

## **CS516: Parallelization of Programs Warm up Exercises**

**Due Date: 14-Jan-2023**

### **Instructions:**

1. Prepare your solutions in a zip file
2. These problems are to make you comfortable with starting to write CUDA programs.
3. These problems do not carry any direct marks.

### **Problem-1:**

For given two matrices M and N both having size  $k \times k$  (where  $k \leq 1024$ ), write a CUDA program to perform  $M+N$

**Hint:** Allocate M and N single dimension array having  $k \times k$  elements

### **Problem-2:**

For given two matrices M and N both having size  $k \times k$ , write a CUDA program to perform  $M+N$  using threads and thread blocks. Assume the number of threads in a thread block as `THREADS_PER_BLOCK`