Do all services run on the Main thread?

3. What are the type of services?

4. What method each of the services need to implement?

5. What are services used for?

6. Does each service needs to be declared in the manifest?

7. What is a started service? When do we use it?

8. What is a bound service? When do we use it?

9. What is a Scheduled service? When do we use it?

10. What is a jobScheduler? Why do we use it?

11. How do we perform a job using the JobScheduler? Explain in detail.

1. What are the disadvantages of using MVVM

2. What are the advantages of using MVVM

3. What is the difference between MVVM and MVP?

4. What is LiveData?

5. What is RxJava?

6. How is multithreading handled in RxJava?

7. How is multithreading achieved in android?

8. What are the types of Observables in RxJava?

9. What is the difference between RxJava vs LiveData?

10. What is a CompositeDisposable?

11. What does it mean to say the ViewModel is LifeCycle aware, in your own words?

12. Explain in technical terms the application we created in the morning session?

1. What are services?

2. Why are services important in android?

3. What are the different types of services?

4. What is a foreground service?

5. What is a background service?

6. What are background limitations on services since Android O?

7. What is a bound service?

8. Can a bound service become a started service? Why?

9. What are the methods associated with bound service?

10. When is an IntentService destroyed?

11. Which type of service runs on a worker thread?

12. What are the methods associated with an IntentService?

1. What is multithreading?

2. How can I achieve multithreading in android?

3. What is an AsyncTask?

4. Why was the AsyncTask deprecated?

5. What are the alternatives to using an AsyncTask?

6. What are the methods associated with an AsyncTask?

7. How can I update the UI from the doInBackground method?

8. What is a Handler?

9. How can I create a splash screen with a Handler?

10. Why are threads important?

11. How can I send a message using a Handler?

12. What is considered thread safe and what isn't?

1. What is Firebase?

2. What are some of the services that Firebase offers?

3. Write a code snippet to read from a realtime databse

4. What is the Key method in firebase?

5. What are the advantages of using Firebase?

6. What is the use of SHA-1 in Firebase?

7. What are Firebase Analytics? And Why are they used?

8. What are FirebaseDatabase Rules?

9. How can I send a notification using Firebase?

10. What is Firebase storage?

1. What is firebase authentication

2. How can I register a new app user on Firebase

3. What are the advantages of Kotlin over java? Personally

4. What is the difference between var and val?

5. What is the lateinit keyword used for in Kotlin?

6. What is String interpolation?

7. What are Kotlin synthetics and how do they work?

8. What are extension functions in Kotlin? How can I create one?

9. How can I create a singleton in Java?

10. How can I create a singleton in Kotlin?

11. Can a val be reassigned?

12. Write a snippet of initializing a final string in kotlin with you name as the value

1. What are CustomViews?

2. When do we use CustomViews?

3. How do we create Custom Views in android?

4. What class must we extend to create CustomView?

5. What are the different types of animations in android?

6. What does the View.invalidate() method do?

1. What are memory leaks?

2. What are the observable types in RxJava?

3. What are the differences between MVP and MVVM?

4. How do I create a custom view in android?

5. What is the difference between the lifecycle of a fragment and an activity?

6. How do fragments communicate with activities?

7. How can I get the device location in android?

8. What is the difference between ACCESS\_FINE\_LOCATION and ACCESS\_COARSE\_LOCATION?

9. How do you request permissions at runtime?

10. What is a BroadcastReceiver?

11. What are the different types of permission groups?

12. What is LiveData?

13. What does the method shouldShowRequestPermissionRationale do? What data type doe it return?

14. What are the lifecycle methods of an Activity?

15. What is dataBinding?

16. How can I implement dataBinding in android studio?

17. What are Kotlin synthetics?

18. What are Services?

19. What are the different types of Services in Android?

20. What is a bound Service?

21. Which type of Service runs on a worker thread?

22. What is Firebase?

23. What files are associated with Room db?

24. What is Retrofit?

25. What are the advantages of using Retrofit?

1. What can be achieved using a broadcastReceiver and what can be achieved with RxJava?

2. Why would we use RxJava instead of broadcastReceivers?

3. What are the advantages of using third party libraries like Retrofit and Volley to make API calls?

4. How can I make REST calls with native libraries?

5. Why would you choose volley over retrofit?

6. How do you add 3rd party libraries to android projects?

7. Do I add these on the modular or applicaiton level gradle?

8. What is the reason for adding dependencies to the app level and not the project level?

9. What is the difference between the build.gradle(project) vs build.gradle(app) - What libraries go into

the application level and vice versa?

10. Is it compulsory to register services in the manifest file?

11. What happens if I do not register applicaiton components in the AndroidManifest?

12. What is the significance of the android manifest file?

13. When is the Manifest used by the operating system?

14. What design patterns have you used in your previous projects?

15. When would you have a singleton in you application?

16. What happens if I try to instantiate a singleton?

17. How can I create a singleton in Java?

18. How does the static method in the singleton make sure that it only return the same instance?

19. How can I prevent a singleton class not being derived by any subclasses?

20. How can I safely transmit PII data in android(personally Identifiable Information / sensitive information) across a network?

1. Do you have experience in Kotlin?

2. Tell me about yourself - your most recent experience

3. What are the features of Kotlin?

4. What happens if I use the !! on a null value?

5. When is it okay to use the !! operator in Kotlin?

6. What is smartcasting in Kotlin?

7. How do I create my data classes in Kotlin?

8. How can I check if a class `is` a class type in Java?

9. When do I use extension functions in Kotlin?

10. How can I fix an issue of my application slowing down in a recyclerView? -your step by step approach

11. What is the Android Profiler used for?

12. What are memory leaks?

13. How can I detect memory leaks?

14. What components would I need to make a web call efficiently?

15. Have you worked with data-binding?

16. What is data-binding?

17. What does it mean to be lifecycle-aware?

18. What are coroutines?

19. Do you think RxJAva will be deprecated because of Coroutines?

20. What other uses are there for RxJava?

-Tell us a bit about yourself

-What made you apply?

-Tell us about you last project

-Tell us more about “Relevant project” what you did

-in projects what was the size of the teams,

-What Working Methodologies did you use

-What testing libraries did you use

-What kind of things were you looking to test for

-something about ndk,

-if you had a clean slate what would you prefer to develop with, kotlin or java, what libraries would you use, what coding architectures etc

-how about jetpack would you include jetpack

-what do you find difficult using jetpack compose

-Workmanager foreground/background services

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-we have a couple xml files and want to display multiple languages, how would you do that

-have you used SVG’s ??

-have you been involved in release management and releasing apps to stakeholders

-what kind of things have you done with firebase

-subject surrounding fastlane experience

-what areas would you like to learn or improve upon

-working with design teams, your experience working with designers

-did anything catch your eye from last weeks google io