Algo-I Lab Prerequisites

Configuration and Languages

- You are required to submit your codes in C/C++ languages only. Code can be submitted as **.c**/**.cpp**
- Recommended Compiler is GNU GCC v5+ (to support C++ 17). Installation:
  - Linux: How to install G++ the C++ compiler on Ubuntu 18.04 Bionic Beaver Linux
  - Windows: How to install gcc in Windows 10? (the easier way)
  - Code::Blocks: Make sure you install *mingw-setup.exe* or *mingw-32bit-setup.exe* from Binary releases
  - VS Code on Windows: Get Started with C++ and Mingw-w64 in Visual Studio Code
- Helpful instructions:
  - Try to use **-Wall** flag while compiling, to display all the warnings. This may sometimes help in debugging.
  - If using C++, add **-std=c++17** flag while compiling. Ex: *g++ -Wall -std=c++17 hello.cpp*
  - Learn about GNU GDB to help in debugging: GDB Tutorial - A Walkthrough with Examples
  - When debugging Segmentation Faults use **endl** instead of **\n** in your print statements.

Compatibility of C & C++

- **C++** is backwards compatible with **C** syntax for all the practical purposes of Algo-I Lab

- In the first assignment, sample codes in **C++** were supplied. This was meant to help you out with the file handling part of the assignment. Since, **C++** supports **C** syntax, you can write your **C** code as you normally do without worrying about the **main()** function.

Allowed Libraries and STL

- C Standard Library header files - All the mentioned header files are allowed except **stdlib.h** (memory management functions under **stdlib.h** are always allowed), unless stated otherwise. This applies for both C and C++.
- C++ Standard Library headers - All header files mentioned under *Dynamic Memory Management*, *Numeric Limits*, *Error Handling*, *Numerics Library*, *Input/Output Library* are allowed. This applies only for C++.
- Certain Components of STL if allowed will be mentioned explicitly during Lab hours.

Thank You! Any Questions?