Test Report

Introduction

Purpose of application
To help students find their way around Chalmers campus. Finding entrances to buildings and classrooms.

General characteristics of application
Uses Google maps as GPS for navigation. The user can see themselves on the map and set out destinations, enter buildings and navigate between floors inside buildings.

Test Environment

The testcode is located in a sub-project of the main project, in the tests directory in the root. Ant is used to launch the tests.

Hardware environment
When testing locally, such as before pushing a commit to github, either a physical device or an emulator may be used.

The following devices have been used:
Samsung Galaxy S2 - Android 4.0.4
HTC Sensation - Android 4.0.3
Sony Ericson - Xperia ray 2.3.4
Emulator on OS X 10.8: Android 2.3.3 - API Level 16

Software environment
Locally we have been doing testing against both 2.3.4 and later versions like 4.0.4

Softwares
Apache Ant (version 1.8.2)
Android Development SDK
Eclipse and the Android Development Plugin

System information

System version
CTHmaps v0.3

Known bugs and limitations

- The destination-flags-pole-position is not graphically exactly the same as the end of the drawn route
- The route between current location and destination is only shown “as the crow flies”, that is it is not drawn accordingly to the streets.
- Options view is under development and does at the moment not contain any real functions.
- Few classrooms exists in database (this could be extended with further classrooms during further development)

Test specification
see Appendix: Acceptance Tests

Automatic test

OVERALL COVERAGE SUMMARY

name	class, %	method, %	block, %	line, %
all classes	15% (5/33)	22% (33/147)	18% (493/2708)	23% (132/567)

OVERALL STATS SUMMARY

```
total packages:         5
total executable files: 16
total classes:          33
total methods:          147
total executable lines: 567
```

COVERAGE BREAKDOWN BY PACKAGE

name	class, %	method, %	block, %	line, %
se.chalmers.project14.activities	0% (0/14)	0% (0/42)	0% (0/631)	0% (0/136)
se.chalmers.project14.model.overlay	0% (0/11)	0% (0/60)	0% (0/1378)	0% (0/248)
se.chalmers.project14.model	60% (3/5)	70% (19/27)	44% (84/192)	59% (39/66)
se.chalmers.project14.model.storage	50% (1/2)	71% (10/14)	79% (374/472)	78% (84/108)
se.chalmers.project14.utils	100% (1/1)	100% (4/4)	100% (35/35)	100% (9/9)

We use the code coverage tool called “EMMA”, which is a open source toolkit for measuring and reporting Java code coverage.

Unit tests
We have been writing Junit tests using the built-in testing framework in the Android SDK.
We focused on testing as much as possible except the code that involves GPS, as it’s much more difficult and time demanding.
We rely a lot on our acceptance testing. We think it’s the best way to test if the app does what the user expects it to do, and does it well.

We have also been testing the database ,SQLite Database. We used an Android testing context called “RenamingDelegatingContext” which created a new empty database that doesn´t mess up with our real database that are used in CthMaps app.

Test table

See “TestReport table” for information about how the tests went.