

Weekly Recap

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1 Updates on previous goals

Previous goals was to change directions for unit testing from Google test to CTest.

2 Progress up to now

In the past few days, lots of efforts have been put on:

- How to make non-100%-autopilot cmake setting up (most efforts).
- How to use CTest to do unit testing.

So far, linking has finally been performed and principle of setting CMakeLists.txt has been known. Up to the time of meeting, several small demos will be shown. Updates on restart branch will also be available soon.

Compared to deal.II default CMakeLists.txt, all sources are made into one executable (I guess). Modified cmake system performs the following tasks:

- Making an executable solely with main.cc;
- Making one independent library per subdirectory of source folder (src);
- Making one executable per test source and link with corresponding libraries made above.

Each testing is independent of one another and has its own main function per se. Thus, generating comparison file can be different from Google test. One could design the output functionality inside the testing sources with `std::ofstream` and generate output once by directly calling the testing executables. Check if the output is correct and in a desirable way. If so, modify the name of the output file to be with the same name as the testing source file except with the extension of “.output”. Each time one calls `ctest` for testing purpose, the testing will be performed against those once generated comparison files. That being said, we wouldn’t necessarily have to design the testing with knowing the results beforehand.

3 Things you need from Rachel

Not up to now.

4 Goals for the coming week

- Adding instruction into Style Guide on how to add unit testing
- Performing rewriting with unit testing.