Part 1

[a1704695@uss assignment1]$ mpiexec -n 1 mpi_hello

Greetings from process 0 of 1!

[a1704695@uss assignment1]$ mpiexec -n 4 mpi_hello

Greetings from process 0 of 4!

Greetings from process 1 of 4!

Greetings from process 2 of 4!

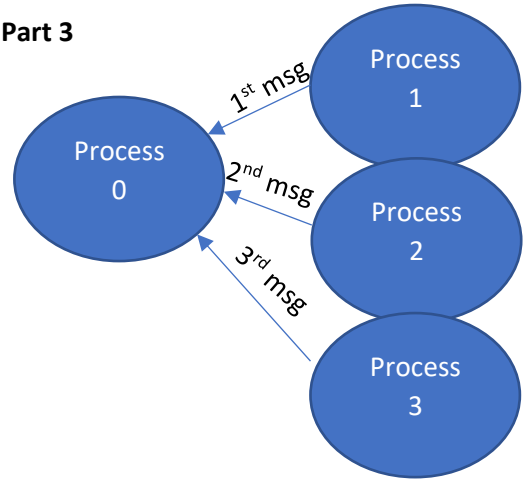
Greetings from process 3 of 4!

Part 2

Each process except the first creates a greeting string and sends it to the first process.

The first process prints out its own greeting, receives all the other greeting strings from the other processes, and prints them out.

Part 3



Part 4

Yes, because the messages are all being sent to and printed by process 0 in order, not being printed by each process themselves.

Part 6

This makes MPI_Recv() not wait for the next process to finish before receiving the message from the next process. So Process 0 now prints out the greetings messages as the other processes finishing running. The greetings messages may now print out of order.

Part 7

Kept running the program until it gave 2 different outputs, here process 2 finishes after, then before process 1:

[a1704695@uss assignment1]$ mpiexec -n 4 mpi_hello1

Greetings from process 0 of 4!

Greetings from process 1 of 4!

Greetings from process 2 of 4!

Greetings from process 3 of 4!

[a1704695@uss assignment1]$ mpiexec -n 4 mpi_hello1

Greetings from process 0 of 4!

Greetings from process 2 of 4!

Greetings from process 1 of 4!

Greetings from process 3 of 4!