

1. Write a Java program that sequentially finds the largest number in an array of integers with 1,000,000 elements filled with randomly generated numbers in the range of 1 to 50,000.
2. Repeat the above program but using two threads to concurrently find the largest number.
3. Write a Timer class that can record a start time, an end time, and return the difference between the two times. Using the Timer class, modify the programs in (1) and (2) above to measure and compare the performance of the programs in completing their tasks.
4. Repeat the Program in (2) but using four threads instead of two. Compare the performance of this modified program with the original program.