**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** )Justify your answer using examples of how a computer is used to perform a task related to your application.

* The speed is one of the most important things about a media production and streaming PC as the speed would determine how fast you can accomplish many editing tasks as well as how long it will take to open a video etc.
* The CPU will determine the speed of your computer and if the speed is not up to par for certain programs such Sony Vegas Pro, than you would have to have a CPU which will be able to handle those applications
* Therefore the speed of the computer must have a **High** priority.
  1. How important is data storage for my topic ( **High** )? Justify your answer using examples of how a computer is used to perform a task related to your application.
* The data storage will be at a **High** because you would need to be able to save different types of videos at least 1080p and with better data storage you can save videos with even higher quality
* Also having a bad data storage can also drop your video in frame speed
* There for the priority for data storage is **High**
  1. How important is graphics and sound for my topic ( **Medium** )? Justify your answer using examples of how a computer is used to perform a task related to your application.
* The graphics card is a component which is more important for gaming PCs
* There the importance of it is a medium
  1. How important is internet connectivity for my topic ( **Medium** )? Justify your answer using examples of how a computer is used to perform a task related to your application.
* Just like any computer internet connectivity is essential so you can access to the internet
* In media production computers you would need good internet so you can be able to publish videos online after editing but if you already have videos on your pc you can edit without internet connectivity
* For streaming good internet is required so video can be high quality and have zero lag interruptions
* Therefore internet connectivity would have a **Medium** importance

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

* Speed is one of the most important part of a media production computer as the processors core count and speed will determine how fast we can accomplish edits
* AMD Ryzen 5 2600X
  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
* Intel core i9-9900K
* Price: $640 CDN from amazon
* Features: 8 cores, base clock 3.6 GHZ, boost clock: 5.0 GHz, L3 cache: 16MB
  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 2600X
* Price: $200 CDN from amazon
* Features: Cores: 6, Base clock: 3.6 GHz, Boost clock: 4.32 GHz, L3 cache: 16Mb
  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
* AMD Ryzen 3 2200G
* Price: $110 CDN from amazon
* Features: cores: 4, Base clock: 3.5 GHz, boost clock: 3.7 GHz, L3 Cache: 4MB
  1. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source.

• AMD Ryzen 5 2600X

• Price: $200 CDN from amazon

• Features: Cores: 6, Base clock: 3.6 GHz, Boost clock: 4.32 GHz, L3 cache: 16Mb, TDP: 95W

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

A medium size of RAM memory is required as in order to edit videos with higher quality they will take uo more space so I would require at least 16 gb

* 1. 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
* Corsair Vengeance LPX DDR4
* Price: $1231 CDN on amazon
* Features: 128GB, runs at 2666MHz
  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
* Corsair Vengeance LPX 16GB DDR4
* Price: $112 CDN on amazon
* Features: 16GB, 3000MHZ memory speed
  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
* Corsair Vengeance LPX 8GB DDR4
* Price: $54 on amazon
* Features: 8GB, 3000MHz memory speed
  1. What would be the least expensive RAM Memory that meets your requirements? List the Model Number, Price, and Vendor Source.
* Corsair Vengeance LPX 16GB DDR4
* Price: $112 CDN on amazon
* Features: 16GB, 3000MHZ memory speed

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

Graphics cards are not as important for media production computers as the purpose of those computers are to edit and not for gaming where you need high quality graphics

* 1. 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 Gaming GeForce RTX 2060 6GB GDRR6 192-bit HDMI
* Price: $475 CDN on amazon
* Features: 6GB 192-Bit GDDR6, Boost clock 1710 MHz, PCI Express 3.0 x16,
  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
* GIGABYTE GeForce GTX 1660 OC 6G graphics card
* Price: $230 CDN on Newegg
* Features: 6GB 192-bit GDDR5, core clock 1830 MHz, PCI express 3.0 x16,
  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.
* MSI GeForce GTX 1050
* Price: $110 CDN on newegg
* Features: 2GB 129-Bit GDDR5, Core clock, 1404 MHz, Boost clock 1518 MHz, PCI express 3.0 x16

1. Sound Card
   1. Do you require special sound support? (**Basic - On Motherboard**)

* External sound support is not required as if the user needs sound they can just use headphones
  1. 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
* EVGA Nu Audio PCle sound card
* Price: $263 CDN at B&H photo video audio
* Features: 192 kHz
  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
* Creative Sound Blaster Audigy FX 5.1 PCle sound card
* Price: $45 CDN on newegg
* Features; 192 kHz
  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.
* Need a basic which is provided by the motherboard

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

The motherboard needs to require sound

* 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
* ASUS AM4 TUF GAMING Z570-PLUS ATX motherboard
* Price: $190 CDN on newegg
* Features: Ready for 2nd and 3rd generation AMD Ryzen proccessors to maximize connectivity and speed
  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
* GIGABYTE B450M DS3H AM4 AMD B450 SATA 6GB/s Micro ATC AMD motherboard
* Price: $73 CDN on newegg
* Features: Supports AMD 1st generation and 2nd generation, High quality Audio Capacitors and Audio Noise Gaurds, Smart fan 5 with FANSTOP
  1. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.
* GIGABYTE B450M DS3H AM4 AMD B450 SATA 6GB/s Micro ATC AMD motherboard
* Price: $73 CDN on newegg
* Features: Supports AMD 1st generation and 2nd generation, High quality Audio Capacitors and Audio Noise Gaurds, Smart fan 5 with FANSTOP

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)?

* SSD needed as they provide good much better performance compared to HDD with editing
  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
* Seagate BarraCude Pro 10TB internal Hard Drivw performance HDD
* Price: $480 CDN on amazon
* Features: Lightning fast performance and large storage 10TB
  1. Provide an example of a basic SDD using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
* INTEL solid state drive 660P series, 1TB
* Price: $140 CDN from amazon
* Features: 2TB storage, thin 80mm
  1. What would be the least expensive Solid Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.
* INTEL solid state drive 660P series, 1TB
* Price: $140 CDN from amazon
* Features: 2TB storage, thin 80mm

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.

USBs can be required as you can store videos within them or your own filesin them

* 1. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
* SanDisk Ultra Flair USB 3.0 128GB flash drive
* Price: $29 CDN from amazon
* Features: 128GB storage, up to 150Mb/s, 128-bit AES

1. 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.

Basic Wi-Fi and Bluetooth will be enough for a media production computer as Wi-Fi would be needed to access internet, download applications or send videos though cloud. Bluetooth will also be used for connection of wireless headphones or mouse, etc.

* 1. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
* Ignite internet packages: Ignite internet Gigabit: Up to 1Gbps, $110/month
* Bluetooth Adaptor
* Enables Bluetooth compatibility
* $16

1. 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.

A mouse keyboard and monitor are both needed. for monitor a 4k monitor would be needed as resolution for editing would be at either 4k or 1080p

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

Monitor

* Samsung 28" 4K UHD 60Hz 1ms GTG TN LED FreeSync Gaming Monitor
* Price: $350 on bestbuy
* Features: screen size: 28 in, resolution: 4k Ultra, Display type LED

Mouse and keyboard

* Logitech Wireless Keyboard and Mouse Combo
* Price: $30

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.

The need for portability would be if you have to do work at other places such as school or work, but you can also do that at home and as a desktop will be overall cheaper I will need a desktop

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

Desktop

* 1. How will this affect the cost of your dream machine.

As portability will not be an issue we can have a desktop and the desktop will be cheaper

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

**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*** |  |
| ***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*** |  |