Disks are the main storage of a computer, because all of our data and all operating system files are stored on them

There are different versions of the drives (like 3,5 inch hdd and 2,5 inch) but I want to focus on the functional differences

hdd are a bit like gramophones, they have a head that reads the data we need

We can buy for example 1 TB 7200 rpm hdd for 185 zł

SSDs can use traditional HDD interfaces and form factors, or newer form factors and interfaces that have been developed to address specific advantages of the flash memory technology used in SSDs.

We can buy for example 256 GB SSD for 185 zł

Serial AT Attachment (newest is sata 3 - 600 MB/s max)

Peripheral Component Interconnect Express (pcie 4 – 7876 MB/s max depends on serial bus length)

Non-Volatile Memory Host Controller Interface Specification

Iops - the size determining the performance of disks and disk arrays, expressing how many I / O operations the device can perform in one second

As we can see, sata and pci is both a protocol and form factor. This is because when these protocols were created, new forms factors were created at once, but in the future the same protocols were used for new forms.

It is very important that this speed refers to reading data in a continuous line because the read from the hdd disk is never in a continuous line, only randomly, which causes the head to change its position, so the real transfer speed can sometimes drop to a few MB/s. On ssd, however, there is no difference

again, it is important that it is a logarithmic graph

practically every step of the way you feel the difference between disks, even in the ordinary browsing of the internet

of course, for reasons of construction, hdd are not resistant to impacts and ssd are, therefore it is not recommended to have a "backpack disk" type hdd. For backup kept in the case, it is more advisable to have hdd because of the price.

as a curiosity I will add that the otter from the photo is the oldest living otter, she is 22 years old