Parallel Programming Assignment 3 W
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1)

I would characterize this as a da
is run on each process, and the divisior
process is responsible for processing. I
work well when the program needs to c
are both data sharing and ordering dep
some of the local data of its (spatial) ne
directly below it in the global grid, whicl
the next process (in the circular messa
process. Also, there are ordering deper
local data before they can share it with
calculated the entire new iteration's cor
iteration. In other words, all processes
to the next one. This ordering depende

This is a geometric decompositi
decomposition, and it is a linear decom
problem, and is a SPMD (single proces
use of geometric decomposition.

2)

c. I am going to exclude process 0
discussion. In both decompositi
for each iteration so it can print
needs two copies of its local da
keep track of the old iteration un
2*ROWS/N * COLUMNS (or (2*
above and just below it. This ad
ROWS/N * COLUMNS + 2 * CO
needs 2 copies of the local data
geometric decomposition. But it
adjacent rows and columns, plu
total of 2*C*R/N + 4*R/N^.5 + 4

d. The geometric decomposition is
rectangular (e.g. no longer squa
message passing scheme is mu
being passed). Also, I believe p
flexible is because the grid is ar
about it recursively is difficult ar
decomposition being much mor
I would first deal with transmitti