**Overview**

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

My PC application topic is web surfing

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: October 23

**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.

For a web surfing PC speed is fairly important especially in RAM because you want your computer to be able to process information quickly although most internet tasks can be managed by medium level PCs and small amounts of RAM.

* 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 in terms of RAM is fairly important but in terms of hard drives or solid state drives they are for the most part unnecessary and should be fairly low quality due to a lack of storage if there is no downloading going on.

* 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.

Graphics and sound are fairly unimportant because you can watch video, listen to sound and look at images in high quality with a low quality graphics card or onboard graphics.

* 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.

Internet connectivity is very important for my topic because web surfing requires good internet in order to load things quickly and overall work better.

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

I need a basic CPU because I am only using to search the web which requires mostly RAM and not a lot of CPU power.

* 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

A 2nd generation Ryzen Threadripper 2990 WX is one of the best CPUs on the market You can buy it for $2,747 on Newegg. It has 32 cores and 64 threads.

* 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

A medium speed CPU is an intel i5-9400F with 6 cores. You can buy it for $200 on Newegg

* 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

An example of a basic speed CPU is an intel Pentium G5400 for about $90 on Newegg with two cores.

* 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 chip that I would need is the Intel Pentium G5400 for $90 on Newegg.

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

I need a medium amount of RAM maybe the small side of medium because I need to surf web which needs not much RAM but still requires about 8 gigs of RAM in order to run everything well.

* 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

You can get Trident Z Royal Series 64 GB 4 X 16 Ram sticks for $520 on Newegg. It has DDR4 and 288 pins.

* 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

An example of medium range RAM would be the Ripjaws V Series 2 X 8 GB ram for $89 on Newegg. It has DDR4 and 288 pins.

* 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

An example of basic RAM would be the Kingston 4 GB its model number is KVR16N11S8/4 , it costs $37 on Newegg and has DDR3 and 240 pins.

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

Since I need some RAM to run the internet but not too much, I opted to pick the Ripjaws V Series 2 X 4 GB with 288 pins DDR4 for $49 on Newegg

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

I can use any graphics speed in order to surf the web but the better the graphics card the better the image quality.

* 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

An example of a high-end graphics card would be the ASRock Radeon RX 5700 XT DirectX 12 RX 5700 XT Challenger D with 8GB 256-Bit GDDR6 for $620 on Newegg.

* 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

An example of a mid-range Graphics Card would be the MSI Radeon R7 with 2GB and 64 bits with DDR3 which costs $73 on Newegg

* 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.

What I would probably choose would be the MSI Radeon R7 with 2GB and 64 bits with DDR3 which costs $73 on Newegg

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

I do not require special sound support for my computer. I could go for basic or on motherboard

* 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

An example of a high-end sound card would be the Creative Sound BlasterX AE-5 Sound Card. It connects with PCIe and does very well all around for the quality of sound it costs $204 on Newegg

* 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 mid-range sound card would be the Creative Sound Blaster Audigy with all of the necessary plugs for sound and recording. It costs $45 on Newegg.

* 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.

I Need only the sound from the sound chip on my motherboard.

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

I need a sound chip on my motherboard. Other than that a normal motherboard will work.

* 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

An example of a high-end motherboard would be the ASUS ROG Crosshair VIII Impact It costs $600 on Newegg and has the ability to handle almost anything that you use it for with ports for everything you’ll need.

* 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

An example of a high end of basic motherboard would be the ASRock B450M PRO4 for $105 on Newegg. It can support most mid-range parts and a few high-end ones at the same time

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

I would use the ASRock B450M PRO4 for $105 on Newegg because it would be able to handle all of the parts in my computer fairly easily.

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)?

I do not need any special HDD features because I am only using it to surf the web.

* 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

You can buy a Seagate BarraCuda ST8000DM004 for $209 on Newegg, It has 8 TBs of space and a 6.0Gb/s speed.

* 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

I found a used Seagate 80GB 7200 RPM SATA 3.0Gb/s Internal Hard Drive for $10 on Newegg

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

I found a used Seagate 80GB 7200 RPM SATA 3.0Gb/s Internal Hard Drive for $10 on Newegg. This is useful for me because it is cheap and I don’t need a very good hard drive for only surfing the web.

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.

For just using the internet there is no requirement for adding any removable features to the computer.

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

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.

The topic of web surfing computer should preferable have Wi-Fi and Ethernet connectivity so that it can function without Ethernet but also can take advantage of the better internet with Ethernet

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

I will use a Rosewill Wi-Fi Adapter AC600 Adapter for $30 with up to a 150 Mbps Wi-Fi connection. It costs $30 on Newegg

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.

For my topic basic peripherals are fine to use but the better the keyboard mouse and monitor the better time you’re going to have.

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

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.

Portability is not necessarily needed for a web surfing computer.

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

A desktop could be used for web surfing.

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

It should not affect it as desktop computers are fairly cheap compared to laptops.

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*** |  |
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| ***Media Production and Streaming Computer*** |  |
| ***Web Surfing Computer*** |  |