

Homework #1 - Arman Behnam - A20522906

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System1 Description:

- Manufacturer: Micro-Star International Co., Ltd.
- Model: US Desktop Aegis R
- System Type: x64-based PC
- Processor: 12th Gen Intel(R) Core(TM) i7-12700F, 2.1 GHz, 12 Cores, 20 Logical Processors
- Memory: 16.0 GB Installed Physical Memory (RAM)
- Operating System: Microsoft Windows 11 Home, Version 10.0.22621 Build 22621
- BIOS Version: American Megatrends International, LLC. 1.D4, Date: 3/31/2022
- BaseBoard: Micro-Star International Co., Ltd. PRO B660M-A CEC

Compiler1 Description:

- Compiler: Microsoft C/C++ Compiler (cl.exe)
- Version: Microsoft (R) C/C++ Optimizing Compiler Version 19.34.31937 for x86
- Included with: Visual Studio 2022

System2 Description:

- Manufacturer: Micro-Star International Co., Ltd.
- Model: VivoBook_ASUSLaptop X571LI_K571LI
- System Type: x64-based PC
- Processor: Intel(R) Core(TM) i7-10750H CPU @ 2.60GHz, 2592 Mhz, 6 Core(s), 12 Logical Processor(s)
- Memory: 16.0 GB Installed Physical Memory (RAM)
- Operating System: Microsoft Windows 11 Home, Version 10.0.22621 Build 22621
- BIOS Version: American Megatrends Inc. X571LI.308, 7/16/2021
- BaseBoard: Micro-Star International Co., Ltd. PRO B660M-A CEC WIFI DDR4 (MS-7D37)
- BaseBoard Manufacturer: ASUSTeK COMPUTER INC.

Compiler2 Description:

- Compiler: Microsoft C/C++ Compiler (cl.exe)
- Version: Microsoft (R) C/C++ Optimizing Compiler Version 19.34.31937 for x86
- Included with: Visual Studio 2022

a) Results

Run #	System1 Integer Matrix Time (ms)	System1 Double Matrix Time (ms)	System2 Integer Matrix Time (ms)	System2 Double Matrix Time (ms)
1	2812506	2804385	6849838	7226080
2	2913301	2680089	7619886	6903447
3	2662634	2681274	7064475	6855699
4	2692311	3144635	6866897	7798922
5	2649217	2792343	6754081	6845209
6	2668057	3391317	6716640	6800061
Avg	2733004.333	2915673.833	6978636.167	7071569.667

b) Results after modification

Run #	System1 Integer Matrix Time (ms)	System1 Double Matrix Time (ms)	System2 Integer Matrix Time (ms)	System2 Double Matrix Time (ms)
1	2471479	2489927	6141848	6340010
2	2475372	2478470	6514678	6312456
3	2470089	2470049	6294983	6285656
4	2470901	2469465	6215065	6349903
5	2472490	2496118	6295761	6342116
6	2458449	2508847	6292274	6483283
Avg	2469796.667	2485479.333	6292434.833	6352237.333