Task 1:

Write a c program in which two processes will take command line input and write on shared memory. One process will read from shared memory and print that numbers in sorting form.

./shm1.out 2 3 4 5

./shm2.out 1 6 7 8

./shm3.out

Numbers Sort: 1 2 3 4 5 6 7 8

Task 2:

Write a program that creates M worker threads to sum two M x N matrices and displays the resultant matrix. The program is passed values of M & N through command-line arguments. The program then initializes the values of matrices using the rand () function.

Task 3:

To vaccinate their students and respectable teachers, UCP is arranging a Covid-19 vaccination camp at the UCP. Management allowed one vaccination area for both teachers and students to get their covid-19 shot.

Management agreed, provided that the following synchronization constraints can be maintained:

- There cannot be students and teachers in the vaccination area at the same time.
- There should never be more than three people in the vaccination area.

You are supposed to write a synchronization solution for this problem and implement it in C language.