What is a bundle? What can a bundle contain?

Bundles can be used to send arbitrary data from one activity to another by way of Intents. When you broadcast an Intent, interested Activities (and other BroadcastRecievers) will be notified of this. An intent can contain a Bundle so that you can send extra data along with the Intent.

Bundles are key-value mappings, so in a way they are like a Hash, but they are not strictly limited to a single String / Foo object mapping.

Contains all primitive data types some special objects and can receive elements or Arrays and Array lists using keys

What is the difference between onPause and onStop?

When the app is no longer in the foreground or is transparent it is in pause when the app is no longer visible it is on stop

How to start an activity for getting a result back?

startActivityForResult

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

onActivityResult

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

Implict and explicit. Explicit apps you declare the target location of the intent whereas in implicit you declare an action and the system determines another app or feature to fulfill the request. Explict we use to switch between activities and implicit is for system uses like the camera

How to communicate data between activities?

You use bundles and intents

How to add data to an intent?

You use bundles

What kind of data can be added to an intent?

The data you can put into bundles

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

You use an intent

What is context?

A Context is a handle to the system . It provides services like resolving resources, obtaining access to databases and preferences, and so on.

Name different kinds of layouts in Android?

Grid, relative, linear, web, constraint

How to send an object through an Intent?

Make the class either serializable or parcelable

What is Serializable?

Serializable is a standard Java interface. Reflection is used during the process and lots of additional objects are created along the way. This can cause lot’s of garbage collection. The result is poor performance and battery drain.

What is Parcelable?

Parcelable is another interface that was specifically designed in such a way that there is no reflection when using it. Parcelable is more than 10x faster than Serializable

Which is better and why?

Parcelable because it’s faster

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

For Serializable just extend the class using Serializable. For Parcelable just extend the class and let the system generate all the methods for you.

Can we avoid implementing methods using Parcelable?

No.

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

Standard-This is the default launch mode of an activity (If not specified). It creates a new instance of an activity in the task from which it was started. Multiple instances of the activity can be created and multiple instances can be added to the same or different tasks. In other words you can create the same activity multiple times in the same task as well as in different tasks

singleTop- In this launch mode if an instance of activity already exists at the top of the current task, a new instance will not be created and Android system will route the intent information through onNewIntent(). If an instance is not present on top of task then new instance will be created.

singleTask- In this launch mode a new task will always be created and a new instance will be pushed to the task as the root one. If an instance of activity exists on the separate task, a new instance will not be created and Android system routes the intent information through onNewIntent() method. At a time only one instance of activity will exist.

singleInstance-This is very special launch mode and only used in the applications that has only one activity. It is similar to singleTask except that no other activities will be created in the same task. Any other activity started from here will create in a new task.

What is back stack?

Activities are arranged with the order in which each activity is opened. This maintained stack called Back Stack. When you start a new activity using startActivity(), it “pushes” a new activity onto your task, and put the previous Activity in the back stack.