



BCSWomen
Specialist Group

BCSWomen Android Family Fun day Presenters' outline

This document provides timings and tips for presenters, and will presumably grow as the workshop runs

Version 1.0

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- b) release any versions you develop yourself, using a similar license (so if you make something cool with this, you've got to give it away too). More information here:
<http://creativecommons.org/licenses/by-sa/3.0/>

The current version will be kept at <http://www.hannahdee.eu/appinventor> along with all other materials. If you've any suggestions for improvements, let me know on hmd@hannahdee.eu and I'll incorporate them in future versions

Overview

This workshop is based on family groups coming along and having a go at programming android phones and tablets, through using MIT AppInventor. It's basically got four stages

- Installing the software
- Following instructions to build an app
- Editing an app
- Building your own app

And the workshop takes about 5 hours, including breaks.

Schedule & timings

10:00am – 11:30am	10 mins talk : welcome, getting started, who we are, what's an android, what's an app,
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Skills and outcomes: installation of Appinventor, following instructions to the letter to make the first app, understanding the difference between layout and blocks	20-30 mins chaos : installing the software 10 mins talk : anatomy of appinventor [overview, blocks editor, emulator] 40 mins coding : do the meow application. Make sure everyone has a working installation and can get the blocks talking to the main editor and to the emulator
11:30am	coffee break
11:45am – 1:00pm Skills & outcomes: editing code, understanding mobile, groupwork, planning and brainstorming	10 mins talk : what's special about mobile 20 mins coding : changing your first program: make the meow app work when you shake the phone, make it make the phone vibrate 10 mins chaos : getting it from the computer to your phones and tablets, doing a cats chorus (get everyone's phone to meow) 5 mins: organisation getting into small groups, come up with a group name 10 mins: app overview give an overview of the sample apps, quickly explain what's going on 10 mins small group brainstorming : Think about roles – do you need pictures for your app? Do you need sounds? 10 mins going round the room : what is each group going to make?
1:00pm - 1:30pm	lunch (and app planning)
1:30pm – 2:30pm Skills and outcomes: creating both layout and code from scratch	coding and testing your apps in small groups: 10 mins paper : draw what you want it to look like 50 mins coding
2:30pm	10 mins going round the room : See what everyone has built (this can slip back if necessary, and lose time from the wrapup)
2:45pm	10 mins talk : Congratulations on making your first app; here are the next steps (for younger kids – more appinventor, maybe a bit of scratch; for early teens - python for games programming on the desktop; for older kids and grownups - maybe move towards proper app programming)
3:00pm	Close

Kit list

- Paper,
- Pens
- Printed handouts

- a laptop to run the projection
- A couple of android devices if possible
- Spare multi-plug adaptors, USB to android phone sized micro USB adaptors (enabling charging of phones from laptops etc).

Space/room requirements

- Room with tables arranged “cabaret style” (e.g., space for people to sit at a laptop)
- Wifi
- Projector & screen
- Microphone/amplification if the room is large

Other things that worked well:

- Having a cafe nearby
- Having outdoor space for kids

On USB sticks

If at all possible prepare a bunch of USB sticks. Ideally one each. These should contain

- The materials (this document, the slides, the handout)
- Resources (1st activity, 2nd activity, animals, drum sounds, sample projects, various) – these are available as resources.zip from <http://www.hannahdee.eu/appinventor>

If the sticks are big enough (and they probably will be, it's about 700mb in total) also download

- Installation files for Windows, Mac & Linux; this involves AppInventor and also the correct versions of Java.

If you can't get USB sticks, make a zip of the materials available for download.

The minimum you'd have to know to run this

If you're the kind of presenter that likes to just stay a few steps ahead of the students... :-) You'd need to ...

- Install AppInventor
- Have built some of the sample apps online. I'd recommend at least
 - molemash <http://beta.appinventor.mit.edu/learn/tutorials/molemash/molemash.html>
 - paintpot <http://beta.appinventor.mit.edu/learn/tutorials/paintpot/paintpot-part1.html>
 - piccall <http://beta.appinventor.mit.edu/learn/tutorials/piccall/piccall.html>
- Have read the handout (available on the workshop website) and checked out the sample apps (in the resources zip)
- It'll probably help if you've had a go at making an app of your own, from scratch, where you've had the idea and worked it through

I expect it also really helps to have general programming experience – a lot of the questions which come up in the workshop are to do with breaking down a problem and implementing it in code,

rather than to do with AppInventor-specific questions.

General hints and tips

- Family groups are good; there's a natural mix of ages and skills. If the younger members don't get it, the older ones can help (and vice versa). At several points in the slides/timings we talk about “getting into groups”; it seems this is not always necessary with family days.
 - So there's a chance you can skip a lot of the get into groups stuff, but it's useful to check there aren't any singletons or groups that are really struggling.
- It could be a good idea to run the day with two start times: 10am for those who haven't installed AppInventor, and 11am for those who have. The installation phase is the most irritating. I have not tried this though
- If you can't get hold of a bunch of USB sticks, allow a **lot** more time for setup
- There are animal noises and pictures, and a bunch of drum sounds, included in the resources file. I recommend you use these as a backup plan and steer less confident programmers towards the idea of a drumkit or farmyard app.
- Don't assume that the smaller kids are not going to get it, some of them will really fly.