

## **MPI Section2 Requirement**

Build a program that finds the summation of two integer arrays ( $R=A1+A2$ ) over four processes using MPI. Assume that the number of elements in the array is unknown but it is divisible by four.

### **Process with rank 0:**

- Reads the two vectors from files A1.txt and A2.txt. Each file contains the array elements separated by commas (ex: 1,2,3,...). Assume that the text files have arrays of equal sizes.
- Send each process its share of the arrays (divide arrays over the four processes such that corresponding elements of A1 and A2 are sent to the same process).
- Finds the sum of its share of arrays.
- Receive the summation result from each process.
- Prints the final result array (R).

### **Other processes :**

- Receive its share of the two arrays.
- Finds the summation of its share of arrays.
- Send it to the root (process with rank 0).