GPU Programming
Academic Year: 2021 - 22

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GPU Programming Assignment Submission Guide Lines

- Mail-ID: cs481.gpu.mec@gmail.com
- Sub:TEAM_NUM
- Attach.Name and Type: (TEAM_NUM).zip
- Late Submission$<=$3-Days:50%.
- Write a readme file to understand your solutions.
- Submit source files only.

Programming Assignment1 (Weightage 10%)
Due Date: February 20, 2022

Develop a parallel code for the following problems using OpenMP. Report the speedup of your implementations by varying the number of threads from 1 to 16 (i.e., 1, 2, 4, 6, 8, 10, 12, 14, and 16).

1. Develop a program for the Magic-square problem when $n = 1000, 1001, 1002, 1004,$ *and* 1006.

2. Develop a program to multiply two square-matrices of order 2048 X 2048 using Block Matrix Multiplications by considering the block sizes: 4, 8, 16, 32, and 64.

3. Write a program to find a median of 100000000 elements using median-of-medians.

4. Write a program to sort 10000000 (1 crore integers) elements using Merge sort technique.

5. Write a program to generate all possible permutations for a given set of elements. Assume that cardinality of the set is 10.

Thank You ☺
Any ? Please