

PV239 #android2

cv4

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CUSTOMIZATION

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CUSTOMIZATION

- Styles
 - Custom views
- Themes
 - Custom app-wide looks
- Various build types
 - Debug, release, various optimizations
- Flavors
 - If you need to clone your app

STYLES

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Styles

- A style is a collection of attributes that specify the look and format for a View or window.
- When to use?
 - Couple of screens with multiple text formats
 - Many buttons (and you want to style them)
 - etc
- You can extend styles (parents)

Styles

- Button example (styles.xml)

```
<style name="CalcButton">
    <item name="android:minWidth">@dimen/calc_button_min_width</item>
    <item name="android:minHeight">@dimen/calc_button_min_height</item>
    <item name="android:background">@drawable/calc_button</item>
    <item name="android:gravity">center</item>
    <item name="android:layout_margin">@dimen/calc_button_margin</item>
</style>
```

- Usage (layout/fragment/view.xml)

```
<Button
    android:id="@+id/calcFiveButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    style="@style/CalcButton"
    android:text="5" />
```

Styles

- Color
 - colors.xml file
 - `android:background="@color/colorCloseButtonBackground"`
- Shape
 - xml file in drawable
 - gradients, strokes, ...
 - `android:background="@drawable/myViewBackground"`
- Selector
 - mainly buttons (various states)
 - states defined in xml
- Various displays

Shape & Selector

- Shape (xml file in drawable/)

```
<?xml version="1.0" encoding="UTF-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="rectangle" >
    <gradient
        android:angle="90"
        android:centerColor="#112233"
        android:endColor="#445566"
        android:startColor="#332211"
        android:type="linear" />
</shape>
```

- Selector (xml file in drawable/)

```
<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:drawable="@color/colorPrimary" android:state_selected="true"/>>
    <item android:drawable="@color/colorPrimaryDark"
android:state_pressed="true"/>>
    <item android:drawable="@color/colorAccent"/>
</selector>
```


THEMES

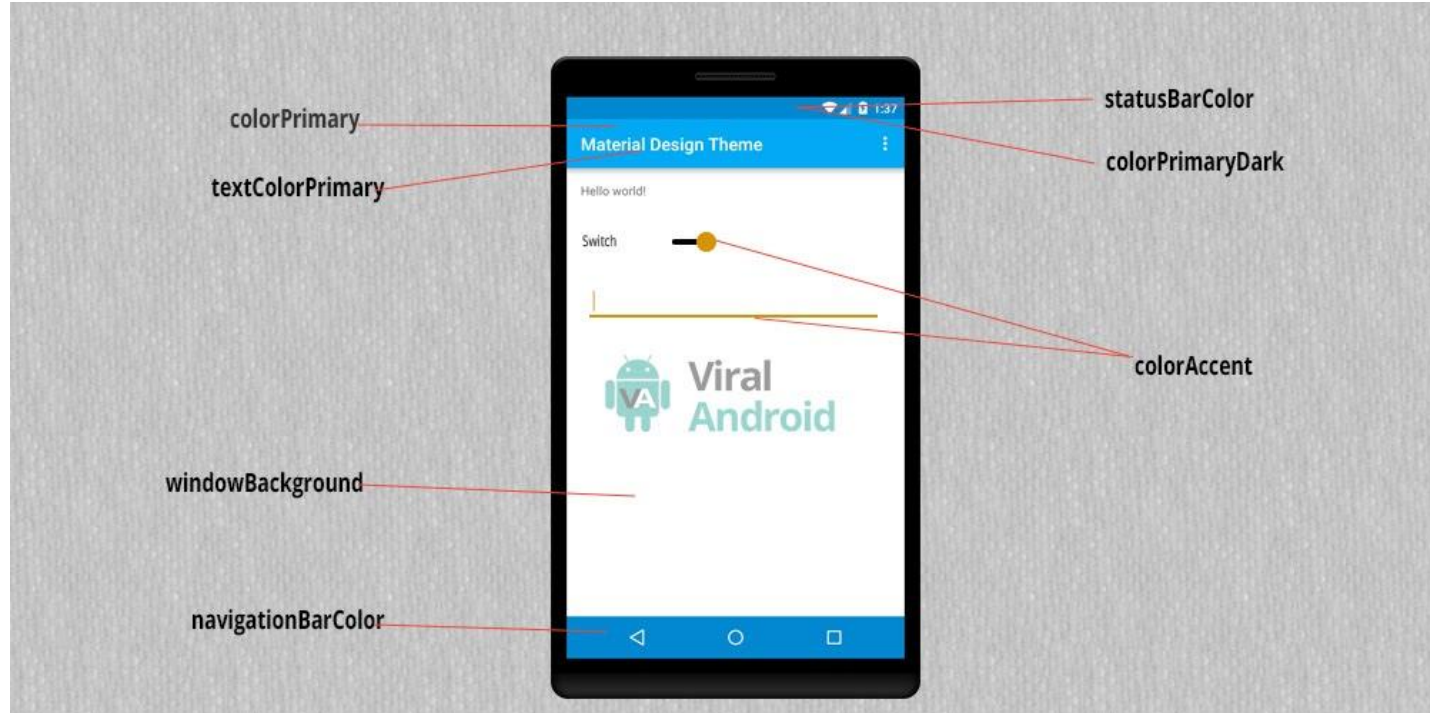
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Themes

- A theme is a style applied to an entire Activity or app, rather than an individual View (styles.xml)

```
<!-- Base application theme. -->
<style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
    <!-- Customize your theme here. -->
    <item name="colorPrimary">@color/colorPrimary</item>
    <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
    <item name="colorAccent">@color/colorAccent</item>
    <item name="android:windowBackground">@drawable/activity_background</item>
    <item name="android:buttonStyle">@style/AllButtons</item>
</style>
```

Themes



<http://www.viralandroid.com/2015/08/android-custom-material-design-theme-color.html>

Themes - how to apply the theme

- In AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="cz.muni.pv239.marek.cv4">
    <application
        ...
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            ...
        </activity>
    </application>
</manifest>
```

CUSTOM APK OUTPUTS

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Build types

- A configuration for binary output.
- Build.gradle:

```
buildTypes {
    debug {
        minifyEnabled false
        proguardFiles getDefaultProguardFile('proguard-android.txt'),
'proguard-rules.pro'
        signingConfig signingConfigs.debug
        applicationIdSuffix ".debug"
    }
    release {
        minifyEnabled true // use proguard
        shrinkResources true // remove unused resources
        proguardFiles getDefaultProguardFile('proguard-android.txt'),
'proguard-rules.pro'
        signingConfig signingConfigs.release
    }
}
```

Signing Configs

- Signing configs allow us to sign various build types with custom keys..
- Build.gradle:

```
signingConfigs {  
    // it is not safe to store passwords here but you get the idea :)  
    // check the git repository ;)  
    debug {  
        storeFile file('../extras/keystore/release.jks')  
        keyAlias 'android'  
        storePassword 'android'  
        keyPassword 'android'  
    }  
    release {  
        storeFile file('../extras/keystore/release.jks')  
        keyAlias 'android'  
        storePassword 'android'  
        keyPassword 'android'  
    }  
}
```

Flavors

- A product flavor defines a customized version of the application build by the project.
- build.gradle:

```
productFlavors {  
    demo {  
        applicationIdSuffix ".demo"  
        versionNameSuffix "-demo"  
    }  
    full {  
        applicationIdSuffix ".full"  
        versionNameSuffix "-full"  
    }  
}
```


Build.gradle

- `buildToolsVersion` (your build tools version - android sdk manager; 25.0.2)
- `compileSdkVersion` (you should always use the latest; 25)
- `targetSdkVersion` (tested up to; 25)
- `minSdkVersion` (minimum api level, where the app is able to run; 15)
- `applicationId` (reverse organisation + project codename;
`cz.muni.pv239.marek.cv4`)
- `versionCode` (increase with every deploy; 1)
- `versionName` (whatever you like - visible to the user; "1.0.0-SNAPSHOT")

EXAMPLES IN GIT

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THANK YOU

See you on Slack.

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