**Overview**

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

My PC application topic Is: Business 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. (Medium speed is the best with a business type computer. It can run at a decent speed and will not have as much lag.)
   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. (Medium Data storage is good for business usage because it stores all your documents, presentations and blueprints.)
   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. (Low graphics card and sound card is all a business computer needs because it’s not for any gaming purpose or high power use.)
   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. (Medium internet connectivity gets the work done and won’t give a lot of problems unless you have bad internet.)
2. CPU Processor Chip
   1. What speed of CPU Chip do you require? (High / Medium / Basic) (Basic)
   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 (AMD Ryzen 9 3900X, Model AM4 105W 100-100000023BOX, CAD $684.82, suppliers are Amazon and Newegg.)
   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 (Intel Core i3-8100, Model 65W BX80684i39100F, Price $119.99, Desktop Processor 4, Cores up to 3.6 GHz, LGA1151 300 Series 95W, suppliers are Newegg, Amazon, AmberCNE, Mike’s Computer Shop and iSanek.)
   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 (Intel® Pentium® Gold G5400, Model 1151 54W BX80677G4560, Price $84.47, Processor 2 Core, 3.7GHz LGA1151,  300 Series 54W/58W, suppliers Newegg, Amazon, Mike’s Computer Shop.)
3. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source. (Intel Core i3-8100, Model 65W BX80684i39100F, Price $119.99, Desktop Processor 4, Cores up to 3.6 GHz, LGA1151 300 Series 95W, suppliers are Newegg, Amazon, AmberCNE, Mike’s Computer Shop and iSanek.)
4. RAM Memory
   1. What size of RAM Memory do you require? (Large / Medium / Basic) (Basic)
   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 (G.SKILL TridentZ RGB Series, 64GB, Model F4-3200C16Q2-64GTZR, $521,Suppliers Newegg and Amazon.)
   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 (CORSAIR Vengeance LPX, Model CMK16GX4M2B3000C15, 16GB,$106.99, Suppliers Newengg, Amazon, iSanek, TechDepot Canada and OnedealOutlet Canada.)
   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 (G.SKILL Ripjaws V Series, Model F4-3200C16D-8GVKB, 8GB, $57.99, Suppliers Newegg, Amazon and Twinix.)
   5. What would be the least expensive RAM Memory that meets your requirements? List the Model Number, Price, and Vendor Source. (CORSAIR Vengeance LPX, Model CMK16GX4M2B3000C15, 16GB,$106.99, Suppliers Newengg, Amazon, iSanek, TechDepot Canada and OnedealOutlet Canada.)
5. Graphics Card
   1. What graphics speed and resolution do you require? (High / Medium /Basic - On Motherboard) (Basic - On Motherboard)
   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 (MSI GeForce RTX 2080, $1,029.99, suppliers Newegg, Amazon, Mike’s Computer shop, iSanek and Onedeal Canada, Vendor Source MSI.)
   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 (GeForce GT 1030, Model GV-N1030D5-2GL, 2GB Price $117.99, Suppliers Newegg, Amazon, Mike’s Computer Shop, iSanek and Techdepot Canada, Vendor Source GIGABYTE.)
   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. (I just need the graphics from the Motherboard.)
6. Sound Card
   1. Do you require special sound support? (High / Medium /Basic - On Motherboard) Basic – (On Motherboard)
   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 (Model 70SB174000000, Price $187.57, Vendor Creative, Suppliers Newegg, Amazon, OneDealOutlet Canada and iSanek.)
   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 (Sound Blaster, Price $94.99, Vendor Source Creative, Suppliers Amazon)
   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. (I just need basic sound provide by Motherboard.)
7. Motherboard
   1. Do you require any special motherboard features (based on your answers to the above questions)? (no, I just need the basic Motherboard for my computer build.)
   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 (Gigabyte Z390 AORUS Master, Price $288.99, Vendor Source GIGABYTE, Suppliers Newegg, Amazon. Mike’s Computer Shop, iSanek and OneDealOutlet Canada.)
   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 (ASUS M5A78L-M< Price $59.99, Vendor Source ASUS, Suppliers Newegg, Amazon, Mike’s Computer Shop, iSanek andOneDealOutlet Canada.)
   4. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source. (ASUS M5A78L-M< Price $59.99, Vendor Source ASUS, Suppliers Newegg, Amazon, Mike’s Computer Shop, iSanek andOneDealOutlet Canada.)
8. 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)? (No, I don’t need a special HDD.)
   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 (Toshiba X300, Model HDWF180XZSTA, Price $349.99, Vendor Source Toshiba, Suppliers Newegg, Amazon, Walnut Computers, TeleasyOnline and OneDealOutlet Canada.)
   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 (Seagate BarraCuda, Model ST2000DM008, Price $77.99, Vendor Source Seagate, Suppliers Amazon, Newegg, OneDealOutlet Canada and DigitalShopper.)
   4. What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source. (Seagate BarraCuda, Model ST2000DM008, Price $77.99, Vendor Source Seagate, Suppliers Amazon, Newegg, OneDealOutlet Canada and DigitalShopper.)
9. 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. (Yes, my computer build requires a Removable Media.)
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features. (LG Internal, Model GH24NSC0B, Price 22.99, Vendor Source LG.)
10. 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. (No, I don’t need special network interface.)
    2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
11. 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. (No, I don’t need special Monitors, Keyboards and Mouse’s.)
    2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
12. 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. (My PC build will not be portable because it will be only be used at work or at home it will be rarely be moved. If I were to want a portable PC I would have just bought a standard Laptop.
    2. Do you require a Desktop / Laptop / Notebook or other PC format? (Desktop)
    3. How will this affect the cost of your dream machine. (This will barely affect the cost because desktop parts are really common and can be found at any large retail chains in Canada.)
13. 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**

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