

Lab 3 : Shared Memory

Roll No	Name
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Results

- GPU : NVIDIA 1050 Ti

Matrix Dimension	CPU Time (ms)	Basic GPU (ms)	GPU with shared memory (ms)
10000×10000	$9.16008e + 06$	195027	6199.7
1000×1000	4850.32	62.3315	7.55814
100×100	5.90179	0.050176	0.055296

Matrix Dimension	S_1 (Basic GPU Speedup)	S_2 (Shared Memory GPU Speedup)
10000×10000	46.96826593240936	1477.5037501814604
1000×1000	77.81490899464957	641.7346066624857
100×100	117.62177136479592	106.7308666087963

$$S_1 = \frac{\text{time on CPU}}{\text{time on GPU basic implementation}} \quad (1)$$

$$S_2 = \frac{\text{time on CPU}}{\text{time on GPU shared memory implementation}} \quad (3)$$

