

```
urfaty@LAPTOP-IGB2OSNF:~/Ceng342-HW-main$ mpirun -n 1 ./hellomake 1003 1003 output.txt
Elapsed time is 0.003855 seconds for parallel mxv with 1 processes
File created successfully!
```

```
urfaty@LAPTOP-IGB2OSNF:~/Ceng342-HW-main$ mpirun -n 2 ./hellomake 1003 1003 output2.txt
[LAPTOP-IGB2OSNF:00549] *** An error occurred in MPI_Bcast
[LAPTOP-IGB2OSNF:00549] *** reported by process [1514930177,1]
[LAPTOP-IGB2OSNF:00549] *** on communicator MPI_COMM_WORLD
[LAPTOP-IGB2OSNF:00549] *** MPI_ERR_ARG: invalid argument of some other kind
[LAPTOP-IGB2OSNF:00549] *** MPI_ERRORS_ARE_FATAL (processes in this communicator will now abort,
[LAPTOP-IGB2OSNF:00549] *** and potentially your MPI job)
```

```
urfaty@LAPTOP-IGB2OSNF:~/Ceng342-HW-main$ mpirun -n 3 ./hellomake 1003 1003 output2.txt
[LAPTOP-IGB2OSNF:00561] *** An error occurred in MPI_Bcast
[LAPTOP-IGB2OSNF:00561] *** reported by process [1514602497,2]
[LAPTOP-IGB2OSNF:00561] *** on communicator MPI_COMM_WORLD
[LAPTOP-IGB2OSNF:00561] *** MPI_ERR_ARG: invalid argument of some other kind
[LAPTOP-IGB2OSNF:00561] *** MPI_ERRORS_ARE_FATAL (processes in this communicator will now abort,
[LAPTOP-IGB2OSNF:00561] *** and potentially your MPI job)
[LAPTOP-IGB2OSNF:00555] 1 more process has sent help message help-mpi-errors.txt / mpi_errors_are_fatal
[LAPTOP-IGB2OSNF:00555] Set MCA parameter "orte_base_help_aggregate" to 0 to see all help / error messages
```

There is a error for multiple thread compiling scenarios, but I will fix it.