Tutorial 1: Build Minic environment & Minic program coding tips

TAs:

- Tut: Zihan (Simon) Zhao, simon.zhao@mail.utoronto.ca
- Assignment: Avery Laird, avery.laird@mail.utoronto.ca
- Assignment: Srisht Fateh Singh, srishtfatehsingh@gmail.com

Assignment 1:

- Build Minic environment
- Write sample program in Minic language.

Minic Requires:

- OS: Ubuntu 20.04 LTS
- cmake $\geq$ 3.14
- LLVM-11
- ANTLR4

Simple Demo for installation and build

Notes:

- If you use gcc, ignore the warning when compiling ANTLR4 or skeleton code.
- Check the installation location of ANTLR4 and llvm-11.
- When doing cmake for skeleton code, if the error of no finding llvm & antlr4-runtime packages is reported, such as `make[2]: *** No rule to make target 'XXXXX/libantlr4-runtime.a'`, try to manually set `${LLVM_INCLUDE_DIRS}`, `${ANTLR4_INCLUDE_DIR}` and `${ANTLR4_LIB_DIR}` in cmakelist.

Minic program coding tips

- Read Minic language structure carefully
- Use clang 11 to compile your Minic program. **Make sure it pass the compilation**.
- In C, `bool` type is different from others. It is introduced until C99 standard. To local compile, include `<stdbool.h>` in your Minic file.

- Minic doesn't care C99. `bool` can be directly used like `int`. So remove any other included headers than `minicio.h` when submitting.
- Your current Minic programs are good benchmarks for your next assignments.

If you have any questions or issues, please post on the course Piazza website.