CSE762
Homework # 2

Due Date : Oct 19th

We have k vectors $(V_1, V_2, V_3, \cdots V_k)$ each with n components $(x_1, x_2, x_3, \cdots x_n)$ and you are to develop a distributed program using **p4** to add the vectors and return a summation vector with n components

Example:

Assume you have 8 vectors $(V_1, V_2, V_3, V_4, V_5, V_6, V_7, V_8)$ and run the algorithm on 4 computers. (C_1, C_2, C_3, C_4)
where the summation of

- $(V_1 \& V_2)$ would be computed on $C1$
- $(V_3 \& V_4)$ would be computed on $C2$
- $(V_5 \& V_6)$ would be computed on $C3$
- $(V_7 \& V_8)$ would be computed on $C4$

and the result of the summations would be summed up again until only one vector remains.

Note :

Your application should be able to handle vectors of variable size (n) and number (k) and should read the data for the vectors from a text data file and display the results on the screen.

- The number of vectors (k) should be multiple of the number of compute $(nproc)$.
- k should be no less than 64.
- Try nproc = 1, 2, and 4.
- Choose the vector size (n) between 10 and 20.

Submit the all files (**README, *.c, procgroup, makefile**) by e-mail and hardcopy.

To send,

- **tar cvf** hw2-username.tar *.c readme makefile procgroup
- **uuencode** hw2-username.tar hw2-username.tar ¿ aa
- **mail** -s "hw#2" kimd@top.cis.syr.edu ¡ aa