GCC ARM 7.3 + GDB ARM 8.1

Vast set of ARM processors can be easily programmed with usage of GCC ARM tool. This tutorial is intended for Cortex M4F/armv7-m (with float co-processor). Minimal hardware requirement is Nucleo-F411RE board, with provided programmer.

1) compile from sources some compiler for CM4F-based MCU's. It will be based on newlib / newlib-nano 2.1.0. Please do note, that you can set your own tool name instead default "arm-none-eabi":

```
#sudo aptitude install -y build-essential flex bison libgmp3-dev \
libncurses5-dev libmpc-dev autoconf texinfo libtool libftdi-dev libusb-1.0-0-dev \
zlib1g zlib1g-dev python-yaml openocd ncurses-dev build-essential git \
libgmp-dev libmpfr-dev libmpc-dev zlib1g-dev p7zip-full lxterminal srecord wmctrl
#7za x 00_nucleo.7z
#sudo ./00_empty/build_arm_tools.sh
```

2) run provided trivial blink example:

```
#./00_empty/RUN_COMMANDS.sh
```

3) consider learning processor capabilities with C programming language (folder 00_doc).

4) C standard libs should be used with care, and on-going program benchmarks – for example: trivially implementable standard sprintf() uses 16kiB of Flash.