

1. Write a simple MPI program to find out pow (x, rank) for all the processes where 'x' is the integer constant and 'rank' is the rank of the process.
2. Write a program in MPI where even ranked process prints "Hello" and odd ranked process prints "World".
3. Write a program in MPI to simulate simple calculator. Perform each operation using different process in parallel.
4. Write a program in MPI to toggle the character of a given string indexed by the rank of the process. Hint: Suppose the string is HeLLo and there are 5 processes, then process 0 toggle 'H' to 'h', process 1 toggle 'e' to 'E' and so on.

Additional Exercises:

1. Write a program in MPI to reverse the digits of the following integer array of size 9 with 9 processes. Initialize the Input array to the following values.
Input array : 18, 523, 301, 1234, 2, 14, 108, 150, 1928
Output array: 81, 325, 103, 4321, 2, 41, 801, 51, 8291
2. Write a MPI program to find the prime numbers between 1 and 100 using two processes.