# Compiling Polybench CUDA Benchmark with Clang Compiler in a Linux Operating System

The objective of this task is to install LLVM and CUDA on a Linux operating system, followed by the compilation of the Polybench CUDA benchmark using the Clang compiler. The required steps are as follows:

- Install a Linux operating system (Ubuntu or any other version).
- Get LLVM compiler infrastructure code from the repository: https://github.com/llvm/llvm-project and build the project to enable compiling a C code. If you already have clang compiler installed on your system, you should rebuild it from source.
- Install CUDA drivers and CUDA toolkit: https://developer.nvidia.com/cuda-toolkit .
- Download CUDA codes from Polybench benchmark suite: https://github.com/cavazos-lab/PolyBench-ACC
- Compile five selected CUDA benchmark programs from the suite and run them with default parameters.
- Write a short report including the Linux commands and screenshots showing your steps. The screenshots must include the commands to install software and to show that you installed them successfully. Send your report to isiloz@iyte.edu.tr until May 20, 13:00.

**NOTES:**

- If you already have any of the programs on your computer (Linux, LLVM, CUDA etc.), you can just skip that step.
- If you don’t have an NVIDIA-based GPU on your computer, you can use Google colab as your working environment by enabling its GPU support.
- If you cannot complete all the steps until deadline, you can still send your report including partial steps you could perform.