

UNIT-5

Overview of File System in Computers

★ Topic:- File

Definition of file:-

⇒ File is a named collection of related information that is recorded on secondary storage media. It is the smallest allotment of logical secondary storage.

★ Topic:- File Attributes.

i) Name:-

⇒ It is the only information kept in human readable form.

ii) Type:-

⇒ This information is required for systems that supports different file types.

iii) Location:-

⇒ This information is a pointer to a device and to the location of a file on that device.

iv) Size:-

⇒ It gives the current size of the file.

v) Protection:-

⇒ It is the access control information with determine who can open, read and write the file.

vii) Date and Time:-

⇒ It keeps the information for creation, last modification - etc.

★ Topic :- Types of Files

File Type	Usual Extension	Functions
i) Executable	.exe, .com, .bin or none	Ready-to-run, machine language Programme.
ii) Object	.obj, .o	Compiled, machine language not linked.
iii) Source code	.c, .cpp, .java, .vb, .etc.	Source code in various languages.
iv) Batch	.bat, .sh	Commands for the Command Interpreter.
v) Text	.txt, .doc, .docx	Textual data and documents.
vi) Word Processor	.wp, .xlt, .xlt, .doc	various Processor formats.
vii) Print/view	.ps, .pdf, .jpg... etc	ASCII / binary file in a format to print or view.
viii) Library	.lib, .dll, .so, .a	Libraries of routines for Programmers.
ix) Archive	.arc, .zip, .tar	Related files group into one file & compressed.
x) Multimedia	.avi, .av, .mp3, .rm, .mpeg	Binary file containing A/V Information.

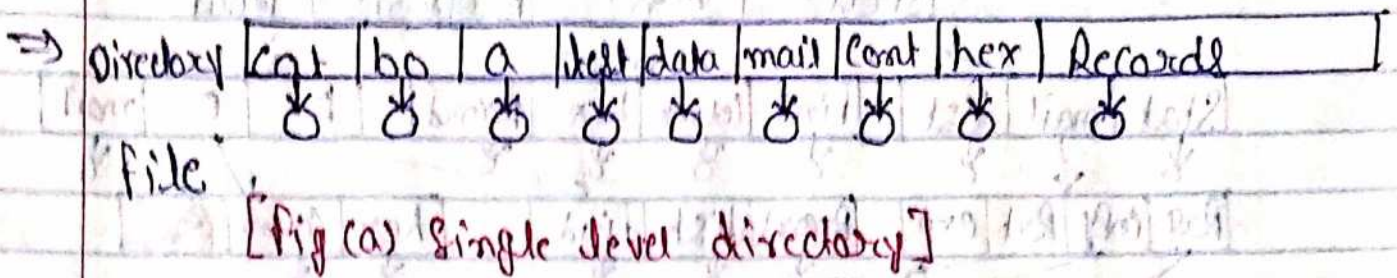
★ Topic :- Directories:-

Definition:-

⇒ Directories are symbol tables that translates file name into their directory entries.

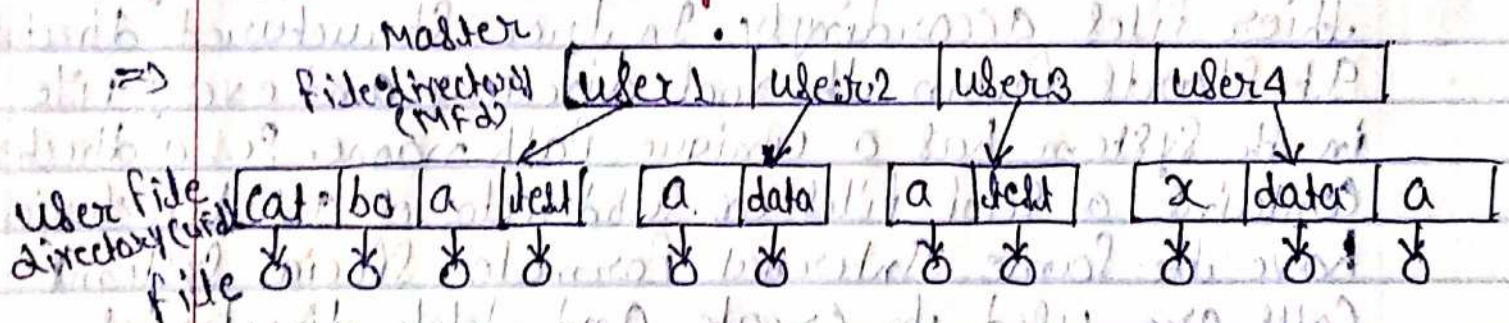
★ Topic: Directories Structure:

i) Single level directory:



It is the simplest directory structure. All files are contained in the same directory which is easy to support and maintain however, it has some limitations when the number of files increases or, when the system has more than one user. Here, all files should have unique names because they are in the same directory.

ii) Two Level directory:



[Fig (b): Two Level directory structure]

In two level directory structure each user has his own user file directory (UFD). The UFD lists only the files of a single user, when a user logs in the system 'MFD' search. The 'MFD' is indexed by the user name or account number and each entry points to the UFD of that user.

doesn't require any other files to run.

- cd (change directory)
- copy
- del
- dir
- !
- tree

ii) External Commands:-

⇒ External Commands are those commands which don't require a separate file to execute.

- edit.com
- fdisk.exe
- defrag.exe
- scandisk.exe
- !
- !

★ Topic: Concept of Path

Absolute Path:-

⇒ Absolute Path or, Full Path or, Complete Path points to the same location in a file system from the root directory.

Ex:-

Absolute Path of Calculator:-

[C:\windows\calc.exe]

Absolute Path of Notepad:-

[C:\windows\notepad.exe]

Relative Path:-

⇒ Relative Path from the some given working directory, avoiding the need to provide the full absolute path.

ex:-

Relative Path of calculator:-

windows \ calc. exe

Relative Path of Notepad:-

windows \ notepad. exe

★ Topic: Management commands of some common operating system:-

Copy:-

⇒ Copy command is used to copy the contents and is ready to be pasted wherever the user wants.

Edit:-

⇒ Edit command is used to make changes in the already written documents and records.

Cd:-

⇒ It is used to change directory from one directory to another directory.

md:-

⇒ It is used to make a new directory.

Cat:-

⇒ It is used to unify two strings at a single string.

dir:-

⇒ Dir Command is used to display all the directories present in the given drive.

Date:-

⇒ Date Command is used to display current date and time of the system. It is also used to modify the current date and time.

Vol:-

⇒ Vol Command is used to display the volume of the drive.

tree:-

⇒ tree Command is used to display all the directories present in the drive in tree manner.

del:-

⇒ It is used to delete the current directory / files.

Exit:-

⇒ Exit Command is used to come out of the currently used application.

Copy con:-

⇒ Copy con Command is used to make file in the system.

Xcopy:-

⇒ It is used to copy one or more files or folders from one location to another location.

LS (List Command):

⇒ It is used to list all files and folders in Unix. It's contemporary command is dir command in Dos.

Type:

⇒ It is used to show the contents of a file.

Syntax:

Type \$ <file name>

Vi:

⇒ Vi editor is a screen which is available on almost all Unix systems. Vi editor has no menu bar but it uses combination of keys in order to accomplish the desired command.

⇒ It is used to edit the contents of a file.

Exit:

⇒ Exit command is used to come out of the editor.

Ctrl (C):

⇒ Ctrl (C) command is used to abort the execution of a program.

X (Ctrl):

⇒ X (Ctrl) command is used to copy the contents of a file.

☆ Computer technology:-

⇒ It is the study and use of Computer systems different types of Computer networks, a large family of Computer languages, many types of data bases -- etc. All these constitute Computer technology which is used to solve any problem occur in an organization. It is one of the most and latest branch of Science and Technology. It is the fastest growing field where we see new hardware technologies and Software systems are emerging almost at every six months to one year. It means heavy research and development activities are carried in computer science and engineering.