



The 18th International Summer School on Telecommunications

Codecamp 2009

Opening Speech



LAPPEENRANTA
UNIVERSITY OF TECHNOLOGY

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Welcome

- Welcome to the Codecamp part of the 18th Summer School on telecommunications
- Code Camp is aimed mainly at students interested in software development. The Camp begins on Friday evening (that's now!) and lasts for nearly 24 hours. It includes 24 hours of intensive programming.
- The best work done during the code camp (based on application, idea or implementation) will be awarded. The **"Codecamp spirit"** will play a role in award selection also. Code camp spirit is about sharing knowledge between participants, preferring common good to own benefit.

Practical Issues

- Location: Basement of Student Union House (downstairs from here, outside entrance on the back side of the building, or via the elevator)
- Snacks and refreshments available, bigger meals (if needed) you have to obtain yourself
- Sauna is available
- Sleeping with own sleeping bags or similar

Topic

- We have selected *Mobile application with music technology* as the theme of this year's CodeCamp
- We have reserved Nokia N810 Internet tablets as development and testing environment
 - SDK's installed on PC computers
 - Programming languages recommended are C++ and Python



Development environment

- We have set up an environment of 6 desktop computers and 6 Nokia N810 Internet tablets
 - If there will be more than 6 groups, or groups need more than one device, try to share devices if UI use is needed
- We have a network outside of University network
 - possibility to plug in own computer and gain Internet access
- Wireless access point also available, ESSID is **codecamp** and everything set to automatic, no security
 - This access point can be used both with Nokia N810 (already configured) and with own notebooks

Development environent

- Computer software versions
 - Ubuntu 9.04 Linux distribution with GNOME
 - Eclipse platform with ESBOX plugin (Maemo development)
 - Scratchbox 2 cross-compilation engine and maemo-sdk+ for N810 software development
 - Maemo 4.1.2 (DIABLO) software version in devices and maemo sdk rootstrap (contains file systems for the working environment)

Development environment

- **maemo-sdk** executable is frontend for maemo sdk+ functions, see <http://www.codecamp.fi/wiki> for more information
- maemo-sdk uses scratchbox2 to run commands in the SDK environment.
- commands can be run using scratchbox2 by writing **sb2** command
- Scratchbox has two targets for the development:
 - diablo4.1.2_386 is used to generate code to be run in desktop computers, in Maemo SDK
 - diablo4.1.2_armel is used to generate code to be run in nokia N810 devices, use this to build to system
 - switching between these can be done using maemo-sdk command
 - If using esbox plugin of the Eclipse IDE, target can be selected with each operation

Computer environment

- Username for the computers: **codecamp**
 - password: **codecamp**
 - root (i.e. administrator) privileges can be gained with sudo command, for example
 - **sudo -i** (gets a root shell)
 - **sudo whatevercommand**
(runs a command as root user)
- Root password for Nokia N810's: **codecamp**

Computer environment

- Computers and Nokia N810s can be connected to each other using wireless network
 - PC IPs range from 192.168.1.201 - 192.168.2.206 (hostnames are codecamp1 -codecamp8)
 - N810 IPs range from 192.168.2.100 - 192.168.1.105 (hostnames N810_0 - N810_5), you can see the hostname from the back of the device
- USB network between N810 and PC's are not configured, but it's possible to use.
- Bluetooth dongles available, for Bluetooth connection between devices and PC's

Computer environment

- You can connect to N810 devices with ssh (or scp for file transfers):
 - **ssh root@N810_X** (X ranging from 1 to 6, depending on the actual device, see back of the tablet) and use codecamp as password
 - **scp file root@N810_X:** (copies file to Nokia N810)
 - you can use computers own graphical file manager, hit CTRL+L (Go-Location from menu); enter sftp://codecamp@N810_X
 - ESBOX plugin inside Eclipse IDE can connect and transfer files to devices

Information about CodeCamp Wiki

- Wiki system is installed for the codecamp participants for sharing information
 - participants can register to wiki themselves
 - ... feel free to create new pages, edit existing (if you feel that editing is required), but remember Netiquette and behave accordingly
- **Wiki** is available at **www.codecamp.fi** , and it's set as a home page for browsers in computers.
 - **<http://www.codecamp.fi/wiki>**

Links

- Maemo - <http://maemo.org/>
- Scratchbox 2 -
<http://www.freedesktop.org/wiki/Software/sbox2>
- Esbox Eclipse plug-in: <http://esbox.garage.maemo.org/>