

Lab - Research a Hardware Upgrade

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Introduction

Use the Internet, a newspaper, or a local store to gather information about hardware components. Your customer's computer currently has one module of 2 GB of RAM, a 500 GB hard disk drive, and a PCIe video adapter card with 256 MB of RAM. Your customer wants to be able to play advanced video games.

Instructions

Step 1: Research memory options.

Shop around, and in the table below list the brand, model number, features, and cost for two different 8 GB modules of DDR3.

Brand and Model Number	Features	Cost
Kingston (KVR16N11/8)	1600Mhz DIMM 240Pin 1.5V, 8GB DDR3	P491
Hyperxfury (HX316C10F/8)	1866Mhz 240Pin 1.5V, 8GB DDR3	P557

Question:

Based on your research, which RAM would you select? Be prepared to discuss your decisions regarding the RAM you select.

I would select the Hyperxfury (HX316C10F/8), as there is not that much of a gap based on the cost / priced obtained through the application shopee. Additionally it consist more Megahertz (Mhz) which is beneficial as it indicates faster data transfer and its processing speeds.

Step 2: Research hard disk drive options.

Shop around, and in the table below list the brand, model number, features, and cost for a 3 TB 7200 rpm SATA 3 hard disk drive and a 500GB or 1TB solid state drive (SSD).

Brand and Model Number	Features	Cost
(SNV3S/1000G) Kingston NV3 NVMe PCIe 4.0 SSD, in the M.2 2280	High-speed storage with read speeds up to 6,000 MB/s and write speeds up to 4,000 MB/s.	P4,000
(ST1000DM010) Seagate Hard Disk 1TB	7200 RPM spindle speed, a 64MB cache, and a SATA 6Gb/s interface	P2,060

Question:

Based on your research, which hard disk drive would you select? Be prepared to discuss your decisions regarding the hard disk drive you select.

If the purpose is for advanced video games, I would select the Kingston SSD over the Seagate Hard Disk regardless of the price. As SSD provides faster loading, smoother gameplay, and quick startups that would give a better experience to be able to play advanced video games.

Step 3: Research video adapter card options.

Shop around, and in the table below list the brand, model number, features, and cost for two different PCIe video adapter cards with at least 1 GB of RAM.

Brand and Model Number	Features	Cost
AMD Radeon HD 8490 (717219-001)	DDR3, 1GB, PCIe x16 interface	P1,300
PNY NVIDIA Quadro NVS 810 (VCNVS810DVI-PB)	DDR3, 8 Mini DisplayPort connectors, supporting up to 8 displays at 4K resolution	P2,240

Question:

Based on your research, which video adapter card would you select? Be prepared to discuss your decisions regarding the video adapter card you select.

I would go for AMD Radeon HD 8490 (717219-001) since it is intended to be used for gaming but not designed for high ends. But since the purpose is only advance I would go for this one as not only it has lower cost than NVIDIA.