

GROUP 0 ODD

What is file system?

File system is a method that the operating system uses to control how data is stored and received.

Why is file system important?

- It improves workflow and enables easy access to relevant data and resources.
- File system helps to differ between operating systems such as Microsoft windows, macOS and Linux-Based systems.
- Without the file system, stored information wouldn't be isolated into individual files and would be difficult to identify and retrieve.
- To support a wide range of storage device types in terms of I/O
- To eliminate or reduce the risk of data loss or destruction.

TECHNICAL STRUCTURE

DISK FILE SYSTEMS

Disk file systems take advantage of disk storage media's ability to address data randomly in a short amount of time. Additional factors to consider are the speed with which data can be accessed after the data that was first requested, as well as the possibility that more data will be requested in the future. This allows several users (or processes) to access different types of data on the disk regardless of their order of appearance. The common components that are universal across all DBMS software, including: Storage engine, Query language, Query processor, Optimization engine.

Storage engine

The storage engine is the core component of the DBMS that interacts with the file system at an OS level to store data. All SQL queries which interact with the underlying data go through the storage engine.

DISTRIBUTED OR NETWORK FILE SYSTEM

This is a file system that provides access to files on a server by acting as a client for a remote file access protocol, Local interface programs can create, maintain and access order directories and files on remote network connected machines transparently. The structure consists of a client-side file system and a server-side file system. A client application issues a system call to access files on the client-side file system, which in turn retrieves files from the server.

Similarities(Comparing):

Differences(Contrasting):

DISK FILE SYSTEM	NETWORK(DISTRIBUTED) FILE SYSTEM
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<ul style="list-style-type: none"> • This files are stored on a physical medium I.e hard disk drive. 	<ul style="list-style-type: none"> • This files are stored on computers /servers.
<ul style="list-style-type: none"> • This file system offers access to data on a disk. 	<ul style="list-style-type: none"> • This file system offers access to files through a shared network or server.
<ul style="list-style-type: none"> • Stores file on disks through one machine. 	<ul style="list-style-type: none"> • Stores files on multiple machines.