OpenMP
(Individual Project)

Due Date: 11/29/2017

1. Write a C++ OpenMP program to compute the standard deviation of a file of integer numbers. See attached source code.

2. Execute your "OpenMP" and the "Sequential" standard deviation programs on different input datasets to evaluate the execution time. Use the table formats below to record your results.

   - Table-1: For each input dataset, execute your programs (e.g. MPI and Sequential) using five different datasets. The input datasets will be provided. The number of processors will remain constant.

Table-1

Input Dataset Size (I)	**Execution Time (OpenMP)(ms)**	**Execution Time (Sequential)(ms)**	**Avg. Relative Speedup**
100	1	1	1
1000	2	2	1
10,000	3	6	2
200,000			

   - Table-2: Execute your OpenMP program on a given input dataset different using N processors (N = 2, 4, 6). The input dataset will be provided.

Table-2

Number of Processors	**Execution Time (OpenMP)**
2	3
4	3
6	3

   - Relative Speedup(I,P) $= \frac{time\ to\ solve\ I\ using\ progrm\ Q\ and\ 1\ processor}{time\ to\ solve\ I\ using\ program\ Q\ and\ P\ processors}$