

Android Tutorial

Lukas Herzberger

Agenda

- Basic Project Structure
- Android Manifest
- Activities

Basic Project Structure

- **Activities** define your app's functionality and layout (Java classes + xml layout files)
- The **Android Manifest** defines your app's meta information (AndroidManifest.xml)
- The **Gradle file(s)** define all information necessary to build your app (dependencies, etc.)

Android Manifest

- Contains all information on your app!
- Everything your app needs has to be specified here:
 - Permissions & Requirements (e.g. Camera, Internet, Sensors...)
 - Activities
 - Metadata (e.g. name, icon, etc.)

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.lukas.citybike">

    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />

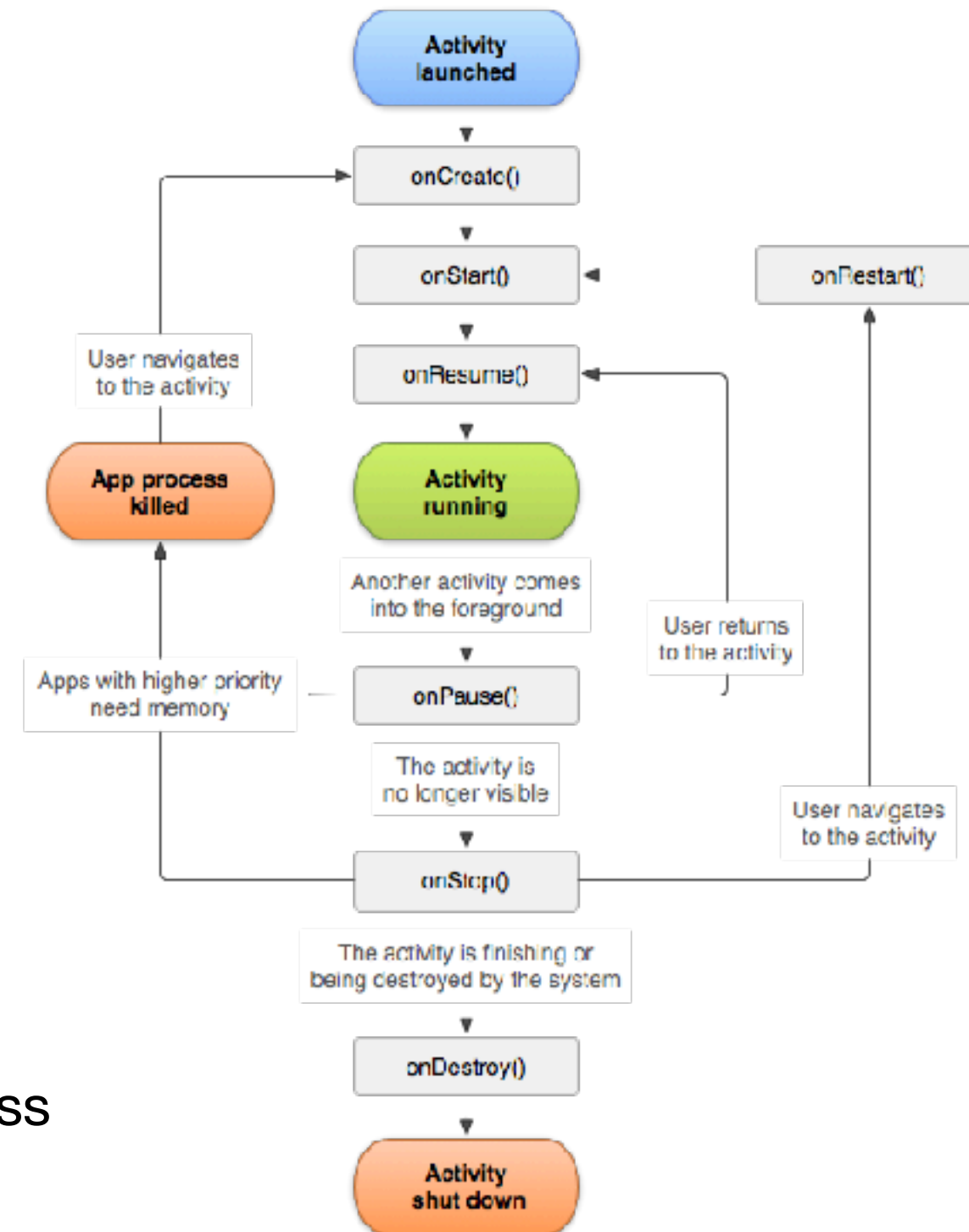
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="Citybike"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".ResultScreen"/>
    </application>

</manifest>
```

Activities

- i.e. your „screens“
- act as an entry point for your app
- let your users interact with your app
- define functionality of your app in Java classes
- define layout of your app in xml layout files
- use the **lifecycle callbacks** to define your app's behavior!
- Use **Intents** to launch a new activity and pass information to it



Application Context

- Provides an interface to global information about the app's environment
- Allows access to app-specific resources and classes:
- Allows access to system resources and services

Let's code!

Cheatsheet

- add Permissions to Android Manifest:
INTERNET, ACCESS_NETWORK_STATE
- add dependency „Volley“ to Gradle file:
compile 'com.android.volley:volley:1.1.0'
- create new ResultActivity (class & layout file)
- add ResultActivity to Android Manifest
- use putExtra() to add additional data to an Intent object