

CS212 GBA

Compiler Setup Instructions for Mac OS X

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This document is intended to help you install the GameBoyAdvanced compiler *devkitARM* for Mac OS X. For more detailed information, please refer to <http://devkitpro.org>, or ask one of the TAs.

1 Downloading the Installer

Go to the page <http://devkitpro.org/setup.shtml> and click on *devkitARM* under the heading 'Manual Setup'. It will bring to the SourceForge page. Click the green 'Download devkitPro' link. On the next page choose *devkitARM* out of the list of software. Download [devkitARM_r21-osx-XXX.bz2](#) where XXX is the appropriate architecture for your machine (intel or ppc).

2 Installing devkitARM

Unzip the disk image and launch the installer. The installer allows you to choose the destination of the software. The software you are installing is not an application in the typical sense, but a set of command-line tools. It will generate a directory tree at the installation point, and we will be using several of the programs within that tree. Place the root wherever you want.

3 Using devkitARM

The tools we will be using are in the directory `*/devkitARM/bin` where `*` is the root directory you chose during installation. We will be interacting with these new tools using the command line interface. You may choose to set your path to include these new tools, or you can run using their absolute path.

If you installed *devkitARM* in `/gbaTools`, and are currently in a directory containing `program.cpp` to compile, you would do it as follows:

1. `/gbaTools/devkitARM/bin/arm-eabi-g++ -c program.cpp`
2. `/gbaTools/devkitARM/bin/arm-eabi-g++ -specs=gba.specs -g program.o -o program.elf`
3. `/gbaTools/devkitARM/bin/arm-eabi-objcopy -v -O binary program.elf program.gba`
4. `/gbaTools/devkitARM/bin/gbafix program.gba`

The resulting file `program.gba` can be run on a GBA emulator. The file `program.elf` is an intermediate object file and can be ignored or deleted in many cases. We will have a discussion on object files in the future.

4 Downloading and Installing the Emulator

The emulator we encourage you to use for this course is called VisualBoyAdvance. There are a number of a viable GBA emulators, if for some reason you are more comfortable with one of those, feel free to use it. VBA can be downloaded from <http://vba.ngemu.com/downloads.shtml>, scroll down to the OS X package and download it (it will redirect you to a SourceForge download page). Inside of the zip file should be `vba.dmg` which you can open and drag and drop onto your system.