**THIRD ASSIGMENT**

ORGANIZATION AND ARCHITECTURE COMPUTER



Disusun oleh:

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| ASPECT | HDD (Hard Disk Drive) | SSD (Solid State Drive) |
| Definition | A **hard disk drive** (**HDD**), **hard disk**, **hard drive**, or **fixed disk** is an electromechanical [data storage device](https://en.wikipedia.org/wiki/Data_storage_device) that uses [magnetic storage](https://en.wikipedia.org/wiki/Magnetic_media) to store and retrieve [digital](https://en.wikipedia.org/wiki/Digital_data) information using one or more rigid rapidly rotating disks ([platters](https://en.wikipedia.org/wiki/Hard_disk_platter)) coated with magnetic material. | A **solid-state drive** (**SSD**) is a [solid-state storage](https://en.wikipedia.org/wiki/Solid-state_storage)device that uses [integrated circuit](https://en.wikipedia.org/wiki/Integrated_circuit) assemblies as [memory](https://en.wikipedia.org/wiki/Computer_storage) to store data [persistently](https://en.wikipedia.org/wiki/Persistence_(computer_science)). It is also sometimes called **solid-state disk**,[[1]](https://en.wikipedia.org/wiki/Solid-state_drive#cite_note-1) although SSDs do not have physical disks. SSDs may use traditional [hard disk drive (HDD)](https://en.wikipedia.org/wiki/Hard_disk_drive) form-factors and protocols such as [SATA](https://en.wikipedia.org/wiki/SATA) and [SAS](https://en.wikipedia.org/wiki/Serial_Attached_SCSI), greatly simplifying usage of SSDs in computers.[[2]](https://en.wikipedia.org/wiki/Solid-state_drive#cite_note-SNIA-101-2) |
| Maximum Capacity | **14 Terabyte**  (the maximum capacity of a single piece HDD that claimed by Seagate. Usually used for corporation) | **4 Terabyte**  (this kind of highest capacity is made by Samsung brand) |
| Speed | HDD has higher latency, longer read/write times, and supports fewer IOPs (input output operations per second) compared to SSD. | SSD has lower latency, faster read/writes, and supports more IOPs (input output operations per second) compared to HDD. |
| Price | Only around $0.03 per gigabyte, very cheap (buying a 4TB model) | Expensive, roughly $0.20 per gigabyte (based on buying a 1TB drive) |
| Size | HDD is around 2,5 inch – 3,5 inch | SSD dimension between 1,8 inch to 3,5 insch |
| Advantance | * HDD is cheaper than SSD * More capacity | * Faster than HDD * Low power consumption * Durable than HDD |
| Disadvanted | * HDD is slower than SSD * Higher power consumption * Produce noise while operating * Not durable compared to SSD | * Expensive * Less capacity |
| Picture | Laptop-hard-drive-exposed.jpg | Super Talent 2.5in SATA SSD SAM64GM25S.jpg |