**WEEK 5 ASSIGNMENT 1**

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| **Date:** | **Oct 9, 2014** |
| **To:** | **Mike MacDonald** |
| **From:** | **Christopher Sigouin** |
| **Subject:** | **CPU Specifications** |

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This learning exercise was to identify information on a computers CPU through the means of various software based tools and/or command line options on both Linux and Windows based operating systems. Once the software and/or command line program had executed and completed the scan, the next task was to locate what type of CPU the computer was running. After locating it the next task was to find documentation on the specific CPU through the manufacturer's website (Intel or AMD). At that time a list of five questions were required to be answered based off of the information found on the site.

For this exercise I used my Dell Inspiron n5010 laptop. On a Windows 7 virtual machine I downloaded Speccy which is a freeware GUI based system information tool. For Linux I chose to try using the command line “lshw -short”. According to the “man” page in Linux lshw is a small tool to extract detailed information on the hardware configuration of the machine. It can report exact memory configuration, firmware version, main‐board configuration, CPU version and speed, cache configuration, bus speed, etc. on DMI-capable x86 or IA-64 systems and on some PowerPC machines (PowerMac G4 is known to work). Both methods proved to provide lots of information on the system including the CPU itself.

Locating the CPU on the Intel website was slightly difficult. I was unsure of the ordering code or SPEC code of the processor. I searched with the model name of the CPU in Google and reviewed the page results searching for any result from the Intel website. I was then able to find it on the first page and review the processor specifications.

After finding the temperature rating for the CPU I was surprised that it can get that hot before failure. Although for a mobile CPU I suppose that it should be allowed to get that hot as heat dissipation is much more difficult in such a compact setup that a laptop contains. Enclosed below are the questions and answers from Step 3.

**Processor Intel(R) Core(TM) i5 CPU M 460 @ 2.53GHz**

**i) What is the clock speed?**

Clock Speed is 2.53GHz

**ii) How many cores does it have? Does it support Hyper-Threading?**

2 cores. Yes, it supports Hyper-Threading

**iii) Is it a 32-bit or 64-bit processor?**

Instruction set is 64-bit

**iv) What type of socket(s) is it packaged for? Why is this important to know?**

CPU is packaged for socket(s) BGA1288 and PGA988. It's important to know the socket type if you ever want to upgrade the motherboard only and continue to utilize the same CPU. A CPU cannot be installed into a socket that it is not built for.

**v) What is the surface and/or core temperature rating of the CPU?**

105 degrees Celsius