

## CS536 Advanced Compiler

### Assignment I, Deadline : 01<sup>nd</sup> September 2022 Thursday 11.59PM

- Submission Procedure: Upload your code (zipped folder) to MS team. The assignment need to be done individually. **Copy case lead to F Grade**
- You need to demonstrate your code in your machine and TA will evaluate the same.

Create a LLVM pass, which take LLVM IR file and calculate

- Number of function definition
- Number of arity/argument for each functions
- Number of basic blocks in each function. Basic block contain series of compute, copy or memory instructions, etc but not the jump/call instruction.

*In this assignment, we don't modify the input program IR file, we only read the IR file and so we preserve all the analyses.*

Running LLVM Pass means: `$opt -passes=your_llvm_pass test.ll`

Hint: You can get information by reading the CPP files of sub-directories of `llvm/lib/Transforms`