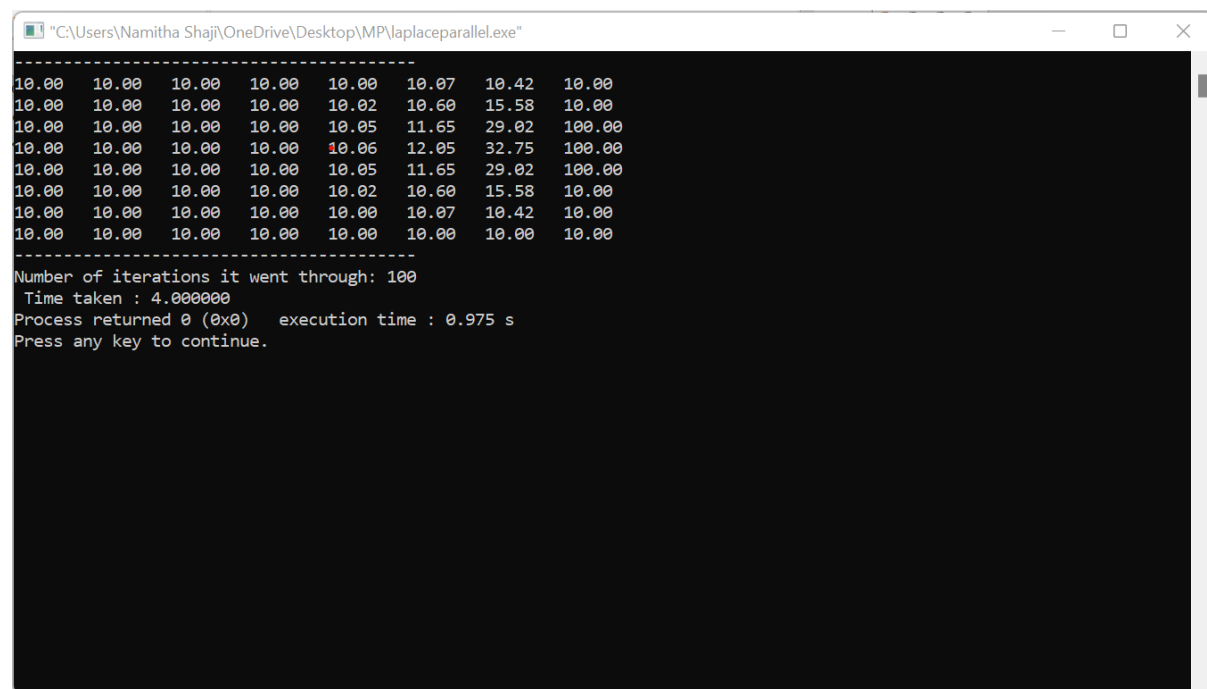


Compilation of code on Codeblocks

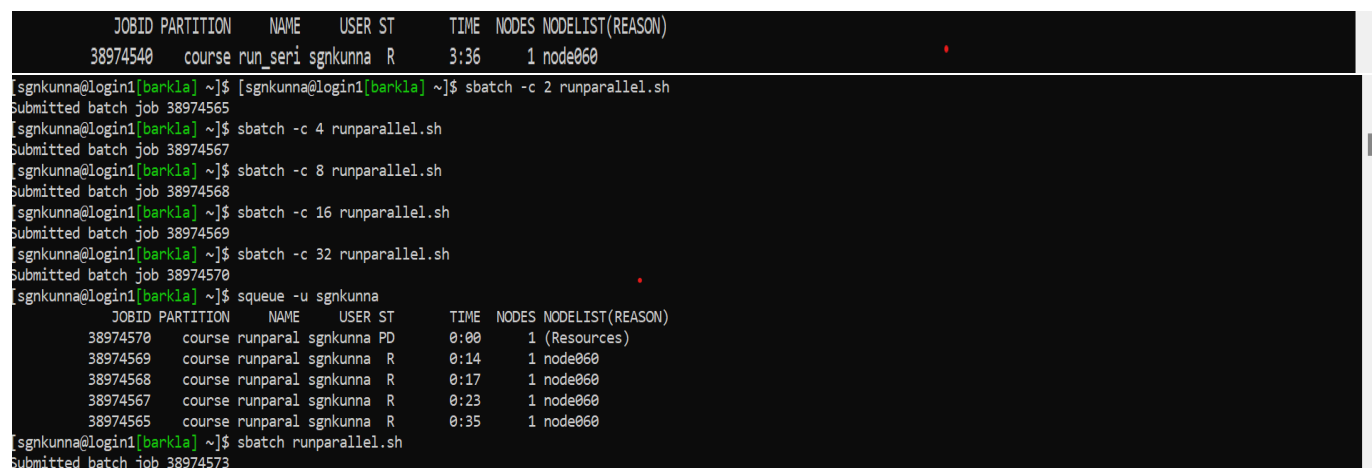
```
----- Build file: "no target" in "no project" (compiler: unknown)-----  
gcc.exe -c "C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.c" -o "C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.o"  
gcc.exe -o "C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.exe" "C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.o"  
Process terminated with status 0 (0 minute(s), 0 second(s))  
0 error(s), 0 warning(s) (0 minute(s), 0 second(s))  
  
Checking for existence: C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.exe  
Executing: "C:\Program Files\CodeBlocks\cb_console_runner.exe" "C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.exe" (in 'C:\Users\Namitha Shaji\OneDrive\Desktop\MP')  
Set variable: PATH=C:\MinGW\bin;C:\MinGW\bin;C:\Windows\System32;C:\Windows\System32\wbem;C:\Windows\System32\WindowsPowerShell\v1.0;C:\Windows\System32\OpenSSH;C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files\NVIDIA Corporation\NVIDIA NvDLISR;C:\winglpk-4.65\glpk-4.65\w64;C:\Users\Namitha Shaji\AppData\Local\Microsoft\WindowsApps;C:\Users\Namitha Shaji\AppData\Local\Programs\Microsoft VS Code\bin
```

Screenshot of output for smaller values (n=64 and limit=100)



```
"C:\Users\Namitha Shaji\OneDrive\Desktop\MP\laplaceparallel.exe"  
-----  
10.00 10.00 10.00 10.00 10.00 10.07 10.42 10.00  
10.00 10.00 10.00 10.00 10.02 10.60 15.58 10.00  
10.00 10.00 10.00 10.00 10.05 11.65 29.02 100.00  
10.00 10.00 10.00 10.00 10.06 12.05 32.75 100.00  
10.00 10.00 10.00 10.00 10.05 11.65 29.02 100.00  
10.00 10.00 10.00 10.00 10.02 10.60 15.58 10.00  
10.00 10.00 10.00 10.00 10.00 10.07 10.42 10.00  
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00  
-----  
Number of iterations it went through: 100  
Time taken : 4.000000  
Process returned 0 (0x0) execution time : 0.975 s  
Press any key to continue.
```

Screenshot of the compilation and output on Barkla



```
JOBID PARTITION NAME USER ST TIME NODES NODELIST(REASON)  
38974540 course run_seri sgnkunna R 3:36 1 node060  
[sgnkunna@login1[barkla] ~]$ [sgnkunna@login1[barkla] ~]$ sbatch -c 2 runparallel.sh  
Submitted batch job 38974565  
[sgnkunna@login1[barkla] ~]$ sbatch -c 4 runparallel.sh  
Submitted batch job 38974567  
[sgnkunna@login1[barkla] ~]$ sbatch -c 8 runparallel.sh  
Submitted batch job 38974568  
[sgnkunna@login1[barkla] ~]$ sbatch -c 16 runparallel.sh  
Submitted batch job 38974569  
[sgnkunna@login1[barkla] ~]$ sbatch -c 32 runparallel.sh  
Submitted batch job 38974570  
[sgnkunna@login1[barkla] ~]$ squeue -u sgnkunna  
JOBID PARTITION NAME USER ST TIME NODES NODELIST(REASON)  
38974570 course runparal sgnkunna PD 0:00 1 (Resources)  
38974569 course runparal sgnkunna R 0:14 1 node060  
38974568 course runparal sgnkunna R 0:17 1 node060  
38974567 course runparal sgnkunna R 0:23 1 node060  
38974565 course runparal sgnkunna R 0:35 1 node060  
[sgnkunna@login1[barkla] ~]$ sbatch runparallel.sh  
Submitted batch job 38974573
```

Serial Code run

```
sgnkunna@login1[barkla] ~]$ cat slurm-38974540.out
Node list           : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node :
Requested CPUs per task :
Scheduling priority : 0
compiling Laplace.c to Laplace.exe
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 184.650000
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 215.230000
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
```

```
Number of iterations it went through: 100000
Time taken : 215.230000
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 194.190000
```

1 CORE

```
Scheduling priority : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 1 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 130.058646
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 120.546889
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 121.093170
```

2 CORES

```
sgnkunna@login1:~$ cat slurm-38974565.out
Node list                : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node   :
Requested CPUs per task    : 2
Scheduling priority        : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 2 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 163.311403
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 150.457413
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
```

```
Number of iterations it went through: 100000
Time taken : 150.457413
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 144.438354
sgnkunna@login1[barkla] ~]$
```

4 CORES

```
sgnkunna@login1:~$ cat slurm-38974567.out
Node list                : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node   :
Requested CPUs per task    : 4
Scheduling priority        : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 4 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 159.948727
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 159.289710
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
```

```

Number of iterations it went through: 100000
Time taken : 159.289710
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 151.049111
[sgnkunna@login1[barkla] ~]$

```

8 CORES

```

[sgnkunna@login1:~$ cat slurm-38974568.out
Node list           : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node :
Requested CPUs per task : 8
Scheduling priority : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 8 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 147.759796
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 167.649660
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00

```

```

Number of iterations it went through: 100000
Time taken : 167.649660
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 149.736113
[sgnkunna@login1[barkla] ~]$

```

16 CORES

```
[sgnkunna@login1[barkla] ~]$ cat slurm-38974569.out
Node list           : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node :
Requested CPUs per task : 16
Scheduling priority : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 16 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 148.457595
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 149.451124
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 149.451124
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 146.661355
[sgnkunna@login1[barkla] ~]$
```

32 CORES

```
Select sgnkunna@login1:-
[sgnkunna@login1[barkla] ~]$ cat slurm-38974570.out
Node list           : node060
Number of nodes allocated : 1 or 1
Number of threads or processes :
Number of processes per node : 1
Requested tasks per node :
Requested CPUs per task : 32
Scheduling priority : 0
compiling laplaceparallel.c to laplaceparallel.exe
using 32 OpenMP threads
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 121.088827
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 124.977086
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 124.977086
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 124.977086
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 124.977086
[sgnkunna@login1[barkla] ~]$
```

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-----
Number of iterations it went through: 100000
Time taken : 124.977086
-----
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.04 10.26 11.39 15.67 27.88 54.99 100.00
10.00 10.03 10.23 11.20 14.83 24.98 47.74 100.00
10.00 10.02 10.15 10.76 12.92 18.28 26.15 10.00
10.00 10.01 10.06 10.32 11.17 12.87 13.86 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of iterations it went through: 100000
Time taken : 124.681408
[sgnkunna@login1[barkla] ~]$
```