# CSIS 111- Desktop Computer hardware Analysis Project

Understanding how to identify, describe, and analyze hardware components on a system is an essential skill for technicians, and as you prepare for more advanced studies. In this lab, you will take a comprehensive look at a Desktop computer, and follow each of the prompts to provide a comprehensive hardware analysis.

### For each of the following items, provide screenshots as necessary to demonstrate your completion of the task. Paste and type directly into the gray boxes only. The boxes will expand as the paragraph grows. This project is worth 60 points, which includes 55 total for the sections below, and 5 for overall quality.

**Motherboard and RAM- 15 pts**This section is very similar to a previous discussion post. However, choose a different computer you have access to, and answer the following questions:

* Determine MB model and specs. Determine the BIOS or UEFI version.  Does an update exist?
* Find MB documentation online and provide a link
* Assume your MB failed, conduct research online to find a similar compatible motherboard, as well as an upgraded board.
* How much RAM can your board support? How much do you have? What type of RAM is it? Conduct research online to find 2 compatible options available if you wanted to upgrade your RAM.  Is the amount of RAM appropriate for the system’s primary use?
* Describe the processor. Could you upgrade?

### **When answering the questions with your laptop, explain that you have a laptop and there are no upgrades available, but put in there that if you could upgrade what you would upgrade to and why.**

**Your Response:**

https://rog.asus.com/us/search/explore?searchkeyword=ROG%20Strix%20G15%20G512%20%20G512LI-RS73%20motherboard

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| I have a laptop. I'm unable to upgrade unless I upgrade the ram on my laptop. I found a manual on performing memory upgrades which I posted below.  8GB DDR4 SO-DIMM(2933MHz for i5-10300H/i7-10750H/i7-10870H)  Max Capacity : 32GB  These are the specs on my laptop for memory. As for motherboard replacement, I would find a replacement on the manufacturer website. If I used another motherboard not produced by ASUS, there is no guarantee it would properly work.  Manual regarding my laptop:  <https://dlcdnets.asus.com/pub/ASUS/GamingNB/G512LH/0409_E16763_G532_G512_V2_A.pdf>    I was also able to find a manual for upgrading the memory on my laptop:<https://dlcdnets.asus.com/pub/ASUS/GamingNB/G512LH/E15910_G532_G512_Upgrade_Guide_WEB.pdf>  Motherboard options:<https://rog.asus.com/us/search/explore?searchkeyword=ROG%20Strix%20G15%20G512%20%20G512LI-RS73%20motherboard> |

### **Processor- 10 pts** *Describe is as much detail as you can the processor of your chosen system. Is it appropriate for the normal use of the system? Please explain*

**Your Response:**

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| My current laptop set-up is a type of Processor that is an Intel(R) Core(TM) i7-10750H CPU @ 2.60GHz, 2592 Mhz, 6 Core(s), 12 Logical Processor(s).  I have not personally ran into any issues with the processor that’s built-in on my laptop. My laptop was designed for gaming specifically.  There have been no processing issues for its intended purpose As for normal tasks and what I have to do for school on it, I have noticed no issues with them at all. Due to the laptop being built for gaming, I could go with a lower processor and have no issue why I was going for it normal usage-wise but gaming-wise would affect it.    Information with description processor info:  <https://rog.asus.com/us/laptops/rog-strix/rog-strix-g15-series/spec> |

### **Storage- 10 pts** *Describe in as much detail as you can the secondary storage devices on the system. Are they appropriate for the normal use of the computer? Please explain.* **Your Response:**

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| As for my storage on my laptop, the specs I found on the manufacturer’s website is 512GB M.2 NVMe™PCIe® 3.0 SSD.  This is working fine without any issues. So, I am able to go upgrade the ram on my laptop which adds some more help with storage wise. I can also go the route of getting a secondary drive that I would be able to connect through the one USB outlet I have as well.    Storage specs:  <https://rog.asus.com/us/laptops/rog-strix/rog-strix-g15-series/spec> |

### **Peripherals and Network- 10 pts** *Describe in as much detail as you can the peripheral devices on the system. Describe any expansion cards, I/O ports, device speeds, network hardware and configuration, etc. Are they appropriate for the normal use of the computer? Please explain.*

**Your Response:**

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| I found the specific I/O spec from the manducatory website. I have 3x USB  3.2 Gen 1 Type-A which is able to have speeds up to 5Gbps, I also have 1x USB 3.2 Gen 2 Type-C support 10Gbps. 1x 3.5 mm Combo Audio Jack. 1x HDMI 2.0b. DisplayPort™/ G-Sync.    As for Network wise, I was able to find the information regarding the network card which is Wi-Fi 6(802.11ax)+Bluetooth 5.1 (Dual band) 2\*2 specs    So I have not run into an issue with my laptop when it comes to running normal everyday usage.      Spec found network card and I/O ports  <https://rog.asus.com/us/laptops/rog-strix/rog-strix-g15-series/spec>    Information on the network card  <https://ark.intel.com/content/www/us/en/ark/products/189347/intel-wifi-6-ax200-gig.html> |

### **Drivers- 5 pts** *Observe the Device Manager on the system. Describe the status in as much detail as you can. Are there any concerns or areas for improvement? Please explain.*

**Your Response:**

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| I found there were updates for my drivers on the manufacturer’s website. I updated the  Windows and Nvidea, but otherwise, I was not maintaining my hardware updates. Since I’m aware of these updates now, I’m going to be applying them.    Drive updates for hardware on my laptop:  <https://rog.asus.com/us/laptops/rog-strix/rog-strix-g15-series/helpdesk_download> |

### **BIOs/UEFI Configuration- 5pts** *Describe the BIOS/UEFI on the system. What is the version? Are there any updates available?*

**Your Response:**

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| The BIOS I have on my laptop is BIOS Version/Date American Megatrends Inc. G512LI.311, 4/28/2021. While doing research on the manufacturer’s website I found the upgrade to BIOS which I have posted below.    <https://rog.asus.com/us/laptops/rog-strix/rog-strix-g15-series/helpdesk_bios> |