Exercise Introduction

What to expect and what this sheet will cover.

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Task 1: Writing a Makefile (10 min)

Complete the following tasks:

1. Clone the git repository
   https://github.com/KTTrev/Exercises.git
2. cd into `Exercises/test_make`, identify the makefile, and execute it
3. Check if the compilation worked properly by running the obtained executables, and clean them afterwards

Task 2: Using Cmake (5 min)

In the previous git repository, if you cd into Exercises/test_cmake, you will find the three C scripts that were used in the previous exercise, with an additional file: CMakeFiles.txt

1. Load `cmake/3.21.4`
2. Use the steps provided in the previous slide to generate the executables

Task 3: Building with Autotools (10 min)

Follow the instructions to build *nano* from source:

- Get the source code with the command `wget`:
  `wget` https://mirrors.tripadvisor.com/gnu/nano/nano-7.2.tar.xz
- Unpack the nano source with `tar -xvf`:
  `tar -xvf` nano-7.2.tar.xz
- Then:

  - `cd nano-7.2/`
  - `mkdir build`
  - `../configure --prefix=/usr/users/YourUsername/bin/`
  - `make`
  - `make install`
- Confirm that it works via
  - `/usr/users/YourUsername/bin/bin/nano --version`
  - This should show the version you just compiled, e.g., 7.2
- Make it your default version via
  - `echo "alias nano='/usr/users/YourUsername/bin/bin/nano'" >> ~/.bashrc`
  - `source ~/.bashrc`
  - `nano --version`

Now also build ncurses from source:

From `https://ftp.gnu.org/gnu/ncurses/`,
download the source code of ncurses-6.3,
and install it as in the previous example.