

All the instruction below are listed for linux based systems. Please have the following installed:

- 1) cmake version 4.2.3
- 2) Install a conda environment. But before this please install miniconda3 from here:
- 3) create a conda environment: `conda create -n venv python==3.10.0`
- 4) conda activate venv
- 5) pip3 install lbmpy=1.3.7 pystencils=1.4 numpy=2.2.6 Jinja2=3.1.6 sympy=1.12.1

These are the version for sure would work for the current webinar. And after this do the following steps to install and build walberla:

- 1) clone walberla from the git repository from : "<https://github.com/lssfau/walberla.git>"
- 2) `cd walberla`
- 3) `mkdir build`
- 4) `cd build`
- 5) `cmake .. -DWALBERLA_OPTIMIZE_FOR_LOCALHOST=OFF -
DWALBERLA_BUILD_WITH_CODEGEN=ON -
DPython_ROOT_DIR=/path_to_virtual_environment_created_above/bin -
DPython_EXECUTABLE=/path_to_virtual_environment_created_above/bin/python
-DWALBERLA_BUILD_WITH_FASTMATH=OFF`

Note that "path_to_virtual_environment_created_above" has to be adapted appropriately.

After all of these steps, the last 3 lines should look something like this:

```
-- Configuring done (5.8s)
-- Generating done (1.1s)
-- Build files have been written to: /walberla/build
```

The important thing is that the build has to finish successfully and should say "-- Build files have been written to: /walberla/build".

6) After all of these steps are successful, individual apps can be build by going to the respective directories of the app and then followed by "make -j"