Module A.3 Dream Machine

1. Explain and justify the processor and memory requirements for your ‘dream machine’ task. Discuss the following:

a. Minimum and “would be nice” requirements for the Computer Display

The PC must also have a high definition and high-quality monitor as that will help in the video streaming and media playback. The best monitor would be the SEIKI SE39UY04 39" 4K UHD LED HDTV

b. Minimum and “would be nice” requirements for External Storage and Backup

A lot of footage and media needs to be stored and transferred from camera to PC or PC to PC and that is why the external storage must be portable and large. The perfect external storage would be the Seagate 1TB Backup Plus Slim Portable Drive

c. Minimum and “would be nice” requirements for Network Connectivity

No major requirements are needed for network interface as most video editing happens on one computer. If there were several computers editing at the same time than the Intel EXPI9301CTBLK 10/100/1000Mbps PCI-Express Network Adapter – OEM would help link a LAN between those PCs.

d. Minimum and “would be nice” requirements for Printer Technology

No printer technology is needed as no pictures/files will be needed to be printed and only video will be produced.

**Level 3: Building Your Dream Machine**

1. Identify the minimum requirements for each component of your dream machine as follows::

a. CPU processor chip speed and type

Intel – Core i7-8700K 3.7 GHz 6-Core Processor

b. Motherboard type

Asus – Prime Z370-A ATX LGA1151 Motherboard

c. RAM memory speed and size

Corsair – Vengeance LPX 32 GB (2 x 16 GB) DDR4-3000 Memory

d. HDD speed and size

BarraCuda 4TB

e. Display Monitor resolution, type, and size

SEIKI SE39UY04 39" 4K UHD LED HDTV

f. Graphics card resolution and type

Asus – GeForce GTX 1070 8 GB Video Card

g. Audio card type

ASUS Xonar DG 5.1 Channels 24-bit 96KHz PCI Interface Sound Card

h. Audio Speakers type

Audio engine A2+

i. External backup type and size

Seagate 1TB Backup Plus Slim Portable Drive

j. Network interface requirements

Intel EXPI9301CTBLK 10/100/1000Mbps PCI-Express Network Adapter - OEM

k. Printing Technology

Not Needed

l. Other Peripherals (e.g. mouse, keyboard, joystick, etc.)

MOUSE: Razer Naga Chroma

KEYBOARD: Corsair Vengeance K70

2. Prioritize you list of components from question #1 from those that are essential down to those that would be nice.

Essentials:

· CPU

· GPU

· HDD

· Motherboard

· RAM

· Monitor

Would be nice:

· Audio card

· Audio speaker

· External backup storage

· Network interface

· Mouse

· Keyboard

3. Establish a target budget (cost) for your dream machine.

a. Justify your cost based on your projected component needs.

b. Justify your cost based on a realistic assessment of your application and target user

The budget for this dream machine is $3,000. The cost of essential components like CPU, RAM, HDD and GPU coast a lot, thus making the overall cost higher. This budget is suitable for the target user as most media producer are really rich, work on projects that are sponsored by other people or the project has a good outlook for the future with big profits. Therefore, the budget is justified and realistic.

4. Build your dream machine or locate a ready to buy machine using on-line vendor web sites.

a. Find at least two sources for your dream machine

b. Provide a copy of the cost and feature list summary for each source

c. Explain how the machine from each source matches (or is different) from your ideal configuration

The PCs from both vendors are pretty much the same, the only major different is that the GPU is better from Canada Computer and the Monitor is better from Canada computers. Another major difference is that the cost of the PC from Canada computers cost $100 more than the PC from PC Part Picker. The PC from PC Part Picker also includes a PC tower, Windows 10 Pro and a CPU cooler.

Components from **PC Part Picker**

https://ca.pcpartpicker.com/list/hnQ96s

Components from **Canada Computers**

CPU processor chip speed and type

<https://www.canadacomputers.com/product_info.php?cPath=4_1210_65&item_id=112829>

Motherboard type

<https://www.canadacomputers.com/product_info.php?cPath=26_1207_1206_1514&item_id=132000>

RAM memory speed and size

<https://www.canadacomputers.com/product_info.php?cPath=24_311_1326&item_id=096123>

HDD speed and size

<https://www.canadacomputers.com/product_info.php?cPath=15_1086_210_212&item_id=104098>

Display Monitor resolution, type, and size

<https://www.canadacomputers.com/product_info.php?cPath=22_1195_700_1104&item_id=098373>

Graphics card resolution and type

<https://www.canadacomputers.com/product_info.php?cPath=43_1200_557_559&item_id=097867>

Audio card type

<https://www.canadacomputers.com/product_info.php?cPath=40&item_id=102722>

Audio Speakers type

<https://www.canadacomputers.com/product_info.php?cPath=35_663_656&item_id=066226>

External backup type and size

<https://www.canadacomputers.com/product_info.php?cPath=15_213_602&item_id=067603>

Network interface requirements

<https://www.canadacomputers.com/product_info.php?cPath=27_1048_1052&item_id=022090>

Mouse

<https://www.canadacomputers.com/product_info.php?cPath=21_279_275&item_id=062866>

Keyboard

<https://www.canadacomputers.com/product_info.php?cPath=21_273_274&item_id=102475>

Suggested on-line computer sources:

·  [www.bestbuy.ca/](http://www.bestbuy.ca/)

·  [www.dell.com/en-ca](http://www.dell.com/en-ca)

·  [www.staples.ca](http://www.staples.ca/)

·  [www.tigerdirect.ca/](http://www.tigerdirect.ca/)

·  [www.canadacomputers.com](http://www.canadacomputers.com/)

**Level 4: Sharing Your Dream Machine**

1. Prepare a brochure documenting your dream machine options and choices.

a. The target audience is other students in the class

b. You should explain your target task (e.g. game computer) and how this affects configuration choices.

The task I was given was to create a dream machine for media production and video streaming. This means that the PC must be good at video editing and video playback. Most media production PCs are for big companies and corporations because media production is a big business, and this means that the budget for this pc will be big. Media production PCs are supposed to be fast and they must have a good CPU because video editing uses a lot of power. The monitors and the speakers of this type of PC must be good as when playing back the video, you must be able to video the video in high quality. The storage of this computer must also be big as footage will be stored in your PC and media files take up a lot of space.

c. You should explain your configuration choices in greater detail

A high-end GPU and a CPU is needed because rendering a video and editing it takes a lot of computing power. Best CPU choice would be the Intel i-9 and the best GPU would be the ASUS GeForce GTX 1070. For the same reasons as the GPU and CPU, the RAM needs to be better than the average home computer as RAM effects the power of the computer. An HDD with large storage capacity is needed as media files and stock footage will take up a lot of space. The perfect HDD would be the BarraCuda 8TB. For motherboards, it should be capable of expanding and adapting to different component as different media projects require different motherboards components like a bigger RAM. The motherboard that fits this criteria would be the Asus – Prime Z370-A ATX LGA1151 Motherboard. For audio, the PC must be able to playback audio with high quality as the PC will be used for Media streaming. The best audio speaker would be the Audio engine A2+ and the best audio card would be the ASUS Xonar DG 5.1 Channels 24-bit 96KHz PCI Interface Sound Card. The PC must also have a high definition and high-quality monitor as that will help in the video streaming and media playback. The best monitor would be the SEIKI SE39UY04 39" 4K UHD LED HDTV. A lot of footage and media needs to be stored and transferred form camera to PC or PC to PC and that is why the external storage must be portable and large. The perfect external storage would be the Seagate 1TB Backup Plus Slim Portable Drive. No major requirements are needed for network interface as most video editing happens on one computer. If there were several computers editing at the same time than the Intel EXPI9301CTBLK 10/100/1000Mbps PCI-Express Network Adapter – OEM would help link a LAN between those PCs. No printer technology is needed as no pictures/files will be needed to be printed and only video will be produced. The PC must have a mouse and a keyboard, as they are very helpful when video editing and a good muse and keyboard will increase the efficiency of video production. The best mouse would be Razer Naga Chroma and the best keyboard would be Corsair Vengeance K70.

d. Your two purchase options should be explained and compared

Components from **PC Part Picker**

https://ca.pcpartpicker.com/list/hnQ96s

Components from **Canada Computers**

CPU processor chip speed and type

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Keyboard

<https://www.canadacomputers.com/product_info.php?cPath=21_273_274&item_id=102475>

2. Share your brochure

a. By uploading it to your repository

b. By presenting it during the in-class tradeshow (date TBD)

3. Visit and report on other trade show presentations / brochures

a. Complete the Passport Template (TBD) as you participate in the in-class tradeshow.