

# CS 4342 – Advanced Computer Architecture

## Lab 4

### Group Members

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### Computer Specifications

<b>CPU Type</b>	Intel(R) Core(TM) i5-5200U
<b>CPU speed</b>	2.20GHz
<b>Number of cores</b>	2
<b>Number of threads</b>	4
<b>L1 – D Cache capacity</b>	32 kB (per core)
<b>L2 Cache capacity</b>	256 kB (per core)
<b>L3 Cache capacity</b>	3072 kB (shared)
<b>RAM</b>	6GB

### Step 2

	Subroutine A	Subroutine B	Subroutine C
Total amount of data	12500 MB	800000 MB	800000 MB
Total execution time	0.582689 s	32.335926 s	43.592367 s
Average time of a byte access	0.04 ns	2.47 ns	3.33 ns
Average bandwidth	21452.27 MBps	24740.28 MBps	18351.84 MBps

$$T(L2) / T(L1) = 55.49$$

$$T(L3)/T(L2) = 1.35$$