

CS 475/575 -- Spring Quarter 2025

Project #1

OpenMP: Monte Carlo Simulation

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1. Provide a close estimate of the actual probability

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8 , 100000 , 25.64
[flip4 ~/CS575_parallel_programming/project1 178$ vim run.bash
[flip4 ~/CS575_parallel_programming/project1 179$ bash run.bash
1 threads : 100 trials ; probability = 24.00% ; megatrials/sec = 23.40
1 threads : 1000 trials ; probability = 23.40% ; megatrials/sec = 21.78
1 threads : 10000 trials ; probability = 23.09% ; megatrials/sec = 21.14
1 threads : 50000 trials ; probability = 23.17% ; megatrials/sec = 20.92
1 threads : 100000 trials ; probability = 23.15% ; megatrials/sec = 20.91
2 threads : 100 trials ; probability = 24.00% ; megatrials/sec = 19.78
2 threads : 1000 trials ; probability = 23.40% ; megatrials/sec = 11.96
2 threads : 10000 trials ; probability = 23.09% ; megatrials/sec = 35.18
2 threads : 50000 trials ; probability = 23.17% ; megatrials/sec = 41.73
2 threads : 100000 trials ; probability = 23.15% ; megatrials/sec = 41.77
4 threads : 100 trials ; probability = 24.00% ; megatrials/sec = 26.02
4 threads : 1000 trials ; probability = 23.40% ; megatrials/sec = 29.06
4 threads : 10000 trials ; probability = 23.09% ; megatrials/sec = 32.78
4 threads : 50000 trials ; probability = 23.17% ; megatrials/sec = 83.85
4 threads : 100000 trials ; probability = 23.15% ; megatrials/sec = 83.30
6 threads : 100 trials ; probability = 24.00% ; megatrials/sec = 0.07
6 threads : 1000 trials ; probability = 23.40% ; megatrials/sec = 0.62
6 threads : 10000 trials ; probability = 23.09% ; megatrials/sec = 4.02
6 threads : 50000 trials ; probability = 23.17% ; megatrials/sec = 19.14
6 threads : 100000 trials ; probability = 23.15% ; megatrials/sec = 29.23
8 threads : 100 trials ; probability = 24.00% ; megatrials/sec = 0.05
8 threads : 1000 trials ; probability = 23.40% ; megatrials/sec = 0.37
8 threads : 10000 trials ; probability = 23.09% ; megatrials/sec = 3.83
8 threads : 50000 trials ; probability = 23.17% ; megatrials/sec = 18.81
8 threads : 100000 trials ; probability = 23.15% ; megatrials/sec = 28.77
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