1. *sudo apt update*
2. Install cmake, min version 3.24

You can download the current latest release for arm chips using this command:

*curl -OL* [*https://github.com/Kitware/CMake/releases/download/v3.26.4/cmake-3.26.4-linux-aarch64.sh*](https://github.com/Kitware/CMake/releases/download/v3.26.4/cmake-3.26.4-linux-aarch64.sh)

then make the script an executable using:

*sudo chmod +x cmake-3.26.4-linux-aarch64.sh*

Then run the script to download and unzip using:

*./cmake-3.26.4-linux-aarch64.sh*

Now you should have the cmake executable in the current directory, we need to add it to the PATH so you can access it without the path prefix:

*sudo nano ~/.bashrc*

at the end of .bashrc write this line:

export PATH=”/home/$USER/cmake-3.26.4-linux-aarch64/bin:$PATH”

1. Install clang, (I tested with clang-12 only)

Run this command to install all tools:

*sudo apt install clang-format clang-tidy clang-tools clang clangd libc++-dev libc++1 libc++abi-dev libc++abi1 libclang-dev libclang1 liblldb-dev libllvm-ocaml-dev libomp-dev libomp5 lld lldb llvm-dev llvm-runtime llvm python3-clang*

If this command does not install atleast clang 5 (for C++17), you need to install it manually.

1. *sudo apt install ninja-build*
2. *sudo apt install minicom*
3. *sudo reboot* : this will apply the .bashrc change
4. *cd ~*
5. *git clone* [*https://github.com/vladsomai/Mobots-3dPrinter.git*](https://github.com/vladsomai/Mobots-3dPrinter.git)
6. *cd Mobots-3dPrinter*
7. We must specify the path to the compiler in the build.sh file. We can find the clang path by using this command:

*clang++ –version*

you should see the installation dir of clang, now set this path in the build.sh:

*sudo nano ./build.sh*

modify the C\_COMPILER and CXX\_COMPILER variables to the path you got from clang++ --version

after you save the file, execute it: *./build.sh*

You should see the build files generated in the “out” folder

1. *cd out*
2. *sudo ninja*

We have the executable compiled now, but before running it, you should copy the sample g code from ~/Mobots-3dPrinter/*Samples* to ~/Mobots-3dPrinter/out using this command:

*sudo cp ~/Mobots-3dPrinter/Samples/hello-world.ngc ~/Mobots-3dPrinter/out/*

now rename the gcode file to the default name(you can change it from config.ini, see below)

*sudo mv ~/Mobots-3dPrinter/out/hello-world.ngc ~/Mobots-3dPrinter/out/gcode.ngc*

and also copy the config.ini:

*sudo cp ~/Mobots-3dPrinter/Samples/config.ini ~/Mobots-3dPrinter/out/*

Set the serial port:

*Use this command to find all the connected serial ports*

*sudo dmesg | grep tty*

for example I see “/dev/ttyUSB0”

*sudo minicom -s*

Enter in “Serial ports setup”

Press “A” and modify the “Serial Device” to “/dev/ttyUSB0” in my example, then press Enter to save it

Press “E” to modify the Baud rate to 230400 8N1, then press Enter to save it

Exit from Minicom.

Change the read/write access to the port:

Sudo chmod o+rw /dev/ttyUSB0

Set the serial port to 230400 baud rate:

Stty 230400 -F /dev/ttyUSB0

Test the motors reset when sending the reset all command:

Sudo echo -en ‘\xFF\x1B\x00’ > binary.file

Cat binary.file > /dev/ttyUSB0

Modify the SERIAL\_PORT from config.ini to the correct serial port:

sudo nano ~/Mobots-3dPrinter/out/config.ini

After running the executable you will see a log file created in the same directory as the executable, the name of the log file is the current date. The log file shall describe the steps the app makes, show errors or info, the log is not 100% complete it may not contain all the errors at the moment.