

## Hardware

1. The Inter(R) Core(TM) i7-8565U CPU has 4 cores

With Google chrome, Notepad, Setting, spotify, Task Manger, Windows Command Prompt and Windows Explorer open, 7% of the CPU is being used.

2. With the same aforementioned apps running, 47% of the computer's memory is being used, with chrome by far using the most memory. Got up to 91% of RAM utilization and the computer became insufferable to use and quickly drained the battery.

## Operating Systems

3. Assuming you are only interacting with apps that simultaneously require less than 4GB of memory, the computer will be able to run all other tasks (albeit slowly) as virtual memory on the SSD. However, you will be unable to use the text editor/browser/ or music app in tandem with the video player app and your computer will likely crash one or more of those apps.

## Computer Networks

4. 70.235.156.160

Unknown adapter Local Area Connection: 00-FF-1A-9E-14-E2  
Wireless LAN adapter Local Area Connection\* 1: 9E-B6-D0-98-20-9F  
Wireless LAN adapter Local Area Connection\* 2: AE-B6-D0-98-20-9F  
Wireless LAN adapter Wi-Fi: 9C-B6-D0-98-20-9F  
Ethernet adapter Bluetooth Network Connection: 9C-B6-D0-98-20-A0  
Ethernet adapter vEthernet (WSL): 00-15-5D-8D-0A-8D

5. cs.stanford.edu : 171.64.64.64  
engineering.stanford.edu : 52.36.131.229  
axess.stanford.edu : 171.67.36.18

I expected all these to at least have the same first number and a close second number, apparently that is only the case for cs and axess whereas engineering has a vastly different IP address.

cs.gatech.edu : 52.72.26.168

Interestingly, the engineering.stanford.edu and cs.gatech.edu have the same leading number in their IP addresses! The other stanford affiliated website IPs are significantly different from that of the ga website, as expected.

6.  $250,000,000 \text{ bytes} * 8 \text{ bits/byte} / (100,000,000 \text{ bit/s}) \rightarrow 20 \text{ seconds}$

7.  $250,000,000 \text{ bytes} * 8 \text{ bits/byte} / (100,000,000 * 0.5 \text{ bit/s}) \rightarrow 40 \text{ seconds}$