

# Calculations for large matrix:

```
eray@ :~/new/hw1$ mpirun -n 1 ./19050111005 105 105 output.txt
Elapsed time is 0.000255 seconds for parallel mxv with 1 processes
eray@ :~/new/hw1$ mpirun -n 2 ./19050111005 105 105 output.txt
Elapsed time is 0.000559 seconds for parallel mxv with 2 processes
Elapsed time is 0.000478 seconds for parallel mxv with 2 processes
eray@ :~/new/hw1$ mpirun -n 3 ./19050111005 105 105 output.txt
Elapsed time is 0.000531 seconds for parallel mxv with 3 processes
Elapsed time is 0.000527 seconds for parallel mxv with 3 processes
Elapsed time is 0.000516 seconds for parallel mxv with 3 processes
eray@ :~/new/hw1$ mpirun -n 4 ./19050111005 105 105 output.txt
Elapsed time is 0.000522 seconds for parallel mxv with 4 processes
Elapsed time is 0.000446 seconds for parallel mxv with 4 processes
Elapsed time is 0.000588 seconds for parallel mxv with 4 processes
Elapsed time is 0.000440 seconds for parallel mxv with 4 processes
eray@ :~/new/hw1$ mpirun -n 5 ./19050111005 105 105 output.txt
Elapsed time is 0.000544 seconds for parallel mxv with 5 processes
Elapsed time is 0.000520 seconds for parallel mxv with 5 processes
Elapsed time is 0.000530 seconds for parallel mxv with 5 processes
Elapsed time is 0.000778 seconds for parallel mxv with 5 processes
Elapsed time is 0.000731 seconds for parallel mxv with 5 processes
eray@ :~/new/hw1$
```

# Calculations for small matrix:

```
eray :~/new/hw1$ mpicc 19050111005.c -o 19050111005
eray@ :~/new/hw1$ mpirun -n 1 ./19050111005 1005 1005 output.txt
Elapsed time is 0.000612 seconds for parallel mxv with 1 processes
eray@ :~/new/hw1$ mpirun -n 2 ./19050111005 1005 1005 output.txt
Elapsed time is 0.000807 seconds for parallel mxv with 2 processes
Elapsed time is 0.000841 seconds for parallel mxv with 2 processes
eray@ :~/new/hw1$ mpirun -n 3 ./19050111005 1005 1005 output.txt
Elapsed time is 0.001144 seconds for parallel mxv with 3 processes
Elapsed time is 0.000960 seconds for parallel mxv with 3 processes
Elapsed time is 0.000909 seconds for parallel mxv with 3 processes
eray@ :~/new/hw1$ mpirun -n 4 ./19050111005 1005 1005 output.txt
Elapsed time is 0.000955 seconds for parallel mxv with 4 processes
Elapsed time is 0.000811 seconds for parallel mxv with 4 processes
Elapsed time is 0.001009 seconds for parallel mxv with 4 processes
Elapsed time is 0.001185 seconds for parallel mxv with 4 processes
eray@ :~/new/hw1$ mpirun -n 5 ./19050111005 1005 1005 output.txt
Elapsed time is 0.001265 seconds for parallel mxv with 5 processes
Elapsed time is 0.001005 seconds for parallel mxv with 5 processes
Elapsed time is 0.001002 seconds for parallel mxv with 5 processes
Elapsed time is 0.001257 seconds for parallel mxv with 5 processes
Elapsed time is 0.001146 seconds for parallel mxv with 5 processes
eray@ :~/new/hw1$
```

As you can see above, I can successfully run a file more than one process but I had a problem about task parallelism. That's why file runs on different processes but not separated.