

Hands-on Android

Ever wondered how to unleash the computing power of your phone or tablet? How can we use such devices to talk to our own developed hardware? How hard is to make a sensor monitoring app or an app that can control an actuator remotely?

This course takes advantage of modern and unique high technology facilities located at campus Sønderborg of SDU to provide a thorough hands-on introduction to practical Android application development by addressing:

- Basics of Android programming
- Activities and background services
- Implementing wireless communication (Bluetooth / WiFi)
- Powerful user interfaces: charting tools for sensors, use of touch screen or internal sensors for remote control of external hardware

The aim is to give an overview and a crash hands-on course of how we can use Android to make powerful apps to serve the development of third party hardware and be ahead of the curve in user interaction. The course was developed by researchers of the Mads Clausen Institute.

Benefits

On the course you will receive:

- A Google Asus Nexus 7 tablet ready for your first app
- An overview of Android: what is it all about?
- Knowledge about object oriented programming
- Knowledge about key concepts in Android: activities, services, intents and broadcast receivers
- Knowledge about wireless communication
- Easy to understand examples for all the important concepts
- Individual assistance for developing your own app
- Opportunity to exchange experiences and network with colleagues

Audience

The course content is addressed to skilled professionals working in different industrial sectors related to hardware/software, home automation or smart sensor/actuator development.

Knowledge of either C/C++/Java programming language and an understanding of object oriented programming concepts, corresponding to a bachelor, civil engineer, professions bachelor or similar is expected.

Time and place

21.-23. January 2015

The course is held at University of Southern Denmark, Sønderborg campus

Price

9.000 kr. excl. VAT

The price includes tuition, materials and meals during the course days. The tablet will be yours after the course.

The price does not include accommodation.

Registration

Deadline 12. December 2014

On our website: www.sdu.dk/sdue

Program

Day 1 Morning: Introduction to Android

- Introduction to Android and Object Oriented Programming
- Practical session: Writing and testing your first app

Day 1 Afternoon: Key Concepts in Android

- Activities and intents
- Practical session: Adding key concepts to your first app

Day 2 Morning: Charting

- Charting tools
- Practical session: Using the Achart Engine to display internal sensor data

Day 2 Afternoon: Services

- Background services and broadcast receivers
- Practical session: Build an app with service/activity interaction

Day 3 Morning: Communication

- Bluetooth and Wireless Communication
- Practical session: Implementing simple Bluetooth/WiFi communication on the tablet

Day 3 Afternoon: Hands-on App development

- Practical session: Build an app that can read external sensors
- Practical session: Build an app that can control external actuators

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