1.
Write a program which creates a thread. The main thread should publish its pid. Let the thread publish its thread id. Next the thread computes the sum of first twenty five numbers and outputs the result to the screen. {Use pthread_join() in the main, so that it waits for the thread to finish its execution.}
Modify the above code such that the upper limit of the summation is read from the user and is passed as a parameter to the thread.

2.
Write a program which creates 3 threads.
case (i) Let the main thread input the value of n from the user. {Hint:- You can store n in a global variable so that it is available to all threads of the process} Each thread reads a message from the user and displays the message n times.
case (ii) Modify your program such that the value of n is given by the user and is passed as a parameter to the threads.

3.
Write a program which creates two threads. Let the main thread display a message, "Hello, main thread here!". Also the main thread reads 2 integers n1 and n2 (which can range between 1 to 9) from the user. Main should pass n1 to thread1, and n2 to thread2. Thread1 then displays "Hello, thread1 here!" n1 times. Thread2 displays "Hello,thread2 here!" n2 times.

4.
Write a program which defines a global integer array. Let the main read the length of the array and populate it. Next it creates 2 threads. Let the main pass the array length to the 2 threads. One thread computes the sum of array elements and outputs the result. The second thread publishes all odd numbers present in the array. {Use pthread_join() in the main, so that it waits for the threads to finish their execution.}

Suppose the array is defined in main, and the main has to pass both the array as well as the array length to the threads, how will your program change?

5. Define a global integer matrix of size 3 * 4. Let the main thread populate the matrix with integers from the user. Create 4 threads. Each thread computes the column sum of a particular column. The main waits for the threads to complete their execution. Finally the main computes the total sum of integers from the partial results given out by the threads, and outputs the sum to the screen.
How will your program change if there are 3 threads, each computing the sum of a particulr row, and finally the main thread computes the

total sum?

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