

Activities

An activity is a single, focused thing a user can do. For example, an activity might present a list of menu items a user can choose from, or it might display photographs along with their caption. An application may consist of just one activity, or like most applications in the Android system, it can contain several.

Though activities may work together to appear to be one cohesive application, they are actually independent of each other. An *activity* in Android is an important part of an application's overall life cycle, and the way the activities are launched and put together is a fundamental part of the Android's application model. Each activity is implemented as an implementation of the Activity base class.

Almost all activities interact with the user, so the Activity class takes care of creating the window for you in which you can place your user interface (UI). Activities are most often presented in full-screen mode, but in some instances, you can find an activity floating in a window or embedded inside another activity — this is known as an *activity group*.

Activity Lifecycle

Refer to: <http://developer.android.com/intl/ja/reference/android/app/Activity.html>

Activities in the system are managed as an *activity stack*. When a new activity is started, it is placed on the top of the stack and becomes the running activity -- the previous activity always remains below it in the stack, and will not come to the foreground again until the new activity exits.

An activity lifecycle consists of the following six states:

- **Created:** The activity has been created and is ready to be displayed.
- **Started:** The activity is visible, but the user cannot interact with it yet. This state is typically followed immediately by the resumed state.
- **Resumed:** The activity is running in the foreground and the user can interact with it.
- **Paused:** The activity has been interrupted by a phone call or dialog message (e.g., a low-battery alert). This often leads immediately into the stopped state. The activity is usually still visible while paused, but obscured by a dialog so the user cannot interact with it.
- **Stopped:** The activity has been moved to the background and is no longer visible, but the instance still exists in memory. An activity can be re-launched from this state without re-creating it.
- **Destroyed:** The activity has been released by the system and no longer exists. This will happen automatically when the Android operating system deems it necessary.

The following diagram shows the important state paths of an Activity. The square rectangles represent callback methods you can implement to perform operations when the Activity moves between states. The colored ovals are major states the Activity can be in.

