

Android Native Apps



Technische Universiteit
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Where innovation starts

Android platform

Applications

Home, Contacts, Phone, Browser, ...

Application Framework

Managers for Activity, Window, Package, ...

Libraries

SQLite, OpenGL, SSL, ...

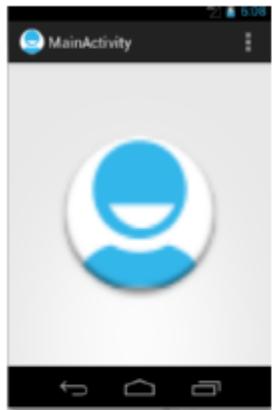
Runtime

Dalvik VM, Core libs

Linux Kernel

Display, camera, flash, wifi, audio, IPC (binder), ...

Tasks



1.) User triggers "Pick photo" via button

2.) Start Gallery

4.) Return selected photo



3.) User selects photo

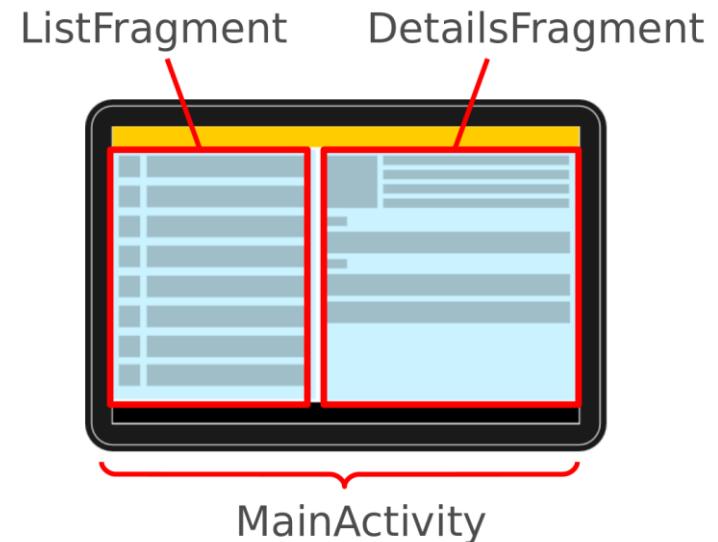
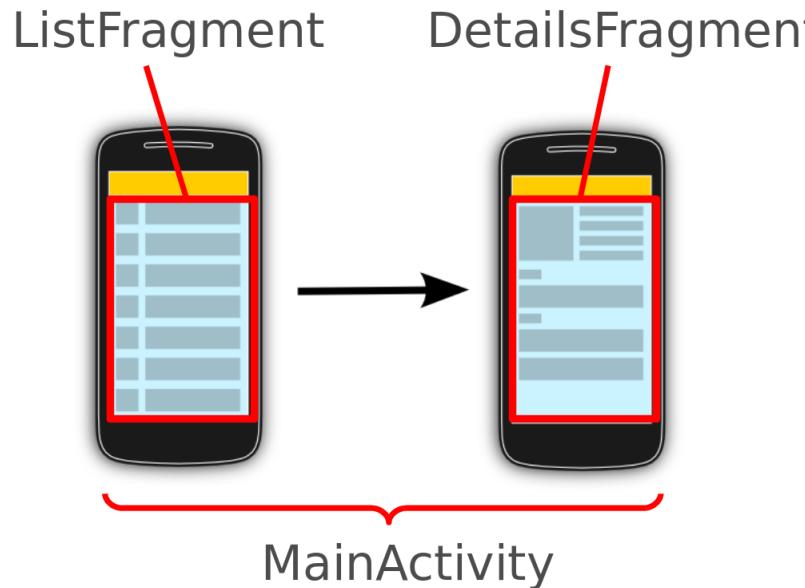
Android software components

- Context
 - Activities – user interfaces (views and fragments)
 - Services – tasks without UI
- BroadcastReceiver – listen to messages and intents
- ContentProvider – access to data

Hello Android revisited

Activity

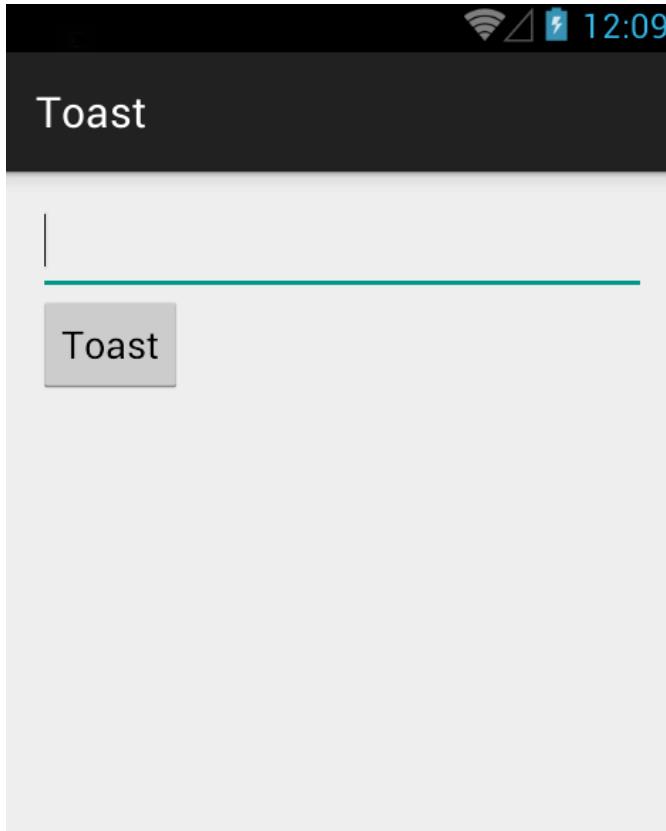
- Fragments



Views and layout manager

- Views
 - Buttons
 - Test fields
 - ...
- Layout managers
 - LinearLayout
 - GridLayout
 - RelativeLayout
 - FrameLayout
 - ...

Example: RelativeLayout



Homework

- Follow the tutorial and try out the examples at:
 - <http://www.vogella.com/tutorials/Android/article.html>
- Try to create a Currency Converter (USD↔EUR)
 - Hint: learn from “Temperature Converter” from the tutorial.
- If the Currency is too easy for you: (not required)
 - Create a simple calculator.