

# Android Primer

Sam Sudar

April 4, 2014

<https://github.com/srsudar/android-primer>

Building an app:  
Say my name.

Demo.

1: Configuration

2: Android at a glance

# 1: Configuration

# Installing Android

You're on your own. Google it.  
Nothing is more frustrating than not  
being able to get started. I've fixed a  
lot of Android builds. Email me if  
you're stuck and we'll figure it out:  
[sudar.sam@gmail.com](mailto:sudar.sam@gmail.com)

# Plunge into Eclipse

res/  
xml

Logcat

```
Log.e("MainActivity", "hello");
```

Support Library over ABS

# adb

Your friend. Put it on your PATH.

```
$ adb devices
```

```
$ adb shell
```

```
$ adb push
```

```
$ adb pull
```

## 2: Android at a glance



Activities

Views and Fragments

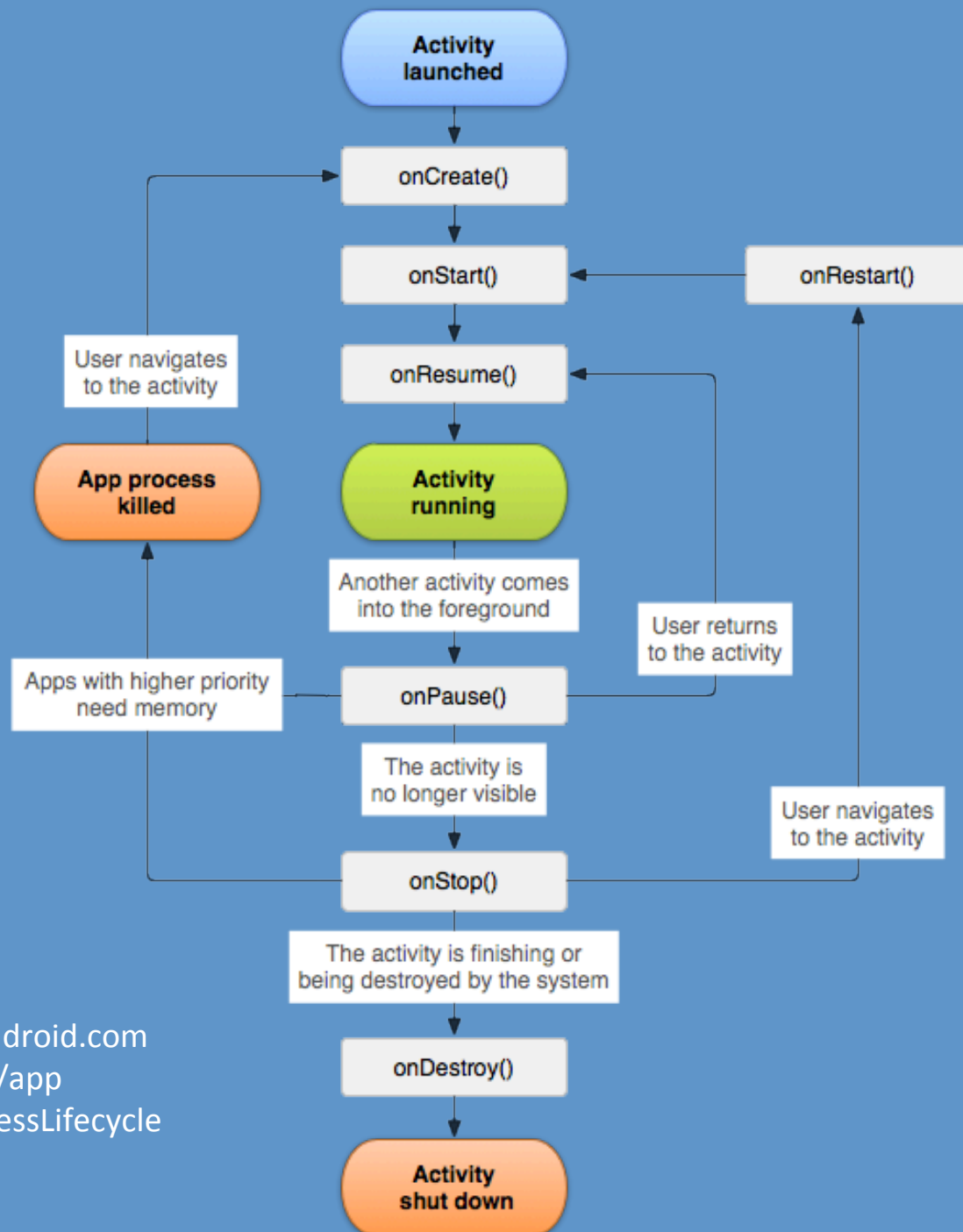
R.java

Intents

# Activities

A unit of user interaction.

- Lifecycle
- Android Manifest
- ActionBar
- Views and Fragments



<http://developer.android.com/reference/android/app/Activity.html#ProcessLifecycle>

# Activity Gotchas

- Didn't add to AndroidManifest.xml
- Respect the lifecycle!
- Rotation / Lock / Phonecall

# Views

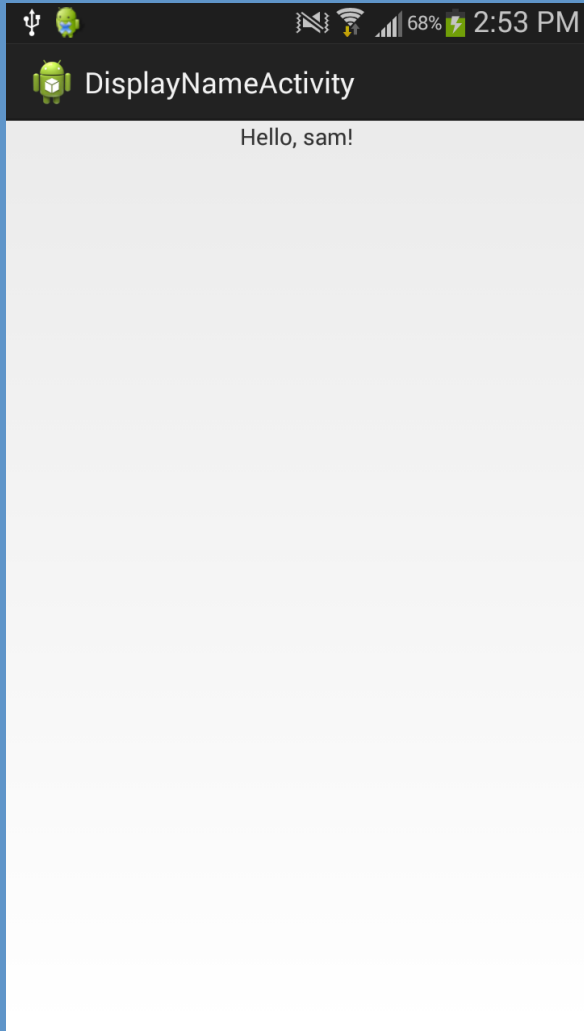
Something that is displayed to the user.

- View
  - TextView
  - Button
  - EditText (text entry)
  - Spinner (dropdown)
  - etc
- ViewGroup: holds views
  - LinearLayout
  - ScrollView
  - RelativeLayout
  - etc

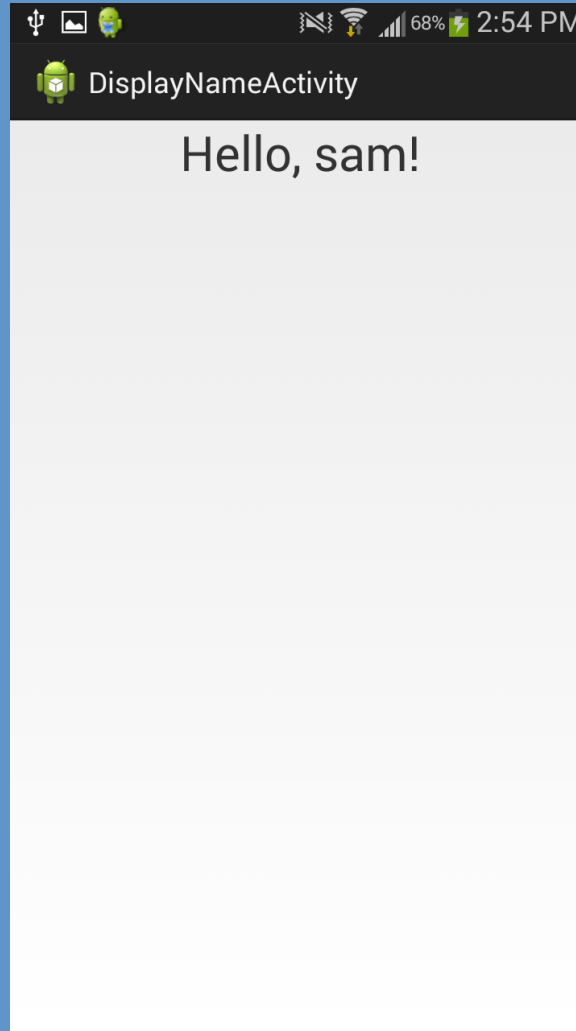
- Can configure statically (xml) or programmatically (java)
- Usually specified in res/layout
- Redrawn on rotation, those with ids are saved by the system



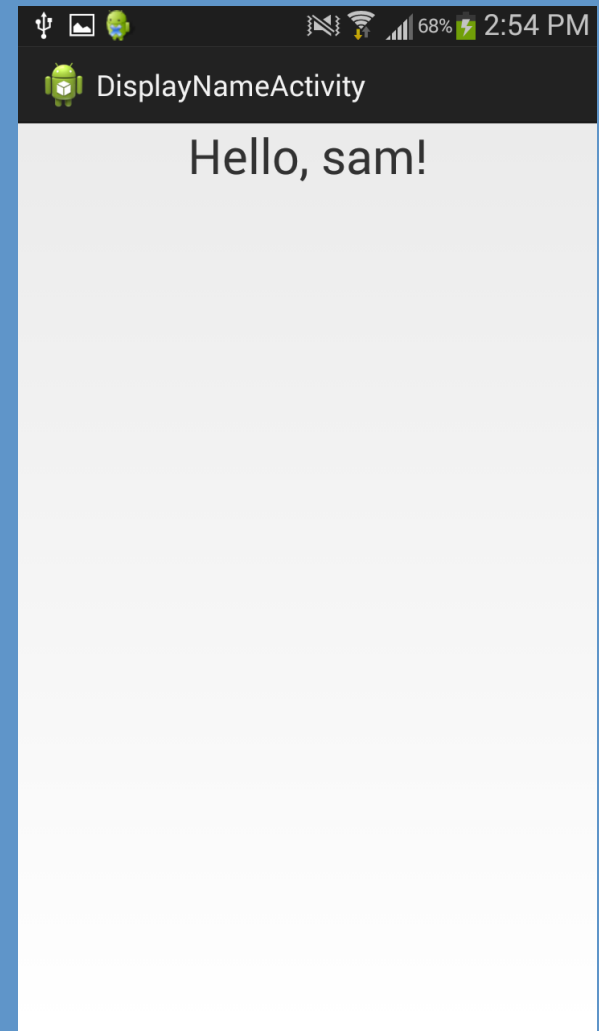
default



Java  
`mNameView.setTextSize(30)`



xml  
`android:textSize="30sp"`



# View Gotchas

- `.findViewById()` must follow view tree
- Some attributes required (e.g. `layout_width`)
- Wrap everything in a `ScrollView` or else you can't scroll
- `match_parent` vs `wrap_content`
- Let eclipse suggest things

# Fragments

A mini activity inside an activity.

Lets you resize for big screens easily.

Not talked about here for time reasons, but  
you should use them.

# Fragment Gotchas

- They have their own life cycle!
- Activity doesn't attach immediately, so `getActivity()` will return null through the first few lifecycle methods
- TWO CLASSES—support and standard, for all Fragment-related things.

# R.java

A bunch of int ids.

Built automatically!!! Don't edit it.

# R.Java Gotchas

- DO NOT edit it. Overwritten.
- Cannot find R.java—not your main problem.
- Two R.java files—yours and Android's
- Using the wrong id.

# Intents

How you launch other apps and activities.

How activities communicate.

- A Bundle is a map
- An intent (may) have a Bundle
- Can return information as well
  - `startActivityForResult()`



# If we have time

Protected vs external storage

adb backup

ContentProvider—imagine a web endpoint