

# Course Introduction - DT1062

Development of mobile and  
embedded systems

ANDROID

Teacher

Hans Jones – [hjo@du.se](mailto:hjo@du.se)

# Learning goals, contents, labs, points and examination

- Learn > Kursinformation > Kursplan
  - <http://www.du.se/sv/Utbildning/kurser/kursplan/?code=DT1062>
- Examination
  - Labs – can be done in student pairs
  - Computerbased "tenta" as in the web development course – can be done at a learning center
    - Questions in frontier
    - Practical tasks in Android
- Students are assumed to have basic knowledge and skills
  - in Java or similar languages like C#
  - how an operating system and its services it offers works
  - XML and web technologies

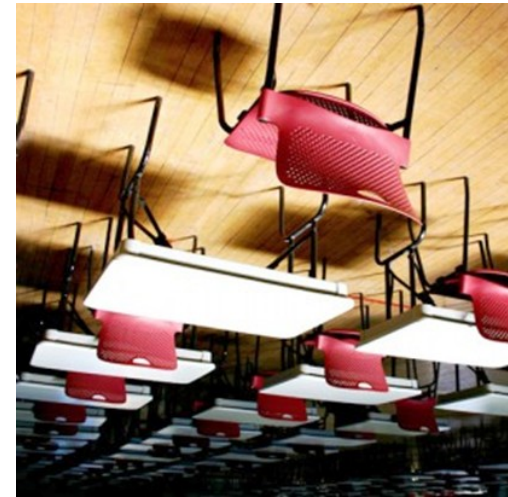
# Course contents (outline), and study material/methodology

- Learn > Kursmaterial > Studiehändledning
  - A work in constant progress! Android is evolving... FAST!
- 4 sessions/week, 2 lectures and 2 labs
  - During w38 I will be away, can be reached via email/slack
- Online material (with pointers), recorded sessions and slides (updated) from previous years
- Every week at least one relevant question from every student must be asked during lab or emailed to the teacher if not participating on lab
  - The question can cover anything we treated in the course that far at the moment
  - This is hopefully a way to increase discussions during sessions

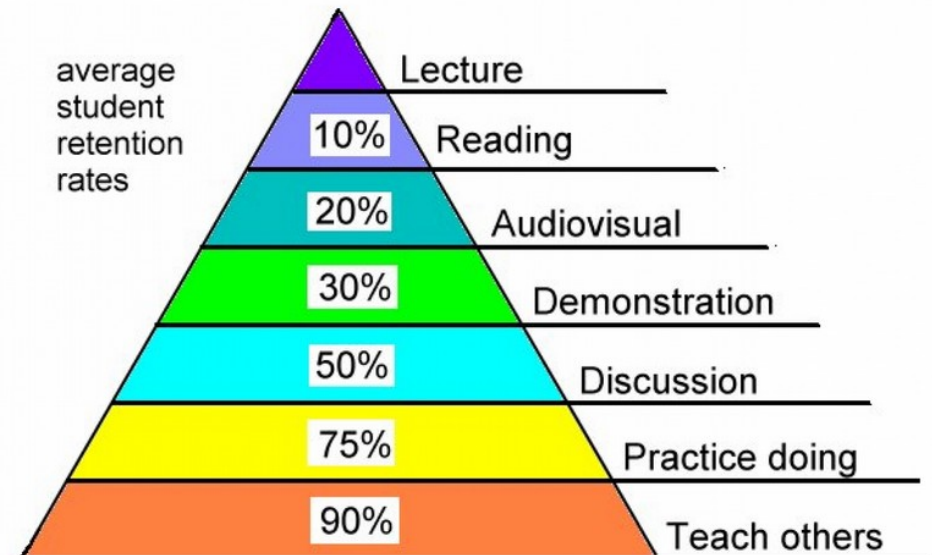


# Flipped classroom

- Recorded lectures and seminars (in our case labs) replace the traditional lectures
- Active learning
  - Engage the student
  - Student responsibility
  - Not only listen and read
- Relieve the teachers
  - Increase time and efficiency
  - Student discussion (and peer review) is desirable
    - Students can do labs in pairs, but hand in is individual



## Learning Pyramid



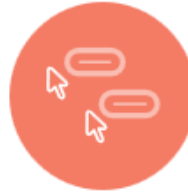
Source: National Training Laboratories, Bethel, Maine

# Screenhero

- Remote pair programming
  - Screenhero gives you low-lag screen sharing, multiple mouse cursors, and voice chat.
  - You each get your own mouse cursor, and you're both always in control.
  - It works with your favorite IDE, text editor, or app.
- To begin using Screenhero get an invite from the teachers
- <https://screenhero.com/>

## Screenhero features

Screenhero is specifically tailored for effortless real-time collaboration



### Multiple mouse cursors

You both have your own mouse cursor. Now both sides can switch seamlessly between driving and navigating, with zero cognitive overhead.

### Voice chat

Effective collaboration requires being able to speak with your collaborator while you work together. Screenhero provides crisp, 48kHz audio with echo cancellation.



### Lightning fast screen sharing

Screenhero provides the lowest latency screen sharing on the market, even at full resolutions. You feel like you are working at the same desk.

### Cross platform

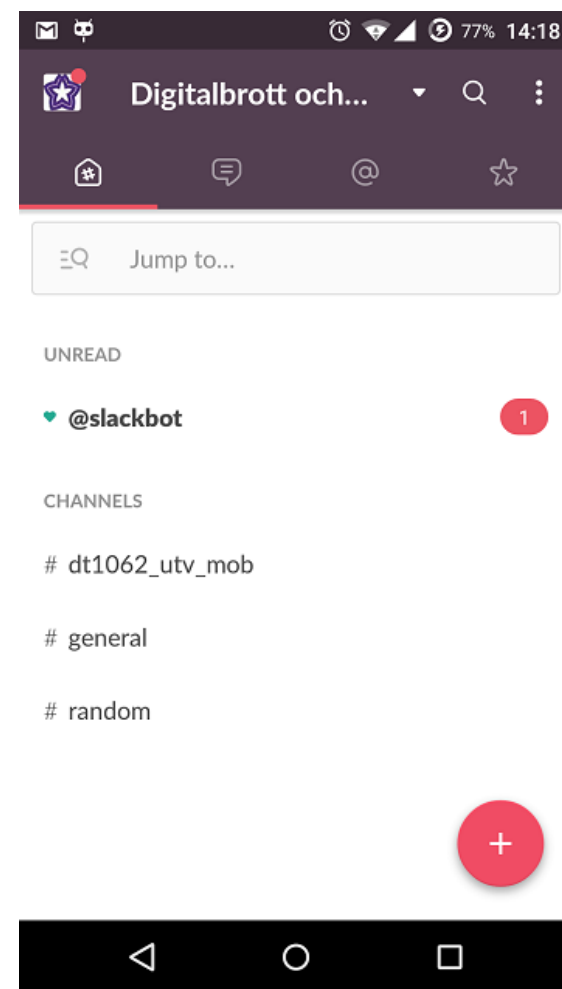
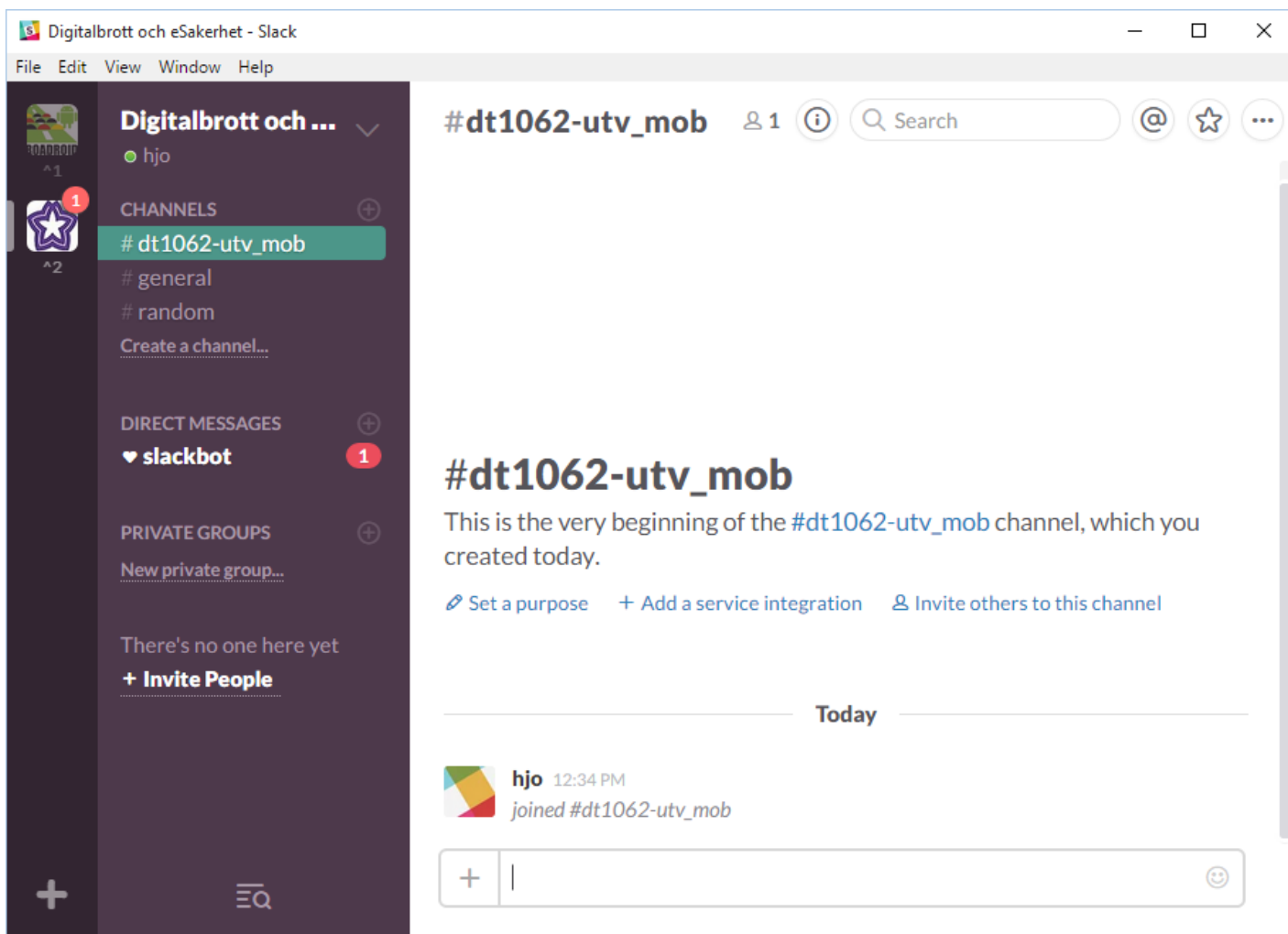
Screenhero is cross-platform, which means you can share between Mac and Windows (and any other future platforms). On Mac, we support: Mac OSX 10.8+, 10.9+. On Windows, we support: Windows 7





# slack

<https://slack.com/> > Sign in > Teamdomain (digitalbrott-du)  
To begin using Screenhero and Slack get an invite from the teacher



<https://digitalbrott-du.slack.com/>

# Literature (any book will basically do the job)

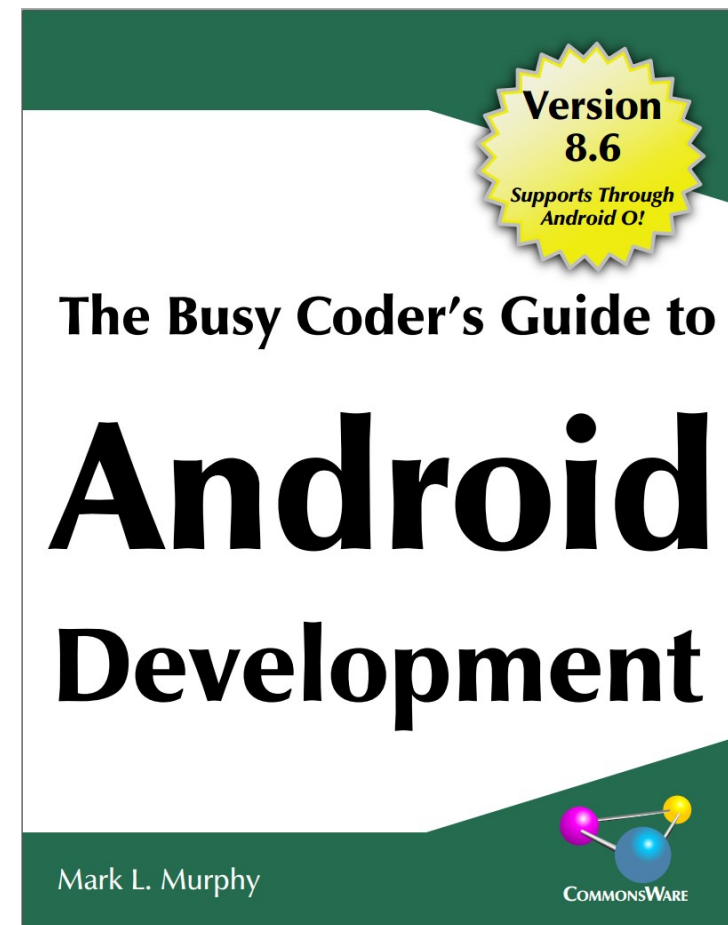
- There is an abundance of literature and various resources available dedicated to Android
  - From Google, different web sites and YouTube channels etc.
- The Busy Coder's Guide to Android Development
  - Many quality sample apps (free dwnl)
  - <https://commonsware.com>
  - Description (subscribe for \$20)
  - Around 4500 pages!

For Android Studio 2.3 (3.0 soon), covering the Android SDK up to 8.0 (Android Oreo)

Do you want current information about how to develop Android apps?

This book covers the latest Android Studio version and the latest version of Android, plus all the information you need to get your apps working on older devices.

And, with updates coming every couple of months via the Warescription, you will keep up to date.

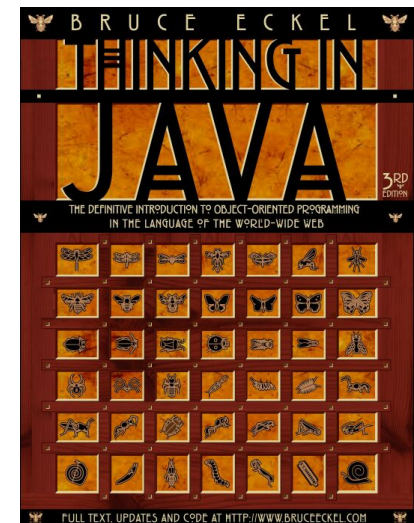
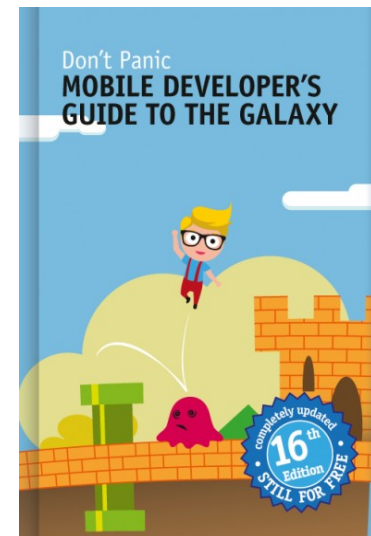






# Other resources



- Android Developers
  - <http://developer.android.com>
- Mobile Developer's Guide To The Galaxy
  - <http://enough.de/en/app-coaching/devguide/>
- Vogella Android Development
  - <http://www.vogella.com/>
- Free Electronic Book: Thinking in Java
  - <http://www.mindview.net/Books/TIJ/>
- Android Apps Development Tutorial for Beginners (on YouTube)
  - Your main resource to learn Android?



 Developers 	<b>Design</b>	<b>Develop</b>	<b>Distribute</b>
	<a href="#">Get Started</a> <a href="#">Style</a> <a href="#">Patterns</a> <a href="#">Building Blocks</a> <a href="#">Downloads</a> <a href="#">Videos</a>	<a href="#">Training</a> <a href="#">API Guides</a> <a href="#">Reference</a> <a href="#">Tools</a> <a href="#">Get the SDK</a> <a href="#">Google Services</a>	<a href="#">Google Play</a> <a href="#">Publishing</a> <a href="#">Promoting</a> <a href="#">App Quality</a> <a href="#">Spotlight</a> <a href="#">Open Distribution</a>