My presentation is about the function of the mainboard, storage and cooler and also in this order. It is pretty superficial because we don’t have the time for a deeper insight. But I will try my best to give you all the basic and most important information you need to know.

The different parts of a computer are communicating over the motherboard. It provides connectivity between the hardware components of a computer, like the processor (CPU), memory (RAM), hard drive, and video card. They cannot work with every processor or memory because everyone is designed for a special type or brand. Most hard drives are not affected by the motherboard thus you can use nearly anyone without considering the type or brand.

The modern motherboard include sockets or slots in which one or more microprocessors can be installed, memory slots, a clock generator which produces the system clock signal to synchronize the various components, power connectors which receive electrical power from the power supply and distribute it to the different connected parts of the computer and connectors for hard drives.

This is a normal motherboard and the picture shows a few things I just talked about like the CPU socket. It is right in the middle because it is the heart of every pc. On the top is the power connector and these thin grey things right there are the slots for the memory. On the bottom are the Inputs and Outputs like the audio Outputs, USB, HDMI or Internet Input. The difference between input and output is that an input device sends information to a computer system for processing, and an output device reproduces or displays the results of that processing. Input devices only allow for input of data to a computer and output devices only receive the output of data from another device.

The storage, not to confuse with memory (RAM), is a hard disk drive where the data is recorded. In contrast to the memory the storage does not forget what was stored in it after you shut your pc down. Stuff written to disk stays there permanently until it’s erased, or until the storage medium fails. Computers need non-volatile storage so you do not have to re-do everything you have done when you restart a pc. There are two kinds of storage. The hard drive (HDD) and the solid state drive (SSD).

It can be used to store applications, documents, data and all the other stuff you need to get your work done (and your computer needs to operate). There are different speeds and sizes for hard drives. Most operate at 5400 RPM. 5400 RPM just means that the disk does 5400 revolutions per minute. But you can also get a 7200 RPM drive or a 10 000 RPM drive. The faster the better. And with new technologies we are able to create bigger and faster hard drives.

But SSDs have chips instead of mechanical spinning disks so they are still and will always be faster. They need less power, less space and produce less heat and that is the reason why they are more expensive than hard drives. The only reason hard drives are still in use is because they are cheap and available in large versions. SSDs are more performant but you get less space for more money.

A cooler does exactly that what it says. It is designed to draw heat away from the system CPU and other components and cool them down. Its purpose is to improve the systems stability and efficiency. Since it is not silent a cooler increases the noise level of your computer. Only two different types of coolers are mainly used in modern pc systems. One is the air CPU cooler. The CPU cooler may consist of a heat sink which is a component designed to lower the temperature of an electronic device by dissipation heat into the surrounding air or combination of a heat sink and a fan. Systems which are designed to improve airflow are often used with air cooling. Then there is also the liquid cooling.

A liquid cooling system (LCS) circulates liquid through small pipes (in the picture in red) in a heat sink attached to the processor in your system. As the liquid passes through the heat sink, heat from the hot processor is transferred to the cooler liquid. The warmed liquid is then cycled to a radiator on the side or rear of the casing where it is released into the ambient air outside of the unit. The cooled liquid then travels back through the system to the CPU to continue the process. Liquid cooling systems are more efficient and make less noise than air cooling systems but it can be very complicated to install them and they are quite expensive.

That was my presentation. I hope you enjoyed it.

Are there any questions?

Thank you for your attention.