Time Complexity

Single-threaded CPU approach:
O(N) time complexity

I modify the class naive CPU code only to use one for loop so now the time complexity is **O(N)**. However, if it is the original two loops code the time complexity is **O(N²)**.

Naive GPU approach:
O(N²) time complexity

The time complexity for the algorithm itself is **O(N)** and since there are N threads, the total complexity is **O(N²)**

Recursive Doubling GPU approach:
O(N log N) time complexity

The time complexity for the algorithm itself is **O(logN)** and since there are N threads, the total complexity is **O(N log N)**