CS3600 - Take-home program Test

1. Write a program in c program to define an array so that any thread in the program can access it. **(5 points for the main function and array declaration)**
   - Array length of the program will be the highest number in your last six digits of your # 900 number
     For example, if your 900 number is #900858624, here the highest is 8.

2. Create one thread to reverse the array. The thread function should have a delay of 20ms between each iteration through the array. **(5 points)**
   Example if array = [1,2,3,4….], reverse its elements as [4,3,2,1….]

3. Create a second thread to read the **N^{th} and M^{th}** elements from the array and find the sum of them and print it. **(5 points)**
   - **N** will be the second-highest from the last six digits of your # 900 number.
   - **M** will be the smallest number from the last six digits of your # 900 number.
   -
     For example, if your number is #900858624, here the second highest is **6,** and the smallest is **2**.
     So N= 6 and M= 2

4. Comment your #900 number, your name, time taken for the program, and the possible race condition/s. **(5 points)**

5. Complete the program to execute the threads without a race condition, and you can use any method we discussed in class to avoid the race condition. **(5 points)**

6. Submit the screenshots of the outputs before race condition and after solving for the race condition/s. **(5 points)**

Note: Submit the 'c' program with mentioned commenting statements and screenshots in Moodle.