Results

Vector reduction: Input Size: 1000, Block Size: 32

CPU results : 508.125519

GPU results : 508.125549

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.063000

Memory Transfer Time: 0.079000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.142000

Vector reduction: Input Size: 1000, Block Size: 64

CPU results : 508.125519

GPU results : 508.125519

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.065000

Memory Transfer Time: 0.077000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.142000

Vector reduction: Input Size: 10000, Block Size: 32

CPU results : 4971.319336

GPU results : 4971.321777

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.068000

Memory Transfer Time: 0.097000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.165000

Vector reduction: Input Size: 100000, Block Size: 32

CPU results : 49986.671875

GPU results : 49986.851562

Timer results [ms] :

CPU Execution Time: 0.367000

GPU Execution Time: 0.149000

Memory Transfer Time: 0.323000

CPU Time To Add Partial Sums: 0.005000

Overall Execution Time: 0.476000

Vector reduction: Input Size: 1000000, Block Size: 32

CPU results : 500003.750000

GPU results : 500006.281250

Timer results [ms] :

CPU Execution Time: 3.635000

GPU Execution Time: 0.780000

Memory Transfer Time: 2.394000

CPU Time To Add Partial Sums: 0.046000

Overall Execution Time: 3.221000

Vector reduction: Input Size: 2000000, Block Size: 32

CPU results : 999969.375000

GPU results : 999936.750000

Timer results [ms] :

CPU Execution Time: 7.423000

GPU Execution Time: 1.360000

Memory Transfer Time: 4.455000

CPU Time To Add Partial Sums: 0.091000

Overall Execution Time: 5.906000

Vector reduction: Input Size: 2000000, Block Size: 64

CPU results : 999969.375000

GPU results : 999935.812500

Timer results [ms] :

CPU Execution Time: 7.431000

GPU Execution Time: 0.829000

Memory Transfer Time: 4.271000

CPU Time To Add Partial Sums: 0.045000

Overall Execution Time: 5.145000

Vector reduction: Input Size: 1000000, Block Size: 64

CPU results : 500003.750000

GPU results : 500005.187500

Timer results [ms] :

CPU Execution Time: 3.627000

GPU Execution Time: 0.514000

Memory Transfer Time: 2.335000

CPU Time To Add Partial Sums: 0.023000

Overall Execution Time: 2.871000

Vector reduction: Input Size: 100000, Block Size: 64

CPU results : 49986.671875

GPU results : 49986.820312

Timer results [ms] :

CPU Execution Time: 0.361000

GPU Execution Time: 0.124000

Memory Transfer Time: 0.318000

CPU Time To Add Partial Sums: 0.002000

Overall Execution Time: 0.444000

Vector reduction: Input Size: 10000, Block Size: 64

CPU results : 4971.319336

GPU results : 4971.321289

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.066000

Memory Transfer Time: 0.095000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.163000

Vector reduction: Input Size: 1000, Block Size: 64

CPU results : 508.125519

GPU results : 508.125519

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.075000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.141000

Vector reduction: Input Size: 1000, Block Size: 128

CPU results : 508.125519

GPU results : 508.125488

Timer results [ms] :

CPU Execution Time: 0.003000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.077000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.140000

Vector reduction: Input Size: 10000, Block Size: 128

CPU results : 4971.319336

GPU results : 4971.321777

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.094000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.159000

Vector reduction: Input Size: 100000, Block Size: 128

CPU results : 49986.671875

GPU results : 49986.804688

Timer results [ms] :

CPU Execution Time: 0.360000

GPU Execution Time: 0.119000

Memory Transfer Time: 0.312000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.432000

Vector reduction: Input Size: 1000000, Block Size: 128

CPU results : 500003.750000

GPU results : 500006.187500

Timer results [ms] :

CPU Execution Time: 3.624000

GPU Execution Time: 0.409000

Memory Transfer Time: 2.263000

CPU Time To Add Partial Sums: 0.012000

Overall Execution Time: 2.685000

Vector reduction: Input Size: 2000000, Block Size: 128

CPU results : 999969.375000

GPU results : 999934.312500

Timer results [ms] :

CPU Execution Time: 7.420000

GPU Execution Time: 0.617000

Memory Transfer Time: 4.207000

CPU Time To Add Partial Sums: 0.023000

Overall Execution Time: 4.848000

Vector reduction: Input Size: 2000000, Block Size: 256

CPU results : 999969.375000

GPU results : 999936.500000

Timer results [ms] :

CPU Execution Time: 7.426000

GPU Execution Time: 0.659000

Memory Transfer Time: 4.147000

CPU Time To Add Partial Sums: 0.012000

Overall Execution Time: 4.817000

Vector reduction: Input Size: 1000000, Block Size: 256

CPU results : 500003.750000

GPU results : 500006.656250

Timer results [ms] :

CPU Execution Time: 3.627000

GPU Execution Time: 0.429000

Memory Transfer Time: 2.247000

CPU Time To Add Partial Sums: 0.006000

Overall Execution Time: 2.683000

Vector reduction: Input Size: 100000, Block Size: 256

CPU results : 49986.671875

GPU results : 49986.808594

Timer results [ms] :

CPU Execution Time: 0.360000

GPU Execution Time: 0.120000

Memory Transfer Time: 0.320000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.440000

Vector reduction: Input Size: 10000, Block Size: 256

CPU results : 4971.319336

GPU results : 4971.321289

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.065000

Memory Transfer Time: 0.095000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.160000

Vector reduction: Input Size: 1000, Block Size: 256

CPU results : 508.125519

GPU results : 508.125458

Timer results [ms] :

CPU Execution Time: 0.003000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.075000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.141000

------------------------- PART 5 -------------------------------

---------- WITH IF STATEMENT ---------------------------

Vector reduction: Input Size: 1024, Block Size: 32

CPU results : 518.912537

GPU results : 518.912659

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.076000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.141000

Vector reduction: Input Size: 4096, Block Size: 32

CPU results : 2049.713867

GPU results : 2049.712402

Timer results [ms] :

CPU Execution Time: 0.015000

GPU Execution Time: 0.066000

Memory Transfer Time: 0.084000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.152000

Vector reduction: Input Size: 16384, Block Size: 32

CPU results : 8143.619141

GPU results : 8143.619629

Timer results [ms] :

CPU Execution Time: 0.059000

GPU Execution Time: 0.072000

Memory Transfer Time: 0.109000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.183000

Vector reduction: Input Size: 262144, Block Size: 32

CPU results : 131072.468750

GPU results : 131074.328125

Timer results [ms] :

CPU Execution Time: 0.948000

GPU Execution Time: 0.369000

Memory Transfer Time: 0.733000

CPU Time To Add Partial Sums: 0.012000

Overall Execution Time: 1.113000

Vector reduction: Input Size: 1048576, Block Size: 32

CPU results : 524281.968750

GPU results : 524285.343750

Timer results [ms] :

CPU Execution Time: 3.801000

GPU Execution Time: 0.844000

Memory Transfer Time: 2.509000

CPU Time To Add Partial Sums: 0.048000

Overall Execution Time: 3.400000

-------------- Without If statement ------------

Vector reduction: Input Size: 1024, Block Size: 32

CPU results : 518.912537

GPU results : 518.912659

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.065000

Memory Transfer Time: 0.078000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.143000

Vector reduction: Input Size: 4096, Block Size: 32

CPU results : 2049.713867

GPU results : 2049.712402

Timer results [ms] :

CPU Execution Time: 0.015000

GPU Execution Time: 0.066000

Memory Transfer Time: 0.084000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.150000

Vector reduction: Input Size: 16384, Block Size: 32

CPU results : 8143.619141

GPU results : 8143.619629

Timer results [ms] :

CPU Execution Time: 0.059000

GPU Execution Time: 0.072000

Memory Transfer Time: 0.109000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.182000

Vector reduction: Input Size: 262144, Block Size: 32

CPU results : 131072.468750

GPU results : 131074.328125

Timer results [ms] :

CPU Execution Time: 0.949000

GPU Execution Time: 0.365000

Memory Transfer Time: 0.738000

CPU Time To Add Partial Sums: 0.013000

Overall Execution Time: 1.116000

Vector reduction: Input Size: 1048576, Block Size: 32

CPU results : 524281.968750

GPU results : 524285.343750

Timer results [ms] :

CPU Execution Time: 3.800000

GPU Execution Time: 0.842000

Memory Transfer Time: 2.527000

CPU Time To Add Partial Sums: 0.047000

Overall Execution Time: 3.417000

-------------------------------------- Atomic Function -----------------------------------

Vector reduction: Input Size: 1000, Block Size: 32

CPU results : 508.125519

GPU results : 518.912659

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.078000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.142000

Vector reduction: Input Size: 10000, Block Size: 32

CPU results : 4971.319336

GPU results : 4979.445801

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.069000

Memory Transfer Time: 0.095000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.164000

Vector reduction: Input Size: 100000, Block Size: 32

CPU results : 49986.671875

GPU results : 49986.851562

Timer results [ms] :

CPU Execution Time: 0.361000

GPU Execution Time: 0.148000

Memory Transfer Time: 0.330000

CPU Time To Add Partial Sums: 0.005000

Overall Execution Time: 0.482000

Vector reduction: Input Size: 1000000, Block Size: 32

CPU results : 500003.750000

GPU results : 500006.281250

Timer results [ms] :

CPU Execution Time: 3.625000

GPU Execution Time: 0.764000

Memory Transfer Time: 2.388000

CPU Time To Add Partial Sums: 0.046000

Overall Execution Time: 3.199000

Vector reduction: Input Size: 2000000, Block Size: 32

CPU results : 999969.375000

GPU results : 999936.750000

Timer results [ms] :

CPU Execution Time: 7.436000

GPU Execution Time: 1.327000

Memory Transfer Time: 4.479000

CPU Time To Add Partial Sums: 0.091000

Overall Execution Time: 5.897000

Vector reduction: Input Size: 0, Block Size: 64

Vector reduction: Input Size: 2000000, Block Size: 64

CPU results : 999969.375000

GPU results : 999935.812500

Timer results [ms] :

CPU Execution Time: 7.420000

GPU Execution Time: 0.809000

Memory Transfer Time: 4.305000

CPU Time To Add Partial Sums: 0.046000

Overall Execution Time: 5.160000

Vector reduction: Input Size: 1000000, Block Size: 64

CPU results : 500003.750000

GPU results : 500005.187500

Timer results [ms] :

CPU Execution Time: 3.622000

GPU Execution Time: 0.505000

Memory Transfer Time: 2.321000

CPU Time To Add Partial Sums: 0.023000

Overall Execution Time: 2.851000

Vector reduction: Input Size: 100000, Block Size: 64

CPU results : 49986.671875

GPU results : 50000.855469

Timer results [ms] :

CPU Execution Time: 0.361000

GPU Execution Time: 0.126000

Memory Transfer Time: 0.318000

CPU Time To Add Partial Sums: 0.003000

Overall Execution Time: 0.447000

Vector reduction: Input Size: 10000, Block Size: 64

CPU results : 4971.319336

GPU results : 4995.338867

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.067000

Memory Transfer Time: 0.096000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.164000

Vector reduction: Input Size: 1000, Block Size: 64

CPU results : 508.125519

GPU results : 518.912598

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.078000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.142000

Vector reduction: Input Size: 1000, Block Size: 128

CPU results : 508.125519

GPU results : 518.912537

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.076000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.141000

Vector reduction: Input Size: 10000, Block Size: 128

CPU results : 4971.319336

GPU results : 5023.144531

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.071000

Memory Transfer Time: 0.093000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.166000

Vector reduction: Input Size: 100000, Block Size: 128

CPU results : 49986.671875

GPU results : 50034.273438

Timer results [ms] :

CPU Execution Time: 0.361000

GPU Execution Time: 0.119000

Memory Transfer Time: 0.316000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.436000

Vector reduction: Input Size: 1000000, Block Size: 128

CPU results : 500003.750000

GPU results : 500036.281250

Timer results [ms] :

CPU Execution Time: 3.622000

GPU Execution Time: 0.406000

Memory Transfer Time: 2.269000

CPU Time To Add Partial Sums: 0.012000

Overall Execution Time: 2.688000

Vector reduction: Input Size: 2000000, Block Size: 128

CPU results : 999969.375000

GPU results : 999934.312500

Timer results [ms] :

CPU Execution Time: 7.428000

GPU Execution Time: 0.609000

Memory Transfer Time: 4.204000

CPU Time To Add Partial Sums: 0.023000

Overall Execution Time: 4.837000

Vector reduction: Input Size: 2000000, Block Size: 256

CPU results : 999969.375000

GPU results : -255794835908877877248.000000

Timer results [ms] :

CPU Execution Time: 7.432000

GPU Execution Time: 0.646000

Memory Transfer Time: 4.152000

CPU Time To Add Partial Sums: 0.012000

Overall Execution Time: 4.811000

Vector reduction: Input Size: 1000000, Block Size: 256

CPU results : 500003.750000

GPU results : 500097.000000

Timer results [ms] :

CPU Execution Time: 3.626000

GPU Execution Time: 0.425000

Memory Transfer Time: 2.247000

CPU Time To Add Partial Sums: 0.006000

Overall Execution Time: 2.678000

Vector reduction: Input Size: 100000, Block Size: 256

CPU results : 49986.671875

GPU results : 50034.277344

Timer results [ms] :

CPU Execution Time: 0.368000

GPU Execution Time: 0.122000

Memory Transfer Time: 0.314000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.437000

Vector reduction: Input Size: 10000, Block Size: 256

CPU results : 4971.319336

GPU results : 5085.378906

Timer results [ms] :

CPU Execution Time: 0.036000

GPU Execution Time: 0.065000

Memory Transfer Time: 0.094000

CPU Time To Add Partial Sums: 0.001000

Overall Execution Time: 0.160000

Vector reduction: Input Size: 1000, Block Size: 256

CPU results : 508.125519

GPU results : 518.912537

Timer results [ms] :

CPU Execution Time: 0.004000

GPU Execution Time: 0.064000

Memory Transfer Time: 0.078000

CPU Time To Add Partial Sums: 0.000000

Overall Execution Time: 0.142000