Saint Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO University)

REPORT

about laboratory works

Assignment 12.
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ASSIGNMENT 12.

Task

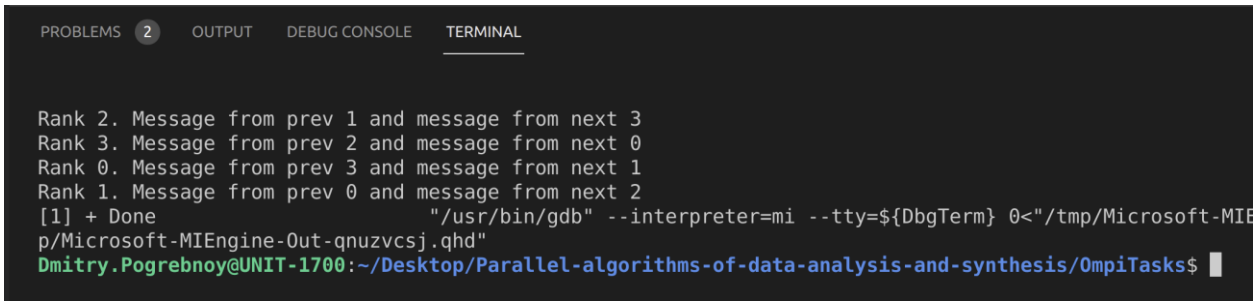
Find and fix errors in Assignment12.c, add the for loop. When should you use a loop?

Implementation

Source code and data gathered are available on https://github.com/DmitryPogrebnoy/Parallel-algorithms-of-data-analysis-and-synthesis/blob/master/OmpiTasks/Task12/Assignment12.cpp

The description of the code is described in the comments.

Output example:



ASSIGMENTS 13.

Task

Find out which process will perform the multiplication of two 500x500 square matrices faster. Complete the code Assignment13.c. You can use the necessary code from the previous assignments.

Implementation

Source code and data gathered are available on https://github.com/DmitryPogrebnoy/Parallel-algorithms-of-data-analysis-and-synthesis/blob/master/OmpiTasks/Task13/Assignment13.cpp

The description of the code is described in the comments.

Output example:

ASSIGNMENT 14.

Task

Understand the new functions in Assignment14.c.
Create your own global function for finding the maximum element, compare the correctness of execution with the MPI_MAX operation in the MPI_Reduce() function.

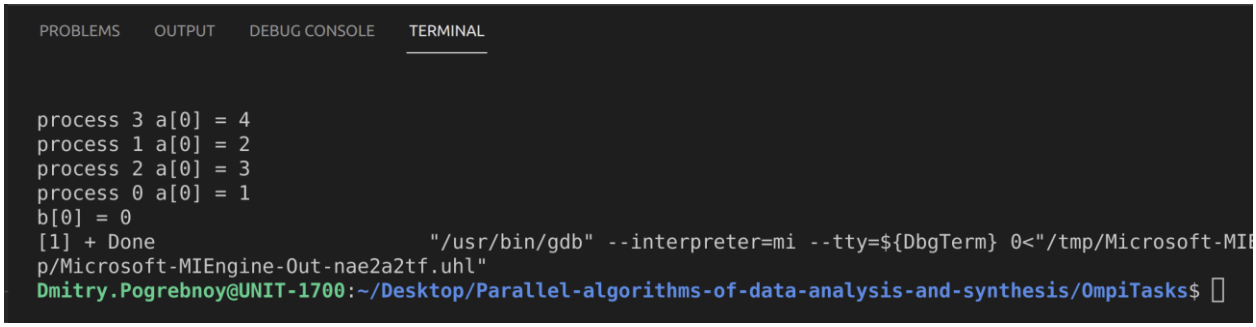
Implementation

Source code and data gathered are available on

https://github.com/DmitryPogrebnoy/Parallel-algorithms-of-data-analysis-and-synthesis/tree/master/OmpiTasks/Task14

The description of the code is described in the comments.

Output of initialAssignment14.cpp example:



Output of implemented task example:

ASSIGNMENT 15.

Task

Understand the new functions in Assignment15.c.
Append part of code.

Implementation

Source code and data gathered are available on https://github.com/DmitryPogrebnoy/Parallel-algorithms-of-data-analysis-and-synthesis/blob/master/OmpiTasks/Task15/Assignment15.cpp

The description of the code is described in the comments.

Output example: