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Team Cow
IntroCS pd06
Lab 1 -- On Wednesdays We Wear Pink
2020-04-17
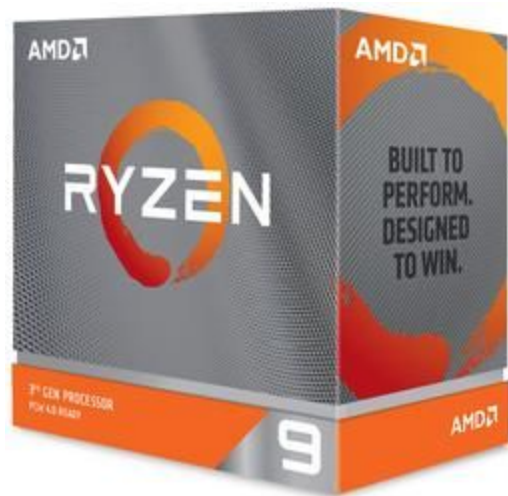
00. Flight Simulator
https://pcpartpicker.com/list/V3r79G
CPU:
AMD Ryzen 9 3950x 3.5 GHz 16 core processor
Price: $738.99

The AMD Ryzen 9 3950x with 3.5GHz and a 16 core processor is one of the most important parts of the build, as the CPU is the brains of the computer. Ryzen is a popular name in the CPU industry and for good reason. Their CPU's are just as powerful as any others in the market. To run Flight Simulator smoothly, one needs a very strong CPU. Ryzen's CPU offers 3.5 GHz, and up to 4.7 GHz boost clock. GHz is the cycle the CPU goes through to make calculations, meaning that a higher GHz, the faster your computer will be able to compute these calculations. Flight Simulator recommends at least a 4 core, 4.0 GHz to be able to run its game, so overshooting a bit will definitely make the experience smoother and make the game a lot better to look at.

CPU Cooler:
Cooler Master MasterLiquid ML240L RGB 66.7 CFM Liquid CPU Cooler
Price: $101.41

Any powerful CPU like the AMD Ryzen 9 3950x is going to create loads of heat which needs to be handled. The fans in the MasterLiquid ML240L RGB by Cooler Master can go up to 2000 RPM which makes it very effective at cooling down your machine. A CPU cooler cools down the machine which improves the stability and efficiency of the machine. Cooler Master is a reputable brand in the industry and this CPU Cooler will get the job done when playing games such as Flight Simulator.

Motherboard:

Asus PRIME X570-P ATX AM4 Motherboard

Price: $159.99

The motherboard is a vital part of the machine that holds together parts of the hard drive such as the CPU and memory. The PRIME X570-P ATX AM4 by Asus is high quality which is important for running games such as Flight Simulator. A high-quality motherboard protects the other expensive parts of the machine, can endure the heat of the powerful CPU and is durable and long-lasting. Asus is a very notorious company in the industry and its products are reliable and of high quality.

Memory:

G. Skill x 32 GB (2 x 16) DDR4-3000 Memory

Price: $137.99

The Memory is often confused with storage, as they both have a GB value to determine its power. The difference is that memory is like short term memory; it only works on the programs you have open. So the more memory (also known as RAM, Random Access Memory), the more programs you can run, and also the more intense programs can be run. Flight simulator only needs about 12 GB of ram to effectively run, so having 32 GB gives a lot of freedom in what you can do. You can open up a bunch of tutorials on google chrome for Flight Simulator, and your game would be just fine since you have so much RAM.

Video Card:
EVGA GeForce RTX 2080 Ti 11 GB Black Video Card
Price: $1125.95

A graphics card is a piece of hardware that produces the image on your monitor. Consequently, the more powerful your graphics card is the better quality the image on your monitor will appear. The GeForce RTX 2080 Ti by NVIDIA is considered one of the best graphics cards available in the market. The minimum required graphics card to run Flight Simulator is the GeForce GTX 960, the GeForce RTX 2080 Ti trumps the requirement is desirable for a game like Flight Simulator. This graphics card will exhibit breathtaking graphics when you are running Flight Simulator and it will feel as if you are actually flying the plane in real life.

Case:
NZXT H510 ATX Mid Tower Case
Price: $69.99

       The case is one of the most ergonomic parts of the entire build. This case is compatible with all the parts of this build and is sleek and is straight to the point. There are only the bare necessities in this case, and there is no confusion in how to turn the computer on. There are no RGB lights to reduce power usage and that just adds to the price for no real reason. The lack of RGB doesn't make a difference, as I don't really feel that they are useful nor look good. So Hikaru doesn't really need an RGB case, leading to this one. Nice slim and simple.

Storage: Corsair MP510 960 GB M.2-2280 Solid State Drive
Price: $154.99

Storage is an essential part of the computer, as it allows for more programs to be ready to be run on the computer. A Solid State Drive lets the computer read and write data onto the computer even faster than an HDD. Although it may be faster, it is more expensive. But this doesn't limit Hikaru as their budget is quite big. The SSD also allows for faster loading times, so you can get right into Flight Simulator without all those loading times.

Monitor:
AOC C24G1 24" 1920x1080 144 Hz Monitor
Price: $280.00

The AOC C24G1 is a 24 inch, 1920 by 1080, 144 Hz monitor. Having a good monitor is crucial for games such as Flight Simulator. A good monitor will allow you to enjoy the gaming experience to its full potential. The monitor allows the user to visualize what is going on inside the machine and interact with the machine in real-time. The AOC C24G1 has a refresh rate of 144 Hz which will make the image appear much smoother. The graphics card paired with this high-quality monitor will allow you to relish in the lifelike graphics of Flight Simulator.

Power Supply:
Antec High Current Gamer Gold 650 W 80+ Gold Certified Fully-Modular ATX Power Supply
Price: $125.16

The Powersupply is what brings power to the entire computer, obviously. But the more power your computer uses, the more powerful the power supply has to be. This computer needs to be powerful to run Flight Simulator smoothly, therefore, we need 650 W. Usually, single graphics card computers only need about 400-450 W, so there is more room for power usage. So if Hikaru wanted to overclock her computer (although they probably won't need to), her computer would be able to handle it.

Peripherals:
Prices:
Keyboard: $26.99
Mouse: $4.99
Headphones: $21.98

Last, but not least, we have the peripherals. Most of the budget went into the computer, so the peripherals aren't as on par, but the peripherals are still enough to play Flight Simulator and have fun. The computer does all the work and these boys still have the same effect as most other mouses, keyboards and headsets.

TOTAL EXPENDITURE: $2921.46