1. Given an array of integers, use C and pthread to write a parallel program to find out the sum of the array and the second maximum. Assume the entire array is stored initially in one location and is distributed to the different threads for parallel processing.

2. Write a program using C and pthreads to perform a parallel matrix multiplication routine. The goal is to multiply an MxN matrix called A by an NxP matrix called B and then store the result into the MxP matrix called C. You can design your program in such a manner that each thread does an equal share of the work or you can have the threads run in a loop that computes single rows of the result, C.