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Assignment 2

1 message

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To: col331tas@cse.iitd.ac.in, col331@courses.iitd.ac.in, col633@courses.iitd.ac.in

Using the framework made in assignment 1, implement the following.

Assignment 2A: Consider the attached code for computing the temperature distribution using heat transfer equations for a 2D plate. It solves the 2D Poisson's equation. The code is attached (jacob.c).

You need to parallelize it, using unicast and multicast communication (use barriers). Then you need to plot the performance vs the number of processes.

[https://en.wikipedia.org/wiki/Barrier_\(computer_science\)](https://en.wikipedia.org/wiki/Barrier_(computer_science))

Assignment 2B: Implement the Maekawa algorithm for mutual exclusion.

Details here: http://www.cse.iitd.ac.in/~srsarangi/col_819_2017/index.html

Also search the web.

If the interrupt based multicast mechanism is found to be very difficult, we can revert to the simple message queue based one.

To be decided later.

The details will be sent later.

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 **jacob.c**
1K