

Overview

Work individually to understand and establish the specifications for a PC dedicated to a specific task or application.

My PC application topic is: _____

Answering the student questions will help you to develop a deeper understanding of the main components of a personal computer. It will also help you to identify the features that are most important for your specific PC application topic and the features that are nice to have but are not as critical for your topic.

Preparing a brochure explaining your PC application topic and your selection of personal computer components and features will help you to summarize what you have learned from the student questions. The brochure will also help you to share your findings in a “tradeshow” to be held in class.

The date for the “tradeshow” is: _____

Student Questions

1. Think about your PC application topic. Do some research to find general answers to the following questions.

a. How important is computer speed for my topic (High / Medium / Low)? Justify your answer using

examples of how a computer is used to perform a task related to your application.

Computer speed for photo editing computers is important but not essential for a photo editing CPU. The computer speed should not be slow because the user store data, opening files, editing and etc.

b. How important is data storage for my topic (High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

Data storage is one of the biggest and most crucial part of a photo editing computer. The user will have to save and store data.

c. How important is graphics and sound for my topic (High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application

Although photo editing computers need a very good graphics, the sound can vary for the user.

d. How important is internet connectivity for my topic (High / Medium / Low)? Justify your answer using examples of how a computer is used to perform a task related to your application.

For any CPU, you need a high internet conductivity because the user would need to upload, post or even publish from anywhere. Without a great internet conductivity, it would be hard for the user.

2. CPU Processor Chip

a. What speed of CPU Chip do you require? (High / Medium / Basic)

- b. Provide an example of a high speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

AMD

Ryzen 9 3900X, is priced at \$709.00, and can be found at canadacomputers.com. It has 12 cores and 24 threads. It has a base clock of 3.8GHz, a max boost

clock of 4.6GHz, the total M2 cache is 6MB, and the total M3 cache is 64MB

- c. Provide an example of a medium speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

Intel Core i9-9900K, the price is \$699.99, and one can buy this product at canadacomputers.com. This chip has 8 cores, and 16 threads. The base frequency is 3.60 GHz, it has a total cache of 16 MB, and its max turbo frequency is 5 GHz.

- d. Provide an example of a basic speed CPU using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

AMD Ryzen 7 2700 3.2 GHz 8-Core Processor, is \$174.99, and one can buy this product at canadacomputers.com. It has eight cores and sixteen threads, the operating frequency is 3.2 GHz, and the max turbo frequency is 4.1 GHz. It also has a total cache of 20MB.

- e. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source.

The Intel Core i9-9900k, which cost \$639.99 on newegg.ca

3. RAM Memory

a. What size of RAM Memory do you require? (Large / Medium / **Basic**)

b. Provide an example of a large size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

G.SKILL TridentZ RGB Series, costs \$201.99, model: F4-3200C16D-32GTZR, and this is found at <https://www.newegg.ca>. This product comes with two components, each carrying 16 GB of memory, clocking it in at 32 GB, and the speed is DDR4 3200, the CAS Latency is 16 and its needs 1.35V.

c. Provide an example of a medium size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

G.SKILLG.SKILL TridentZ RGB Series 16GB (2 x 8GB)
288-Pin DDR4 SDRAM DDR4 3200 (PC4 25600) Desktop Memory Model
F4-3200C16D-16GTZR, model N82E16820232476, it costs \$94.99, and one can buy this at <https://www.newegg.ca>. It has a total capacity of 16 GB of storage with 2 cards each able to hold 8 GB, and the speed isDDR4 3200. It has a CAS Latency of 16, and uses 1.35V.

d. Provide an example of a basic size RAM using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

The CORSAIR Vengeance LPX 8GB (2 x 4GB)Model CMK8GX4M2C3000C116 was for 65.99 dollars on [newegg.ca](https://www.newegg.ca). The two components of this were the 8 GB and the speed of DDR4 3000.

e. What would be the least expensive RAM Memory that meets your requirements? List the Model Number, Price, and Vendor Source.

The CORSAIR Vengeance LPX 8GB (2 x 4GB) Model CMK8GX4M2C3000C116 was for 65.99 dollars on newegg.ca. The two components of this were the 8 GB and the speed of DDR4 3000.

4. Graphics Card

a. What graphics speed and resolution do you require? (High / Medium / **Basic - On Motherboard**)

b. Provide an example of a high-end Graphics Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

1. Arctic Accelero Xtreme iv High-End Graphics Card for \$181.39 on newegg.ca has a unmatched cooling performance. It has a cooling capacity of 300 watts, three 92 mm PWM fans and pre-applied MX-4 thermal compound. The item number is 9SIAGWT9PP8298.

c. Provide an example of a medium-end Graphics Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

The PNY XLR8 GeForce GTX 1650 –Overclocked Edition- graphics card- Gf GTX 1650- 4GB GDDR5 PCIe 3.0 x 16 – DVI, HDMI, is for \$263.99 on <https://www.dell.com>. The item number for this is rt VCG16504SFPPB-O.

d. What would be the least expensive Graphics Card that meets your requirements (or do you just need basic graphics provided by the motherboard)? List the Model Number, Price, and Vendor Source.

1. The Sapphire Pulse Radeon RX 580 was made by Sapphire Tech on newegg.ca for \$185.00. It is am 8GB 256-bit capacity, a Boost clock 1366 MHz and etc. The item number is N82E16814202278.

5. Sound Card

- a. Do you require special sound support? (High / Medium / **Basic - On Motherboard**)
- b. Provide an example of a high-end Sound Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

1. ASUS STRIX RAID DLX 8 Channels 44.1K / 48K / 88.2K / 96K / 176.4K / 192KHz PCI Express Interface Sound Card, is on newegg.ca. It has eight channels and a PCI Express Interface. Its cost \$311.99 and the item number is 9SIA7BB3T71976

- c. Provide an example of a medium-end Sound Card using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

The ASUS STRIX SOAR 8 Channels 44.1K / 48K / 88.2K / 96K / 176.4K / 192KHz PCI Express Interface Sound Card, is for \$a55.99 on newegg.ca. It also has 8 channels and a PCI Express Interface.

- d. What would be the least expensive Sound Card that meets your requirements (or do you just need basic sound provided by the motherboard)? List the Model Number, Price, and Vendor Source.

Although the sound card is an important element for a CPU, a photo editing does not need an advanced sound quality and the motherboard is good enough as well.

6. Motherboard

- a. Do you require any special motherboard features (based on your answers to the above questions)?

No

b. Provide an example of a high-end Motherboard using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

MSI PRESTIGE X570 CREATION, the item number is N82E16813144258, it costs \$639.99, and is found at newegg.com. It has an AMD X570 chipset, it has 4 memory slots, each with 288pin, it has 6 SATA each running at 6Gb/s. It has 7 HD audio ports, holds 128GB of data.

c. Provide an example of a basic Motherboard using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

1. WD Blue 1TB Desktop Hard Disk Drive - 7200 RPM SATA 6Gb/s 64MB Cache 3.5 Inch - WD10EZEX – OEM is for 106.12, newegg.ca. It stores all your games, music, movies and much more with up to 3TB of storage. The item number is N82E16822178994.

d. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.

ASRock B450M PRO4 AM4 AMD Promontory, its item number is N82E16813157843, it costs \$89.99, and is found at canadacomputers.com. It has 4 288pin memory slots, it supports 64GB memory, has a Realtek ALC892 audio chipset and and it has SATA3 6.0Gb/s Connectors.

7. HDD (Hard Disk Drive or Solid State Drive)

a. Do you require any special Hard Disk Drive features (based on your answers to the above questions)?

b. Provide an example of a high-end HDD using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

Seagate BarraCuda ST8000DM004, the model number is N82E16822183793, it costs \$149.99 and is found at newegg.com. It stores 8 TB of data, has a SATA 6.0Gb/s interface. It has an RPM of 5400, and a 256MB cache.

c. Provide an example of a basic HDD using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features

Seagate BarraCuda ST1000DM010, the model number is N82E16822179010, it costs \$43.99 and is found at newegg.com. It stores 1 TB of data, has a SATA 6.0Gb/s interface. It has an RPM of 7200, and a 64MB cache.

d. What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.

It costs \$54.00. The product is Toshiba Canvio Basics hard disk.

Vendor Source : <https://www.amazon.com/Toshiba-Canvio-Basics-Portable-Drive/dp/B00N2S6ZUQ/>

8. Removable Media (DVD / USB / Flash)

a. Do you require any special Removable Media features? Explain what extra features are required for your PC application topic.

Yes.

- b. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

The SAMSUNG 64GB BAR Plus (Metal) USB 3.1 Flash Drive, Speed Up to 200MB/s (MUF-64BE3/AM) is for \$24.99 on newegg.ca. It is a good product because it is waterproof, shock proof, magnet proof, temperature proof, x-ray proof. The item number is N82E16820147699.

9. Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth)

- a. Do you require any special Network Interface features? Explain what extra features are required for your PC application topic.

No.

- b. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

10. Monitor, Mouse, Keyboard

a. Do you require any special Monitor, Mouse, Keyboard, etc. add-ons? Explain what extra features are required for your PC application topic.

Yes.

b. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

The BenQ EL2870U 28" ") 3840x2160 4K Resolution 60Hz 1ms 2xHDMI DisplayPort AMD FreeSync Technology Built-in Speakers Flicker-Free Low Blue Light HDCP Support Backlit LED Gaming Monitor. is for \$499.99 on newegg.ca. It has a 1.07 billion colour support and 2 built-in watt speakers. The item number is N82E16824014485.

11. Portability / Mobility

a. Will you be using your PC in one place, do you need some portability, or do you need a high degree of mobility? Explain the need for portability your PC application topic.

No, because it is a photo editing computer

b. Do you require a Desktop / Laptop / Notebook or other PC format?

A laptop.

c. How will this affect the cost of your dream machine.

It will not affect my dream machine because it all depends on the model and the parts of the laptop/computer

12. Rank each personal computer component in order of priority (1-lowest, 10-highest) based on your research above. Each component must have its own priority number... no duplications.

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|---|----------------------|
| · CPU Processor Chip | 1 2 3 4 5 6 7 8 9 10 |
| · RAM Memory | 1 2 3 4 5 6 7 8 9 10 |
| · Graphics Card | 1 2 3 4 5 6 7 8 9 10 |
| · Sound Card | 1 2 3 4 5 6 7 8 9 10 |
| · Motherboard | 1 2 3 4 5 6 7 8 9 10 |
| · HDD (Hard Disk Drive or Solid State Drive) | 1 2 3 4 5 6 7 8 9 10 |
| · Removable Media (DVD / USB / Flash) | 1 2 3 4 5 6 7 8 9 10 |
| · Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth) | 1 2 3 4 5 6 7 8 9 10 |
| · Monitor, Mouse, Keyboard | 1 2 3 4 5 6 7 8 9 10 |
| · Portability / Mobility | 1 2 3 4 5 6 7 8 9 10 |