Praktikum Entwicklung von Mediensystemen (Android)

Sommersemester 2014

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Today

• Recap
• Android 102
• Hands-On
• Assignment 02
ANDROID 102
Fragments

• Similar lifecycle compared to an Activity
• Used to reduce overhead and adapt to different layouts more quickly
• Encapsulate responsibility

• Make sure to use interfaces for communication between Fragments/Activities
Fragments

Services

• Perform long running tasks
• Have no UI and initially do not run in own thread
• Multiple clients can bind to them and exchange data

• Can be use to share information between multiple applications (IPC)
Android 102

Services

http://developer.android.com/guide/components/services.html
Toasts

- Toast.makeText(context, text, duration).show();

Android 102

Notifications

• Global notifications
• Link to Activity and display first information
• Can be modified/dismissed after posting and made sticky

• Keep the design guidelines in mind

Android 102

Animations & Graphics

• Property animation
  – Animate properties of any object
• View animation
  – Stack multiple animations together and animate a View
• Drawable animation
  – Create an “animated gif” out of stacked images
• Canvas drawing
  – Manual control, explicit draw commands
• OpenGL

Sensors

• Around 15 different sensors currently supported
• Differentiation between three main classes
  – Motion, Position, Environment
• Unified interface for access
  – getSystemService(SENSOR_SERVICE);
  – getDefaultSensor(Sensor.TYPE_ACCELEROMETER);
• Register listener for updates (including frequency)
  – SensorEventListener, SensorEvent
  – Make sure to unregister (e.g. on onPause)
Broadcasts & Broadcast Receivers

- Sends messages within your application or system wide
  - Intent.ACTION_DIAL
  - Intent.ACTION_SENDTO
- React to events triggered by the system
  - Intent.ACTION_BOOT_COMPLETED
  - Intent.ACTION_POWER_CONNECTED
- Build your own, either exposing data or reacting to events
- Use Intent to share information
HANDS-ON
ADDITIONAL INFORMATION
Assignment 02

• Individual assignment
• Build up on your previous work
• Fragments, Notifications and screen layouts

• Due in 2 weeks (08.05.)
• Submission via Uniworx
Next Lecture

• Next lecture in 2 weeks (08.05.), 14.00h

• Semester project introduction
• Teaming up
Questions

- Open Q&A
Resources

• Android Developers
  – http://developer.android.com/design
  – http://developer.android.com/training

• Google IO Session Recordings
  – https://developers.google.com/events/io/2012

• Google IO Schedule App
  – https://code.google.com/p/iosched