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IntroCS Pd.5
L1 -- On Wednesdays We Wear Pink
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Imagine: Your trio comprises the entirety of a new IT consulting firm, and you need to grow your brand. One way you plan to do this is by accruing word-of-mouth referrals. As it happens, each of you has a friend currently in need -- but you only have time to spec out a build for one...

TASK: Peruse the three use cases below and pick your favorite. Use your class jargon glossary and pcpartpicker.com to design a machine and price it. Design a pitch to convince your chosen user to purchase your creation. (Presentation will count for 20% of grade.)

00. Architect Tyrone is an architect. He is currently working with a computer that runs AutoCAD 2017; however, he wants to purchase and run AutoCAD 2020. Tyrone needs you to design a new computer to make his designs come to life. Background/Guidelines: Making 3D Photorealistic rendering in AutoCAD2020 Access to industry-specific toolsets, including:

- o Architecture
- o Electrical design
- o Map 3D
- o Mechanical design
- o MEP (mechanical, electrical, and plumbing)
- o Plant 3D, including P&ID functionality
- o Raster design

Tyrone does not want to spend more than $3,000 (including peripherals, but not software)

hardware/software build link: <u>https://pcpartpicker.com/list/6cKZvW</u>

Component	Selection	Base	Promo	Shipping	Tax	Price
CPU	AMD Ryzen 5 2600 3.4 GHz 6-Core Processor	$152.99		—	○	$152.99
CPU Cooler	+ Choose A CPU Cooler					
Motherboard	Asus ROG STRIX B450-F GAMING ATX AM4 Motherboard	$129.99		FREE	○	$129.99
Memory	G.Skill Ripjaws V Series 32 GB (2 x 16 GB) DDR4-3200 Memory	$139.99		—	○	$139.99
	+ Add Additional Memory					
Storage	Samsung 860 Evo 1 TB 2.5" Solid State Drive	$163.47		—	○	$163.47
	+ Add Additional Storage					
Video Card	Asus GeForce GTX 1080 8 GB ROG STRIX Video Card	$889.99		FREE	○	$889.99
Case	Fractal Design Meshify C ATX Mid Tower Case	$99.95		FREE	○	$99.95
Power Supply	EVGA BQ 600 W 80+ Bronze Certified Semi-modular ATX Power Supply	$85.60			○	$85.60
Optical Drive	+ Choose An Optical Drive					
Operating System	Microsoft Windows 10 Pro OEM 64-bit	$139.99		FREE	○	$139.99
Software	+ Choose Software					
Wired Network Adapter	TP-Link TG-3468 PCIe x1 1000 Mbit/s Network Adapter	$14.99		—	○	$14.99
	+ Add Another Wired Network Adapter					
Wireless Network Adapter	Gigabyte GC-WB867D-I PCIe x1 802.11a/b/g/n/ac Wi-Fi Adapter	$42.90		—	○	$42.90
	+ Add Another Wireless Network Adapter					
Monitor	Samsung U28E590D 28.0" 3840x2160 60 Hz Monitor	$299.99		FREE	○	$299.99
Monitor	Samsung U28E590D 28.0" 3840x2160 60 Hz Monitor	$299.99		FREE	○	$299.99
	+ Add Another Monitor					
Keyboard	Microsoft Designer Bluetooth Desktop Bluetooth Wireless Slim Keyboard With Laser Mouse	$84.99			○	$84.99
	+ Add Another Keyboard					

Total: **$2539.31**

<mark>** all hardware and software is in accordance with the AutoDesk-specified system requirements for AutoCAD2020 **</mark>

Component	Picture	Usage
CPU: AMD Ryzen 5 2600		- High clock speed = good for running programs that demand a smooth and fast experience

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Motherboard: Asus ROG STRIX B450-F		- Is compatible with the sizes of all the cards and CPU, with the potential to add storage
Memory: G. Skill Ripjaws V Series 32 GB DDR4-3200		- A lot of RAM to ensure that all the company programs can run smoothly and quickly without lag or crashing the computer
Storage: Samsung 860 Evo 1 TB 2.5" Solid State Drive		- A lot of storage, because AutoCAD and its files take up a lot of space

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Video Card: Asus GeForce GTX 1080 8 GB ROG STRIX Video Card		- More memory for consistently smooth graphics and can support a high resolution
Case: Fractal Design Meshify C ATX Mid Tower Case		- A smooth and sleek case with tempered glass so all components are easy to view and access
Power Supply: EVGA BQ 600 W 80+ Bronze Certified Semi-modular ATX Power Supply		- Can handle a greater wattage than necessary to supply the computer (354W) and is very efficient
Operating System: Microsoft Windows 10 Pro OEM 64-bit		- Has better security options - Support a lot of accessible memory - Good for running a lot of company things at once and saving them securely

hardware/software build link: https://pcpartpicker.com/list/6cKZvW

Wired Network Adaptor: TP- Link TG-3464 PCle x1 1000 Mbit/s Network Adaptor		- Wired networking is more reliable than wireless networking, and it is compatible with the rest of the system
Wireless Network Adaptor: Gigabyte GC-WB867D-I PCle x1 802.11a/b/g/n/ac Wi-Fi Adapter		- Useful and fast for the wireless connections needed for the keyboard and mouse
Monitor: Samsung U28E590D 28.0" 3824x2160 60 Hz Monitor		- A 4K resolution monitor with fast response time = ideal for graphic design - Two monitors = more comfortable interface when running several programs, increased click accuracy - The monitor is thin, giving it a smooth and sleek appearance

hardware/software build link: https://pcpartpicker.com/list/6cKZvW

Keyboard + Mouse: Microsoft Designer Bluetooth Desktop Bluetooth Wireless Slim Keyboard With Laser Mouse		- Comes with a Bluetooth mouse - The keyboard and mouse themselves are compact, smooth, and sleek.

System requirements for AutoCAD 2020 including Specialized Toolsets (Windows)

Operating System	• Microsoft® Windows® 7 SP1 with Update KB4019990 (64-bit only) • Microsoft Windows 8.1 with Update KB2919355 (64-bit only) • Microsoft Windows 10 (64-bit only) (version 1803 or higher)
Processor	Basic: 2.5–2.9 GHz processor Recommended: 3+ GHz processor Multiple processors: Supported by the application
Memory	Basic: 8 GB Recommended: 16 GB
Display Resolution	Conventional Displays: 1920 x 1080 with True Color High Resolution & 4K Displays: Resolutions up to 3840 x 2160 supported on Windows 10, 64-bit systems (with capable display card)
Display Card	Basic: 1 GB GPU with 29 GB/s Bandwidth and DirectX 11 compliant Recommended: 4 GB GPU with 106 GB/s Bandwidth and DirectX 11 compliant
Disk Space	6.0 GB
Browser	Google Chrome™ (for AutoCAD web app)
Network	Deployment via Deployment Wizard. The license server and all workstations that will run applications dependent on network licensing must run TCP/IP protocol. Either Microsoft® or Novell TCP/IP protocol stacks are acceptable. Primary login on workstations may be Netware or Windows. In addition to operating systems supported for the application, the license server will run on the Windows Server® 2016, Windows Server 2012, and Windows Server 2012 R2 editions.
Pointing Device	MS-Mouse compliant
.NET Framework	.NET Framework Version 4.7 or later *DirectX11 recommended by supported OS