File meta data

Steganography

Hexit, notepad++

Hash value for ---

Main Memory

Secondary storage

File storage: 1. Store data and programs

2. Access data and programs

Files are mapped by the OS onto physical devices.

File Attributes are stored in the File Control Block (FCB)

Name, Identifier (tag), Type (extension), Location (on devise), Size, Protection/Permission, Creation Date, Last Modified Date, Owner.

When a file is named, it becomes independent of the process, the user, and even the system that created it.

File Operations

The Operating System has to provide System Calls to perform various File Operations.

Creating a file (find any available space, make an entry for the new file).

Writing a file

Reading a file

Repositioning within a file

Deleting a file

Truncating a file (empty file)

* The open( ) system call

Open-file table

File Types

Include the type as part of the name. (xxxx.yyy)

**GCK'S FILE SIGNATURES TABLE**

<https://www.garykessler.net/library/file_sigs.html>

Access Methods

1. Sequential Access (Most common editors, compilers)
2. Direct Access (databases)

Directory Structure

Partitions, Slices, Minidisks

Larger structure call Volumes.

(YUMI) multiboot system.

(Windows) Computer management

---- what is the latest file system

Compare Google and ChatGPT (2021)

Single-level directory

Two-level directory

Master File Directory (MFD)

!

User File Directory (UFD)

How search works (just the basics)

<https://support.google.com/webmasters/answer/9128586?hl=en#:~:text=Crawling%3A%20Google%20searches%20the,that%20we%20already%20know%20about>.

In-depth guide to how Google Search works

<https://developers.google.com/search/docs/fundamentals/how-search-works#:~:text=Introducing%20the%20three%20stages%20of%20Google%20Search,-Google%20Search%20works&text=Indexing%3A%20Google%20analyzes%20the%20text,relevant%20to%20the%20user's%20query>.

Tree-Structured Directories

Path names: 1. Absolute path name 2. Relative path name

Each process has a current directory

Acyclic-Graph Directory – sharing

A graph with no cycles

Links (use pointer)

Duplicating

Problems

1. Some file with many paths and names
2. Deleting of shared file

General Graph Directory

File-System Mounting

Mount point

File Sharing

NTFS sharing+security

Remote file systems

FTP, DFS, WWW

Client-Server Model

(Server) The machine containing the files

(Client) The machine seeking access to the files

Encryption - password

Failure Modes (Local machines)

Mirror, Duplexing, Raid 1 …..

Remote file systems

Consistency Semantics

Shared file

Protection (Type of Access)

Physical Damage (Reliability)

Improper Access (Protection)

Complete Protection – Controlled Access – Free Access

Protection (Access Control)

Access Control List (ACL)