

## Assignment 1

Write a C MPI program to measure the performance of blocking P2P between different pairs of nodes (1 rank/node) on CSEWS for varying data sizes (1 KB, 100 KB, 1 MB, 8 MB, 32 MB, 64 MB, 128 MB). For each configuration execute 10 runs, select 2-3 different pairs of nodes.

1. Plot a graph (lineplot with error bars to show the variation. x-axis: data sizes, y-axis: times (seconds))
2. Summarize your observations from the runs (250 words).

Total marks: 30+20 | Early submission credits (bonus): +15%, +10%, +5%

Submission Logistics

1. code.c or code.cpp
2. run.sh or run.py
3. assignment1.pdf (Single pdf. Must contain code, run script, experimentation methodology, plots, observations on different pages. Maximum page limit 5 pages.)

Email GroupX.zip to [muzafarwan@cse.iitk.ac.in](mailto:muzafarwan@cse.iitk.ac.in) and [tareddy@cse.iitk.ac.in](mailto:tareddy@cse.iitk.ac.in) with the subject line “**CS633: Assignment 1**”

- ONLY one group member must send the email.
- Please do not send multiple emails.