

FUNDAMENTAL COMPONENTS IN ANDROID

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1. View

- *Views are user interface (UI) elements that form the basic building blocks of a user interface.*
- A view can be a button, a label, a text field, or many other UI elements
- Views are also used as containers for views, which means there's usually a hierarchy of views in the UI.

2. Activity

- *An activity is a UI concept that usually represents a single screen in your application*
- something that helps the user do one thing, which could be viewing data, creating data, or editing data

3. Fragment

- When a screen is large, it becomes difficult to manage all of its functionality in a single activity.
- *Fragments are like sub-activities, and an activity can display one or more fragments on the screen at the same time.*
- When a screen is small, an activity is more likely to contain just one fragment, and that fragment can be the same one used within larger screens.

4. Intent

An intent generically defines an “intention” to do some work

- Broadcast a message.
- Start a service.
- Launch an activity.
- Display a web page or a list of contacts.
- Dial a phone number or answer a phone call

4. Intent

- Intents can be explicit or implicit.
- to display a URL, the system decides what component will fulfill the intention.
- Intents loosely couple the action and action handler.

5. Content Provider

- Data sharing
- Android provide standard mechanism for applications to share data
- Through content providers, you can expose your data and have your applications use data from other applications.

6. Service

- *Services in Android resemble services you see in Windows or other platforms*
- Android defines two types of services: local services and remote services
- Local services are components that are only accessible by the application that is hosting the service

6. Service

- remote services are services that are meant to be accessed remotely by other applications running on the device.
- An example of a service is a component that is used by an e-mail application to poll for new messages.

7. AndroidManifest.xml

- defines the contents and behavior of your application.
- example, it lists your application's activities and services, along with the permissions and features the application needs to run.

8. Android Virtual Devices

- An Android Virtual Device (AVD) allows developers to test their applications without hooking up an actual Android device
- AVDs can be created in various configurations to emulate different types of real devices.