**FILE SYSTEM:**

A **file system** defines how files are **named**, **stored**, and **retrieved** from a storage device.

**Distributed Filesystem:**

A **Distributed File System (DFS)**as the name suggests, is a file system that is distributed on multiple file servers or multiple locations. It allows programs to access or store isolated files as they do with the local ones, allowing programmers to access files from any network or computer.

The main purpose of the Distributed File System (DFS) is to allows users of physically distributed systems to share their data and resources by using a Common File System. A collection of workstations and mainframes connected by a Local Area Network (LAN) is a configuration on Distributed File System. A DFS is executed as a part of the operating system.

[**https://www.geeksforgeeks.org/what-is-dfsdistributed-file-system/**](https://www.geeksforgeeks.org/what-is-dfsdistributed-file-system/)

**Workstation:**

workstation, **a high-performance computer system that is basically designed for a single user and has advanced graphics capabilities, large storage capacity, and a powerful central processing unit**.

Mainframe:

At their core, [mainframes](https://www.ibm.com/it-infrastructure/mainframes) are high-performance computers with large amounts of memory and processors that process billions of simple calculations and transactions in real time. The mainframe is critical to commercial databases, transaction servers, and applications that require high [resiliency](https://www.ibm.com/it-infrastructure/z/capabilities/resiliency), [security](https://www.ibm.com/it-infrastructure/z/capabilities/enterprise-security) and agility.

Mainframes are data servers designed to process up to 1 trillion web transactions daily with the highest levels of security and reliability.

Resilience -> the capacity to recover quickly from difficulties

Agility -> ability to move quickly and easily

**Difference between Workstation and Mainframe:**

A workstation is a high-end personal computer. They are used primarily by a single person for computationally difficult work, such as engineering or video editing. A mainframe is a large server that multiple users log into to work on data and run programs. It is more useful in large corporate environments like in accounting or banking.