

## Dependency-Structure-Matrix: Komponenten eines Laptops

	CPU	GPU	RAM	ROM	SSD	Screen	Cooling fan	Battery
CPU	0	0	1	2	1	2	3	2
GPU	3	0	0	1	0	4	3	1
RAM	5	0	0	1	1	0	0	2
ROM	0	2	2	0	1	0	0	1
SSD	0	0	1	1	0	0	0	1
Screen	0	5	0	0	0	0	0	1
Cooling fan	5	5	0	0	1	0	0	0
Battery	0	0	0	0	0	0	0	0

0 (no dependency): this value is assigned to components that do not depend on any other component in the laptop.

1(low dependency): this value is assigned to components that have a very minimal dependency on other components(battery-fan)

2(moderate dependency): this value is assigned to components that depend on other components to some extent, but not to a high degree(hard drive - memory)

3(medium dependency): this value is assigned to components that have a high degree of dependency on other components(cpu-graphics card)

4(high dependency): this value is assigned to components that have a higher degree of dependency on other other components .

5(very high dependency): this value is assigned to components that have the highest degree of dependency on other other components .

RAM and GPU - GPU and RAM: two different things. Graphic card also has its own Memory called VRAM. While cpu accessible Memory is RAM.

RAM and CPU: the CPU chip retrieves data from the RAM. The chip takes those instructions and begins to move and process data through the motherboard in the correct order to its next designated location.

CPU and RAM: Memory, on the other hand, is where the computer stores data that the CPU uses to perform its operations.

GPU and CPU: GPU uses CPU to process instructions and communicate with other system components. During games or other graphics-intensive tasks, the GPU sends data to the CPU for processing.

CPU and GPU: CPU returns the processed information to the GPU for display on the screen.

CPU and ROM: the ROM may contain important system information and firmware that the CPU needs to access during boot up or to perform certain system functions

ROM and CPU: ROM does not depend on CPU.

CPU and SSD: CPU does not depend on SSD directly. SSD can influence the speed of data access and transfer. For example, if a

CPU is waiting for data to be read from a slow SSD, its performance will be affected.

CPU and screen: the display driver software enables the CPU to control and display images on the screen.

CPU and cooling fan: The CPU generates heat during operation, and the cooling fan is responsible for dissipating this heat to prevent the CPU from overheating.

RAM and SSD: RAM can depend on the SSD in some cases, but generally, they are independent components