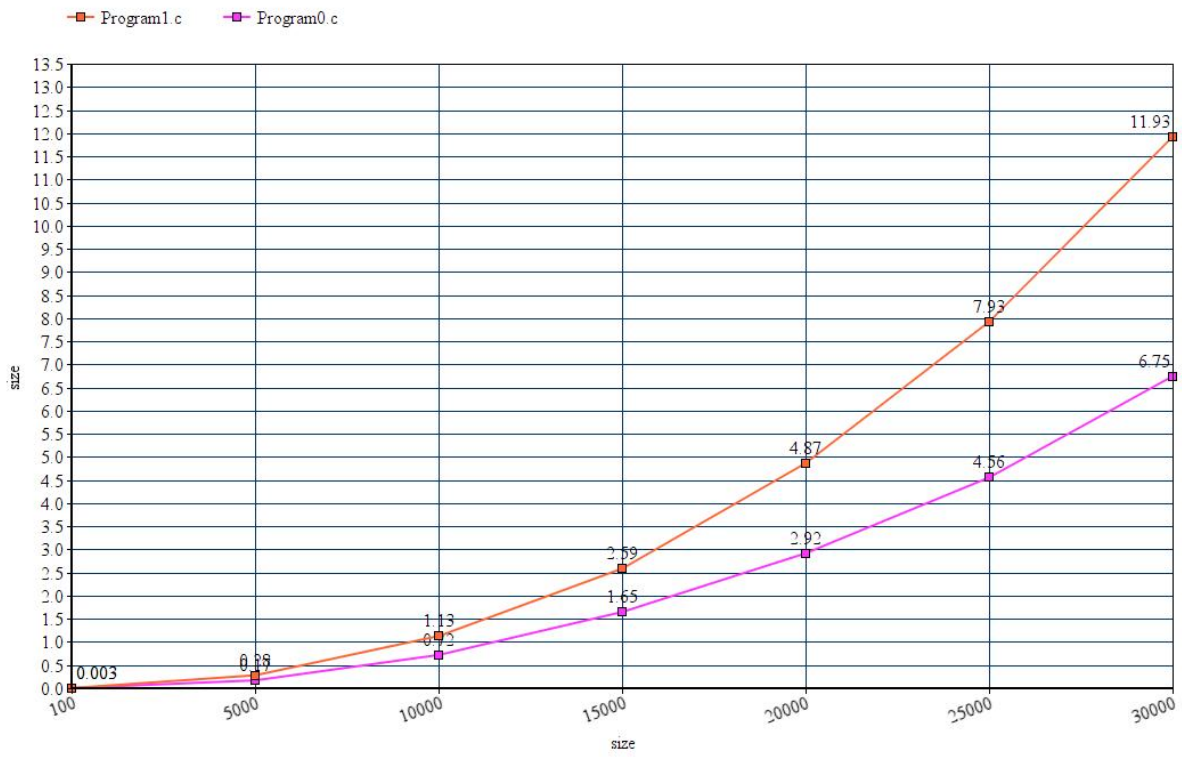
Abraham Kuruvila
Jeonghyoun Lee

Lab 3 report

Test cases(size)	Program0.c	Program1.c
100	0.003s	0.003s
5000	0.17s	0.28s
10000	0.72s	1.13s
15000	1.65s	2.59s
20000	2.92s	4.87s
25000	4.56s	7.93s



By comparing results from both programs, we can conclude that time to execute Program0.c is faster than Program1.c. Only difference between these programs were matrix_vector_multiply function's nested loop
(e.g . Program0.c : y[i] += A[i*size + j] * x[j];
Program1.c:y[j] += A[j*size + i] * x[i];
The index are different)
For program1.c, y[j] is constantly replaced that it requires to write and access the data memory resulting into longer execution time.