

Compiling on Codeblocks

```
Logs & others
Code:Blocks Search results Cccc Build log Build messages CppCheck/Ver++ CppCheck/Ver++ messages Cscope Debugger Di
----- Build: Debug in Assessment (compiler: GNU GCC Compiler)-----
Target is up to date.
Nothing to be done (all items are up-to-date).

----- Run: Debug in Assessment (compiler: GNU GCC Compiler)-----
Checking for existence: C:\Users\Namitha Shaji\OneDrive\Desktop\micro\Assessment\bin\Debug\Assessment.exe
Set variable: PATH=.;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
Executing: "C:\Program Files\CodeBlocks\cb_console_runner.exe" "C:\Users\Namitha Shaji\OneDrive\Desktop\micro\Assessment\bin\Debug\Assessment.exe" (in C:\Users\Namitha Shaji\OneDrive\Desktop\micro\Assessment\.)
```

Screenshot of output on Codeblocks

```
C:\Users\Narmitha Shaji\OneDrive\Desktop\MP\Laplace.exe
Enter the length of the box : 10
10
Enter the limit for the number of iterations : 10
10
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
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10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 100.00
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10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
Press any key to continue . . .
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10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
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10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 32.50 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 32.50 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 32.50 100.00
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10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 38.13 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 43.75 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 43.75 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 38.13 100.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 15.63 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
```



```
"C:\Users\Namitha Shaji\OneDrive\Desktop\MP\Laplace.exe"
10.00 10.00 10.00 10.00 10.00 10.05 10.16 10.59 11.00 11.15 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
10.00 10.00 10.00 10.01 10.05 10.27 10.81 12.12 13.68 14.20 10.00
10.00 10.00 10.00 10.02 10.16 10.60 12.11 15.16 20.38 23.96 10.00
10.00 10.00 10.00 10.05 10.24 11.10 13.50 19.54 31.37 53.75 100.00
10.00 10.00 10.01 10.06 10.33 11.36 14.49 21.90 36.83 62.32 100.00
10.00 10.00 10.01 10.06 10.33 11.36 14.49 21.90 36.83 62.32 100.00
10.00 10.00 10.00 10.05 10.24 11.10 13.50 19.55 31.38 53.77 100.00
10.00 10.00 10.00 10.02 10.16 10.60 12.13 15.19 20.48 24.04 10.00
10.00 10.00 10.00 10.01 10.05 10.30 10.88 12.36 14.03 14.58 10.00
10.00 10.00 10.00 10.00 10.02 10.07 10.33 10.72 11.34 11.27 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
10.00 10.00 10.00 10.02 10.11 10.36 11.13 12.41 14.17 14.41 10.00
10.00 10.00 10.01 10.05 10.23 10.91 12.52 16.04 21.04 24.58 10.00
10.00 10.00 10.01 10.08 10.41 11.43 14.31 20.48 32.62 54.41 100.00
10.00 10.00 10.02 10.11 10.50 11.82 15.31 23.19 38.10 63.22 100.00
10.00 10.00 10.02 10.11 10.50 11.82 15.31 23.19 38.11 63.23 100.00
10.00 10.00 10.01 10.08 10.41 11.43 14.32 20.49 32.66 54.44 100.00
10.00 10.00 10.01 10.05 10.23 10.92 12.54 16.13 21.16 24.71 10.00
10.00 10.00 10.00 10.02 10.12 10.40 11.28 12.71 14.69 14.83 10.00
10.00 10.00 10.00 10.01 10.03 10.16 10.42 11.01 11.50 11.48 10.00
10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00
-----
Number of Iterations 10
Time taken : 19.233000
Process returned 0 (0x0) execution time : 19.606 s
Press any key to continue.
```

Screenshot of code compiling on Barkla

```
[sgnkunna@login1[barkla] ~]$ sbatch run_serial.sh
Submitted batch job 38974540
[sgnkunna@login1[barkla] ~]$ ls
abc          intro-par  lab03.tgz  laplaceparallel.c  myHello.C  sharedscratch  slurm-38974200.out  slurm-38974425.out  slurm-38974526.out  tester.txt
intro1       lab01.tgz  Laplace.c  laplaceparallel.exe  runparallel.sh  slurm-38952232.out  slurm-38974396.out  slurm-38974467.out  slurm-38974540.out  Text.C
intro-openmp lab02.tgz  Laplace.exe  localscratch        run_serial.sh  slurm-38952452.out  slurm-38974418.out  slurm-38974524.out  Tempcheck.c    volatile
```

Screenshot of program output on Barkla

```

sgnkunna@login1:~$ 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

```

```

sgnkunna@login1:~$ cat slurm-38974540.out
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
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

```