**Overview**

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

My PC application topic Is: Media Production and Streaming Computer

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.
   1. 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.
      1. The speed would have to be on the high end, since rendering videos and animation effects would require a high computer
   2. 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.
      1. Data storage should be high, since media (as in visual effects, videos, GFX and etc.…) take up a large amount of storage on a desktop.
   3. 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.
      1. A graphics card will be needed as a high, since the act of streaming requires a large amount of memory housed within the desktop.
   4. 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.
      1. Since you are streaming constant internet connectivity is required to keep the stream up, so it doesn’t go offline
2. CPU Processor Chip
   1. What speed of CPU Chip do you require? (High / Medium / Basic)
      1. You would need a high to expensive medium CPU.
   2. 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
      1. Intel Core i7-9700K Coffee Lake 8 Core/8Thread Processor. 1141, 3.6 GHz Base/ 4.9 GHz Max, 95w. Price $499.00. Canada Computers
   3. 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
      1. AMD Ryzen 7 2700 8-Core/16 Thread Processor Socket, 4.1 GHz Boost, Wraith Spire Cooler (LED) 65W. Price $219.00. Canada Computers
   4. 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
      1. Intel Core I5-9400F Coffee Lake 6-Core.6-Thread Processor Socket LGA1151, 2.9 GHz Base/ 4.1 GHz Max Turbo Frequency 65W Gen9 Retail. Price $229.00. Canada Computers
   5. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source.
      1. Physically impossible to go lower than the one provided above.
3. RAM Memory
   1. What size of RAM Memory do you require? (Large / Medium / Basic)
      1. A large Size is required.
   2. 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
      1. Corsair Vengeance RBG PRO 16GB DDR4 3000MHz CL15 DIMM, 1.35V. Price $129.99. Canada Computers
   3. 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
      1. Corsair Vengeance LPX 16GB (2x8GB) DDR4 2666MHz CL16 Memory Kit – Black. Price $94.99. Canada Computers
   4. 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
      1. Corsair Vengeance LPX 8GB (2x4GB), DDR4 2133MHz CL13 DIMM, Black. Price 55.99. Canada Computers
   5. What would be the least expensive RAM Memory that meets your requirements? List the Model Number, Price, and Vendor Source.
      1. Physically impossible to go lower.
4. Graphics Card
   1. What graphics speed and resolution do you require? (High / Medium /Basic - On Motherboard)
      1. High Graphic Speeds and Resolution.
   2. 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. GIGABYTE GeForce RTX 2070 WINDFORCE 8GB GDDR6 1620 MHz Clock, 14 GHz Memory 1xHDMi, 3x DP, 1x USB Type-C, RGB GV-. Price $599.88. Canada Computers
   3. 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
      1. EVGA GeForce GTX 1070 Ti SC Gaming ACX 3.0 Black Edition 8GB GDDRS (08G-P4-5671-KR) 1607MHz Base/ 1683 MHz Boost, 8008 MHz, Price $659.88. Canada Computers
   4. 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. GIGABYTE GeForce GTX 1060 WINDFORCE OC 3GB 1556 MHz Base/1797 MHz Boost, 8008 MHz Memory PCI-E 3.0, 2x DVI-D, 1x. Price $318.88. Canada Computers
5. Sound Card
   1. Do you require special sound support? (High / Medium /Basic - On Motherboard)
      1. No
   2. 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. Creative Sound BlasterX AE-5 Ultra Class Hi-Resolution Gaming/Hi-Fi Sound Card and DAC, RGB Lighting 122dB PCIe (70SB174000000). Price $204.99. Canada Computer
   3. 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
      1. **Creative Sound Blaster Audigy FX 5.1 - PCI-E Sound Card with SBX Pro Studio (Retail) (70SB157000000). Price $59.99 Canada Computers**
   4. 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.
      1. **Asus Xonar DG - 5.1 Channel + Headphone Amp (GX2.5 Audio Engine) - PCI Audio Card. Price $39.99. Canada Computers**
6. Motherboard
   1. Do you require any special motherboard features (based on your answers to the above questions)?
      1. No I don’t.
   2. 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
      1. **ASUS ROG Strix Z390-E Gaming Motherboard LGA1151 (Intel 8th and 9th Gen) ATX DDR4 DP HDMI M.2 USB 3.1 Gen2 Onboard 802.11ac WiFi. Price $329.00. Canada Computers**
   3. 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. **ASUS ROG STRIX B350-F GAMING Socket AM4 AMD B350 Chipset Dual Channel DDR4 3200(O.C.), PCI-E 3.0, GLAN, SATA 6.0Gb/s, 1x M.2 USB 3.1, Price $125.99. Canada Computers**
   4. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.
      1. **ASUS Prime A320M-K AMD Ryzen AM4 mATX Dual Channel DDR4 3200(O.C.), 1x PCIe 3.0, 1x M.2 USB 3.1, HDMI, mATX Motherboard. Price $85.99. Canada Computers**
7. HDD (Hard Disk Drive or Solid State Drive)
   1. Do you require any special Hard Disk Drive features (based on your answers to the above questions)?
      1. No I require an SSD
   2. 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
      1. WD Black SN750 1TB M.2 Solid State Drive. Price $274.00. Canada Computers
   3. 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
      1. Samsung 860 EVO 2.5” 1TB SATA III Solid State Drive Red. Price $169.99. Computer Studies.
   4. What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.0
      1. Kingston A400 960GB SATA3 6Gb/s 2.5” Max Seq.Read:500MB/s, Max Seq.Write:450MB/s SSD. Price $144.99. Canada Computers
8. Removable Media (DVD / USB / Flash)
   1. Do you require any special Removable Media features? Explain what extra features are required for your PC application topic.
      1. No I dont
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
      1. No
9. Network Interface (Ethernet /Fiber / Wi-Fi / Bluetooth)
   1. Do you require any special Network Interface features? Explain what extra features are required for your PC application topic.
      1. Ethernet
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
      1. Ethernet Network Patch Cable – Blue 6ft. Price $3.99. Canada Computers
10. Monitor, Mouse, Keyboard
    1. Do you require any special Monitor, Mouse, Keyboard, etc. add-ons? Explain what extra features are required for your PC application topic.
       1. All the basic things
    2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
       1. LG 25UM58-P 25” 21:9 Ultra-Wide IPS LED Monitor 2560x1080, HDMI x 2. Price $159.88 Canada Computers
       2. Corsair K55 RGB Gaming Keyboard Price $79.99. Canada Computer
       3. Corsair Gaming Sabre RGB Gaming Mouse Price $69.99. Canada Computers
11. Portability / Mobility
    1. 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.
       1. A laptop for on the go production
    2. Do you require a Desktop / Laptop / Notebook or other PC format?
       1. Only Desktop and Laptop
    3. How will this affect the cost of your dream machine.]
       1. Realistically no
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.
    * 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

**Brochure**

Work individually to create a 4 page brochure according to the following guideline.

**Page 1 – Your Application Topic**

Describe your topic and the top PC components for your topic.

Include the following on this page:

* Describe your application topic and how a PC is used
* In general terms, describe what the best PC for this application would look like (e.g. speed vs portability)
* Describe in more detail the top three most important PC components and explain why they are important for your application

**Page 2 – Would-Be-Nice Features**

Describe your decisions about what PC components are less important but would be nice to upgrade if you had the money.

Include the following on this page:

* Describe the would-be-nice components (just below your top 3 priorities) and what your options for upgrading them would be.
* Describe the components / features at the bottom of your priority list and why you would not spend extra money on them.
* Provide some details about different vendors / suppliers and the options they offer.

**Page 3 – Your Budget Machine**

Your budget is $800. Select a pre-packaged PC or customize / build a PC from parts to fit under this budget.

Include the following on this page:

* Your PC specs, model, cost, vendor, etc.
* Priority components that you were able to include for this price.
* Priority components that you had to leave out because of budget limitations.

**Page 4 – Your Dream Machine**

Your budget is $2000. Select a pre-packaged PC or customize / build a PC from parts to fit under this budget.

Include the following on this page:

* Your PC specs, model, cost, vendor, etc.
* Priority components that you were able to include for this price.
* Priority components that you were able to spend extra on.
* Also comment on any priority components that you had to leave out or down-grade.

**Appendix A: PC Vendors, Parts, & Customization**

Suggested on-line computer sources:

* [www.newegg.ca](http://www.newegg.ca)
* [www.dell.com/en-ca](http://www.dell.com/en-ca)
* [www.tigerdirect.ca/](http://www.tigerdirect.ca/)
* [www.canadacomputers.com](http://www.canadacomputers.com)

**Appendix B: Application Topics**

|  |  |
| --- | --- |
| **Task** | **Student Name** |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** | This is my topic |
| ***Web Surfing Computer*** |  |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |
| ***Game Computer*** |  |
| **Photo Editing & Organization** |  |
| ***Business Office Computer*** |  |
| ***Student Home Computer*** |  |
| ***Factory Floor Computer*** |  |
| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |