**CR1350 Assignment #2**

**Due:** June 13th before 11:59PM.

**IMPORTANT:** The Dropbox will close at 12AM and no assignments will be accepted after that!

Answer all questions on the document!

DO NOT CREATE YOUR OWN! Marks will be lost!

**Question 1:**   
What is the purpose of an operating system?

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| Manages and controls the overall operation of the computer system (or mobile device) |

**Question 2:**   
You are working on a computer system and notice that the CPU temperature is unusually high. What steps would you take to address this issue?

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| * Check to ensure the CPU fan is operational an on * Improve the airflow to the CPU (remove dust, clean airflow intake/outtakes) * Underclock the CPU to reduce workload. * If nothing else works, its probably time to replace/upgrade the cooling system. |

**Question 3:**   
Define binary representation.

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| The representation of data using only 1’s and 0’s |

**Question 4:**   
Define cache memory and its purpose.

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| Cache memory is temporary storage of frequently used data, used for quicker processing by the CPU |

**Question 5:**   
Your computer system is experiencing intermittent network connectivity issues. How would you troubleshoot and resolve this issue?

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| * Check the obvious: is internet on/airplane mode/ * does the internet work on other devices (ie: is it the device or the network |

**Question 6:**   
Your computer system is experiencing frequent crashes when running a particular application. How would you troubleshoot this issue?

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| * Check for logs/error messages that point to the issue * Restart the system * Check for and execute any updates on the application, system drivers, and system software requirements * Scan for viruses and malware that may have infected the system * Uninstall and reinstall the software |

**Question 7:**   
Describe the difference between serial and parallel processing.

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| In serial processing data arrives *sequentially* or one bit at a time whereas in parallel data is transferred in bytes. Contrary to popular belief sequential processing is actually more efficient. This is because sequential data is processed the moment it arrives, whereas in parallel processing if any given bit of the byte is delayed, the whole process is then delayed  ----------[] vs =======[] |

**Question 8:**   
Your computer system is running slowly, and programs are taking longer than usual to respond. What steps would you take to improve performance?

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| * Ensure the operating system is up to date (unless its windows 11 which sucks IMO) * Remove bloatware or unused applications * Also configure startup apps ti ensure youre not running garbage you don’t use (im looking at you ***teams***) * Pause or disable cloud data syncing if youre not actively using it * Restore your pc to a previous image (if youre cool and back up your os image regularly) * Update or replace system hardware that could be causing bottlenecks (old cooling, a dying cpu, an underperforming gpu, etc) * Download extra ram to process everything faster (kidding) |

**Question 9:**   
You are upgrading the RAM in your computer system. What precautions would you take to ensure a successful installation?

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| * Always follow manufacturer instructions * Ensure the RAM is compatible with your motherboard * Its also advised that you use the same ram all throughout your system (ie: 1 4gb ripjaw and a 8gb threadripper is a no-no, get 2 8gb whatever-as-long-as-theyre-the-same * Install on the proper channels, the configuration goes III| - I|I| - I||| - |||| resectivly * Install following standard process (push down locking tabs, line up, push **straight down** (may need a ***small*** oomf), and stop when you hear click and the tabs pop up |

**Question 10:**   
Your computer system is displaying distorted graphics or artifacts on the screen. What steps would you take to troubleshoot and resolve this issue?

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| * Check cables and connections, a half plugged in cable may *work* but it aint right * Make sure you don’t have some settings on that mess it up * Reboot system * Reset the monitor (also make sure its not the monitor itself by trying another one) * Update all connected devices and their drivers * Replace video card |