**Overview**

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

My PC application topic Is: Gaming PC

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: Oct 23, 2019

**Student Questions - Rajdeep Dhaliwal**

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.

**Speed is important for a gaming computer as even some computer lag (because of a low amount of RAM) could be crucial.**

* 1. 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 not the most important thing, but you should still have a somewhat high amount. For a gaming computer, a 1 terabyte HDD would suffice. Data storage is important as games take up a lot of space so it’s important to have space.**

* 1. 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.

**A good graphics card is the most important thing to a gaming computer. If you do not have at least a mid-tier GPU, the games will look very ugly and will run worse as well.**

* 1. 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.

**Online games will require an internet connection along with needing internet to download any**

**games that are on a launcher. The only time internet connectivity isn’t needing is a single player game or a game that came on a disc**

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

**A quad-core CPU would be fine**

* 1. 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 Threadripper 2950X. Model #:YD295XA8AFWOF. Price: $979.99. Vendor Source: newegg.ca. The Threadripper is a 16-Core, 32-Thread CPU with a base clock speed of 3.5GHz. The Threadripper is one of the best CPUs for multi-core processes like gaming, rendering, and running simultaneous applications.**

* 1. 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

**AMD Ryzen 5 2600. Model #YD2600BBAFBOX. Price: $169.99. Vendor Source: newegg.ca. The Ryzen 5 2600 is a 6-Core, 12-Thread CPU with a base clock speed of 3.4GHz. The Ryzen 5 2600 has multi-core processes that are very well considering the fact that it is a mid-tier CPU.**

* 1. 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

**A basic speed CPU is the Intel Core i3-9100F. Model #:BX80684i39100F. Price: $119.99. Vendor Source: newegg.ca. The Core i3-9100F is a 4-Core, 8-Thread CPU with a base clock speed of 3.6GHz. The CPU is decent in multi-core and single-core processes.**

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

**The least expensive CPU that meets me requirements is the AMD Ryzen 5 2600. All specs are listed above.**

1. RAM Memory
   1. What size of RAM Memory do you require? (Large / **Medium** / 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

**A large size RAM is G.Skill Tridentz 32GB RAM. The model # is F4-3200C16Q-32GTZR. The price is $252.99. The vender source is newegg.ca. The RAM is 2x16. It is DDR4 3200 MT/s.**

* 1. 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

**A medium size RAM is G.SKILL Ripjaws X Series 8GB (2 X 4). The model # F3-12800CL9D-8GBXL. The price is $53.99. The vendor that I got this from is newegg.ca. This RAM has DDR3 memory at the speed of 1600 MT/s.**

* 1. 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

**A basic size RAM is the Ballistix Sport LT 4GB (1 x 4). The Model # is BLS4G4D26BFSC. The price of the RAM is $28.99. The vendor source is newegg.ca. This RAM is DDR4 and has a speed of 2666 MT/s**

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

**The least expensive RAM Memory that meets my requirements is the** **G.SKILL Ripjaws X Series 8GB (2 X 4). The model # F3-12800CL9D-8GBXL. The price is $53.99. The vendor that I got this from is newegg.ca. This RAM has DDR3 memory at the speed of 1600 MT/s.**

1. Graphics Card
   1. What graphics speed and resolution do you require? (**High** / Medium /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

**A high-end Graphics Card is the MSI GTX GeForce 1080 Ti. The model # is not listed anywhere. The price is $1,700. The vendor is newegg.ca. The graphics card has 8GB of VRAM. 1 DVI port, 1 HDMI port, and 3 DisplayPort inputs. The card has 2560 CUDA cores.**

* 1. 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

**A medium-end Graphics Card is the ZOTAC GeForce GTX 1060. The model # is ZT-P10620A-10M. The price is $309.99. The vendor is newegg.ca. The graphics card has 6GB of VRAM. 1 DVI port, 1 HDMI port, and 3 DisplayPort inputs. The card has 1280 CUDA cores.**

* 1. 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.

**ZOTAC GeForce GTX 1060. The model # is ZT-P10620A-10M. The price is $309.99. The vendor is newegg.ca. The graphics card has 6GB of VRAM. 1 DVI port, 1 HDMI port, and 3 DisplayPort inputs. The card has 1280 CUDA cores.**

1. Sound Card
   1. Do you require special sound support? (High / Medium /**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

**A high-end Sound Card is the Creative Sound BlasterX AE-5 Pure Edition. The model # is 70SB174000001. The price is $239.99. The vendor is newegg.ca. The main feature is 32-bit audio.**

* 1. 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

**A medium-end Sound Card is the Creative Sound Blaster Audigy RX. The model # is 70SB155000001. The price is $89.99. The vendor source is newegg.ca. The main feature is 24-bit audio.**

* 1. 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.

**No sound card is needed.**

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

**No.**

* 1. 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

**A high-end motherboard is the GIGABYTE X570 AORUS XTREME. The model # is not listed. The price is $934.99. The vendor source is newegg.ca. Some of the main features are AMD 3rd gen Ryzen support, USB TurboCharger for mobile phones, built-in wifi, and RGB lights.**

* 1. 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

**A basic motherboard is the ASRock 760GM-HDV. The model # is 760GM-HDV. The price is $109.99. The vendor source is newegg.ca. Some of the main features are AM3 support, capacity of up to 32GB of RAM, and DDR3 RAM support.**

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

**The ASRock is the least expensive motherboard that meets my requirements. All information is above.**

1. 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.**

* 1. 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

**A high-end HDD is the 12big Thunderbolt 3 120T. The model # is not mentioned. The price is $10,487.48. The vendor is newegg.ca. The main feature is that is has a capacity of 96 terabytes.**

* 1. 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

**A basic HDD is the Seagate BarraCuda 1TB HDD. The model # is ST1000DM010. The price at the moment is $54.99. The vendor source is newegg.ca. The main feature about this is the 1TB capacity.**

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

**The HDD would be the BarraCuda 1TB HDD. Information listed above.**

1. 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. **No.**
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features. **N/A**
2. 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.**
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features. **N/A**
3. 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 not really.**
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.

**N/A**

1. 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.

**There is no need for portability. It is only in one place.**

* 1. Do you require a **Desktop** / Laptop / Notebook or other PC format?
  2. How will this affect the cost of your dream machine.

**It will cost less as it won’t need to be prebuilt.**

1. 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)