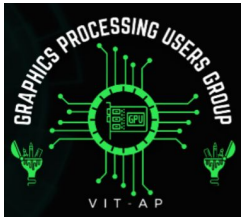

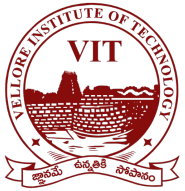

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Assignment 2

Q. 1. Write a sequential program to perform vector dot product.
Q.2. Write a CUDA program to perform vector dot product.

What is dot product?

Formula

$$a \cdot b = \sum_{i=1}^{n} a_i b_i$$

a = 1st vector

b = 2nd vector

n = dimension of the vector space

a_i = component of vector a

b_i = component of vector b

Dot product assignment

- Consider the arrays' size sufficiently large eg. 1000000 of type double.
- Measure the performance of of sequential version and optimized parallel version
- Calculate the speedup observed
- You may execute sequential programs on your local machine
- However all parallel codes must be executed on server
- Parallel versions considered for evaluations only if both sequential and parallel codes gives same output

Submission

- Explain in brief your parallelization strategy like data splitting, thread/block creation, and allocation etc.

Ans:

Submission

- Insert your findings into the below table

Ans:

	Sequential Time	Parallel version 1 time	Parallel version 2 time	Speedup wrt parallel version 1	Speedup wrt parallel version 1
Dot product					

Note:- In case if needed you can add more columns if you have implemented multiple parallel versions

Submission

- Comment on your observations such as limitations of proposed solution, etc.

Ans:

Submission

- Rename the file as <TEAM_NAME>_Assignment2
- Send the presentation file with source code to coordinator's mail