**Overview**

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

My PC application topic Is: \_photo editing and organization\_\_

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.

The computer speed for photo editing should be medium because they should not take too much time or to less time for organizing and editing the photo. The photo editing programs do not need to much speed because they are just editing and that does not need to have fast speed.

* 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 for organizing and editing the photo is needed a lot so the storage would take up more space. The storage needed is a high number. The computer would have multiple files for the editing process.

* 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.

It is medium because the computer would have to organize where it goes and how it should be set up. Because it is only the editing process where the computer would have everything and just replace or add things that need to be fixed.

* 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.

The importance of internet connectivity is high because the whole process runs on Wi-Fi and that is how the process would be completed.

1. CPU Processor Chip
   1. What speed of CPU Chip do you require? (High / Medium / Basic)
      * The speed of the CPU would be fast or medium because the process would need to be high.
   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
      * Apple mac mini 2018 CPU: intel core i3 – i7 | graphics: intel UHD Graphics 630 | Ram: up to 64GB| storage: up to 2TB SSD | connectivity: gigabit Ethernet, 802.11ac WI FI| dimensions (w x d x h): 19.7 x 19.7 x 3.6cm
   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
      * There is one for AMD the new AMD AM4 Ryzen 3000 series platform
   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
      * 878159-B21 HP intel Xeon 28-core platinum 8180M 2.5GHZ 38.5MB L3 cache 10.4GT/S UPI speed socket FCLGA3647 14NM 205W processor.
   5. What would be the least expensive CPU Chip that meets your requirements? List the Model Number, Price, and Vendor Source.
      * Office 365 home, up to 6 people can use 16 Gb RAM if you are using latest creative cloud
2. RAM Memory
   1. What size of RAM Memory do you require? (Large / Medium / Basic)
      * The amount of RAM memory a photo editing program requires is about 17 Gb so medium or it could just be small.
   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

The line is up to 178 characters, there are many different types of thee ram memories that could be used.

* 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

DDR4 3000 (PC4 24000), Timing 16-18-18-38, CAS Latency 16, Voltage 1.35V

* 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 about 8 GB 18 GB is required for ideal for professional work and more demanding games.

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

The lowest prices for a CPU photo editing with ram memory would be around 90-200 $ Crucial 16GB Single DDR3/DDR3L 1600 MT/s (PC3L-12800) not Buffered SODIMM 204-Pin Memory - CT204864BF160B

1. Graphics Card
   1. What graphics speed and resolution do you require? (High / Medium /Basic - On Motherboard)

For the mother board I require at least a basic mother board for graphic speed.

* 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

AMD Radeon Pro WX 3100 Graphic Card - 1.22 GHz Core - 4 GB GDDR5 - Half-Length - Single Slot Space Required

* 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

HP Quadrat K420 2 GB DDR3 SDRAM Low-profile Graphic Card

* 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.

OUYAWEI GTX1050 4G DDR5 Graphics Card 128bit Desktop PC Gaming Video Card this is about 78 $

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

No, my photo editing thing does really require a high speed special sound.

* 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

SOUND DEVICES MIXPRE-10M MUSICIAN MULTITRACK AUDIO RECORDER

Model: MIXPRE-10M

* 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

ASUS Sonar DG 5.1 Channels PCI Interface Sound Card it is a round 49.99$.

* 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.

Sabrient USB External Stereo Sound Adapter for Windows and Mac. Plug and play No Drivers Needed. (AU-MMSA) 9.99$

1. Motherboard
   1. Do you require any special motherboard features (based on your answers to the above questions)?
      * Based on the above questions no I do not need a special mother board. But could use sometimes if needed.
   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 LGA 1151 (300 Series) Intel Z390 SATA 6Gb/s ATX Intel Motherboard it is around 379.99$.
   3. Provide an example of a basic Motherboard using the list of suppliers provided in the appendix. List the Model Number, Price, and Vendor Source. Also list its main features
      * GIGABYTE Z390 AORUS ULTRA LGA 1151 (300 Series) Intel Z390 HDMI SATA 6Gb/s USB 3.1 ATX Intel Motherboard
   4. What would be the least expensive Motherboard that meets your requirements? List the Model Number, Price, and Vendor Source.
      * ASUS TUF Z390M-Pro Gaming (Wi-Fi) LGA1151 (Intel 8th and 9th Gen) DDR4 DP HDMI M.2 Z390 Micro ATX (mA TX) Motherboard with Onboard 802.11 ac Wi-Fi and USB 3.1 Gen2
      * It is around 239$
2. 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 not really some I could use.
   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
      * Seagate Cheetah NS 600GB 6G 3.5-inch Serial Attached SCSI (SAS) Dual Port Hot-Swap 10K 16MB Hard Drive
      * The price for this would be 332$
   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 1 TB Video HDD seta 5900 RPM 64 MB 3.5-Inch ST1000VM002 (Black)
      * The price of this would be around 45$
   4. What would be the least expensive Hard Disk Drive that meets your requirements? List the Model Number, Price, and Vendor Source.
      * Western Digital Caviar Blue WD3200AAJS 320GB 7200 RPM 8MB Cache SATA 3.0Gb/s 3.5" Internal Hard Drive Bare Drive
      * Price of this is about 34.00 $
3. 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 this does not require that much special wear unless it is really required from the pole who asked to edit
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
      * NOLYTH External CD DVD Drive Burner for Laptop/MacBook Pro/Air/Windows supported DVD±RW/CD-RW
      * This is around 60.00$ in Canada
4. 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.
      * Yes, it can sometimes require some things that can be useful for editing such as Wi-Fi and blue tooth because the Wi-Fi process would run on that
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
      * Edimax EW-7611ULB 2-in-1 Wi-Fi & Bluetooth 4.0 Nano USB Adapter
5. 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.
      * Sometimes it could require the special keyboards and other things needed for the editing process
   2. If so, List the Model Number, Price, and Vendor Source for any of these extra features.
      * The mouse which is around 14$
      * Logitech Wireless Mouse M185 - Swift Gray (910-002225)
6. 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.

For editing you could do it anywhere and there are laptops that we can use for if we want to do it out somewhere.

* 1. Do you require a Desktop / Laptop / Notebook or other PC format?
     + For the PC format we can basically use any thing that is capable of using and editing the pictures.
  2. How will this affect the cost of your dream machine.

This can affect the cost because the more the editing you have and more the editing needs to be good and used properly the expensive the costs of the items that you need are going to get.

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)

**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*** |  |