

Ata Kaan Can Olcay 21996168

Arslan Çağrı İnan 21995529

Alperen Yüksel 22197484

BİL 218 Computer Organization

First Poject: Computer Assembling

In this project, we learn the hardware of computer parts and what they are used for. In this project, where we determined our budget, we, as a group, took care to use the highest level model of each hardware equipment. Although we had hardware parts that had compatibility problems from time to time in this project, we solved this problem by replacing these parts with different brands. Although it was a bit challenging, it was a project that all three of us had a lot of fun with. After this project, we all learned better how to assemble a computer and what to pay attention to when assembling a computer.

Case Equipment Optional Equipment

1- Cooler / Liquid Cooler 1- OS

2- Power Box 2- Office Software

3- Video Card 3- Speaker/Headphone

4- Case 4- Mouse

5- RAM 5- Keyboard

6- CPU 6- Camera

7- Motherboard 7- Microphone

8- SSD 8- Mousepad

9- Fans 9- Gaming Chair

10- NULL 10- Monitor

**1- Cooler / Liquid Cooler :** Liquid cooling is a system used to prevent electronic devices from overheating. Any product that runs on electrical energy gets hot.We use;

corsair-icue-link-h170i-lcd-825-cfm-liquid-cpu-cooler

**2- Power Box :**  A power box is a hardware component that enables electrical energy to be used in different types and voltages. We use;

corsair-rm1000e-2023-1000-w-80-gold-certified-fully-modular-atx-power-supply

**3- Video Card :** A video card is the material that acts between the monitor and the processor in creating shapes such as text, pictures, videos and graphics on the computer screen. We use;

gigabyte-aero-oc-geforce-rtx-4080-super-16-gb-video-card

**4- Case :** The computer case protects the computer components to be placed inside against physical impacts that may come from outside, insulates them electrically, and expels the hot air inside with its fans. We use;

gigabyte-aorus-c500-glass-atx-mid-tower-case

**5- RAM(Random Access Memory) :** RAM (Random Access Memory) provides fast access and temporary data storage for data on computers. RAM is located between the processor and fixed data storage such as HDD/SSD. When a computer turns on, the processor requests data (such as the operating system) from the HDD/SSD and loads it into RAM. We use;

gskill-trident-z5-rgb-96-gb-2-x-48-gb-ddr5-6800-cl34-memory

**6- CPU :** The central processing unit (CPU) is the hardware component that is the basic computing unit in the server. Servers and other smart devices convert data into digital signals and perform mathematical operations on them. The CPU is the primary component that processes signals and provides computing. We use;

intel-core-i9-14900-2-ghz-24-core-processor.

**7- Motherboard :** The computer motherboard connects the hardware required in a digital system. It provides power to the hardware by providing data flow between them. It also ensures that each part works efficiently. We use;

gigabyte-z790-aorus-xtreme-x-eatx-lga1700-motherboard

**8- SSD :** SSDs are faster, compact and secure data storage devices that replace hard disks. SSD uses entirely memory chips instead of the mechanical platters driven by a motor in classic hard drives. We use;

sabrent-rocket-4-plus-8-tb-m2-2280-nvme-solid-state-drive

**9- OS :** Operating systems play an active role in managing the hardware resources on the computer. In addition, software that provides services for various application software can be used more effectively thanks to the operating system. We use;

microsoft-windows-11-home-retail-usb-64-bit

**10- Monitor :** Computer monitors convert signals from the device's microprocessor into images. This device; It is used to visually display photos, documents, videos, movies or any other content. We use;

asus-rog-swift-pg32uqx-320-3840x2160-144-hz-monitor

viewsonic-vx3218-pc-mhd-320-1920x1080-165-hz-curved-monitor