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## Android Smartphone Programming

<http://proglang.informatik.uni-freiburg.de/teaching/androidpracticum/2013/>

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### Exercise Sheet 7/ Project

## 1 Cellphone Lock (12 points)

In this exercise you will create an application to constitute an electronic lock for your cellphone. The idea behind this application is to connect the USB cable, or charging cable, and to use this connection as lock. An alarm should occur if the cable connection gets unplugged.

**Alarm** If the lock mechanism is active an alarm sound has to be played if the cable gets unplugged. The alarm has to be deactivatable by entering the PIN.

**Settings** Develop a possibility to activate or deactivate the *Cellphone Lock*. Your *Cellphone Lock* has to be protected by a PIN such that it is impossible to deactivate the application by an unauthorized person.

**State** Develop a possibility to recognise if the *Cellphone Lock* is currently active or inactive.

## 2 Additional Feature (4 points)

Choose and develop *one* additional feature by your own. The feature has to be in the dimension of the provided examples. All extensions include a setting possibility.

- Take and send an picture in the moment of theft
- Send a continuous GPS locations to a SMS receiver
- Activate the SIM-Lock or Cellphone-Lock of your phone
- Extend the *Cellphone Lock* with a GPS lock feature

### 3 Publish your Software (4 points)

This part is to complete and to publish your software application *Cellphone Lock*. Provide an installable *.apk* file with your application. Deploy your application and provide a QR-Code to install your application.

*Hint: Take use of your university web directory /~user/ to publish your application. Your QR-Code has to include a link to the .apk file.*

Your submission has to include the QR-Code (as *.pdf* file) and the *.apk* file.

#### Submission

**Deadline** The submission deadline is **11.02.2014, 12:00 (noon)**. Late submissions will not be accepted.

**Project** Create an *Eclipse Project* `exercise7/ Project_<number>` for each exercise. Use `androidlab.exercise7/ Project_<number>` as package name. Make sure that your project include all source files.

**Report** Your solution will consist of a *pdf file* `report7/ Project_<number>.pdf` with a description. The description must be limited to one page per exercise. Submitting more than one page will lead to reduction in points. The description may be either in German or in English. Clear and understandable style is required.

**Submission** Submit your solution to the subversion repository. Your solution will consist of one *folder* `exercise7/ Project_<number>` for each exercise which include the eclipse project and the report.

You are strongly encouraged to test your solution. Provide your source code with comments to understand the intention. Clear and understandable style is required.