Android: User Interface / Material Design

http://developer.android.com/design/material/

https://developer.android.com/design/

Ferruccio Damiani

Università di Torino
www.di.unito.it/~damiani

Mobile Device Programming
(Laurea Magistrale in Informatica, a.a. 2017-2018)

Outline

1. Material Design for Android

Outline
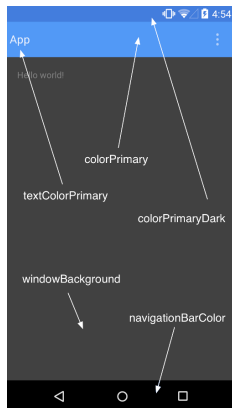
1. Material Design for Android

Widgets/Views

- A new comprehensive guide for visual, motion, and interaction design across platforms and devices
  - ► Android 5.0 (API level 21)
  - ► Compatibility with old versions
- Some new elements:
  - ► Specify the elevation of your views to cast shadows
  - ► Use system widgets for lists and cards
  - ► Customize the animations in your app

Material Theme

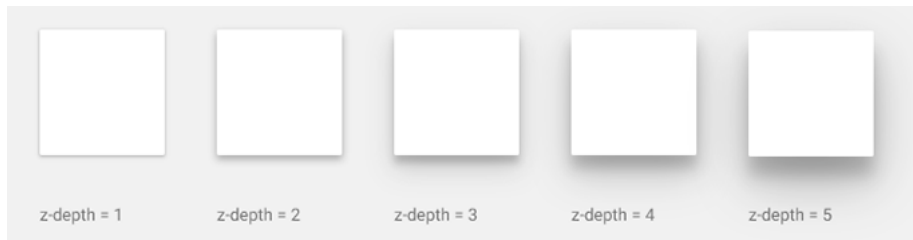File in res/values/


```
1  <resources>
2      <!-- your theme inherits from the material theme -->
3      <style name="AppTheme" parent="android:Theme.Material">
4          <!-- theme customizations -->
5      </style>
6  </resources>
```

Widgets/Views

- The Z value for a view has two components, elevation and translation
  - Translation is used for animations

z-depth = 1   z-depth = 2   z-depth = 3   z-depth = 4   z-depth = 5

RecyclerView (flexible version of ListView)
[The RecyclerView widget is part of the v7 Support Libraries]

- It is a container for displaying large data sets that can be scrolled very efficiently
  - It simplifies the display and handling of large data sets by providing
    - ★ Layout managers for positioning items
    - ★ Default animations for common item operations, such as removal or addition of items
- A layout manager positions item views inside a RecyclerView and determines when to reuse item views that are no longer visible
  - Recycling views improve performance by avoiding the creation of unnecessary views or performing expensive lookups

The RecyclerView widget

CardView (extends the FrameLayout)
[The CardView widget is part of the v7 Support Libraries]

- Shows information inside cards that have a consistent look across the platform
- A RecyclerView comes with an adapter to inflate a layout for organizing the cards
  - Cards need a dedicated layout