University of Jordan	**Computer Engineering Department**
Parallel Processing Lab (0907537)	**Fall 2022/2023**
LAB06: Java Multithreading	
Student Name:	**Student Reg ID:**

Consider the below Java program, which computes the sum of N floating-point numbers.

```
public class SerialSum {
    static final int N = 100000000 ;

    public static void main(String[] args){

        long st = System.currentTimeMillis();

        double sum = 0;
        for(int i=0; i<N; i++)
            sum += (Math.abs(Math.sin(i)) * 1000);

        long end = System.currentTimeMillis();
        long cpu_time = end - st;

        System.out.printf("sum is %.4f\n", sum);
        System.out.println("cpu time in milliseconds is " + cpu_time);
    }
}
```

Your task is to create a multi-threaded version of the above serial code. Name your file ParallelSum.java. For generality, Assume T threads in your code, where T is defined as a constant at the beginning of the program, same as N.

Report the execution times (in milliseconds) in the below table.

	N = 100,000,000
Serial	
T = 2	
T = 4	