for example : [Dropbox]

When os release write command then Dropbox take the data from system and give somewhere on the internet and when os read the file from internet and give the os. Incase local user new device all the to them sive virtual file
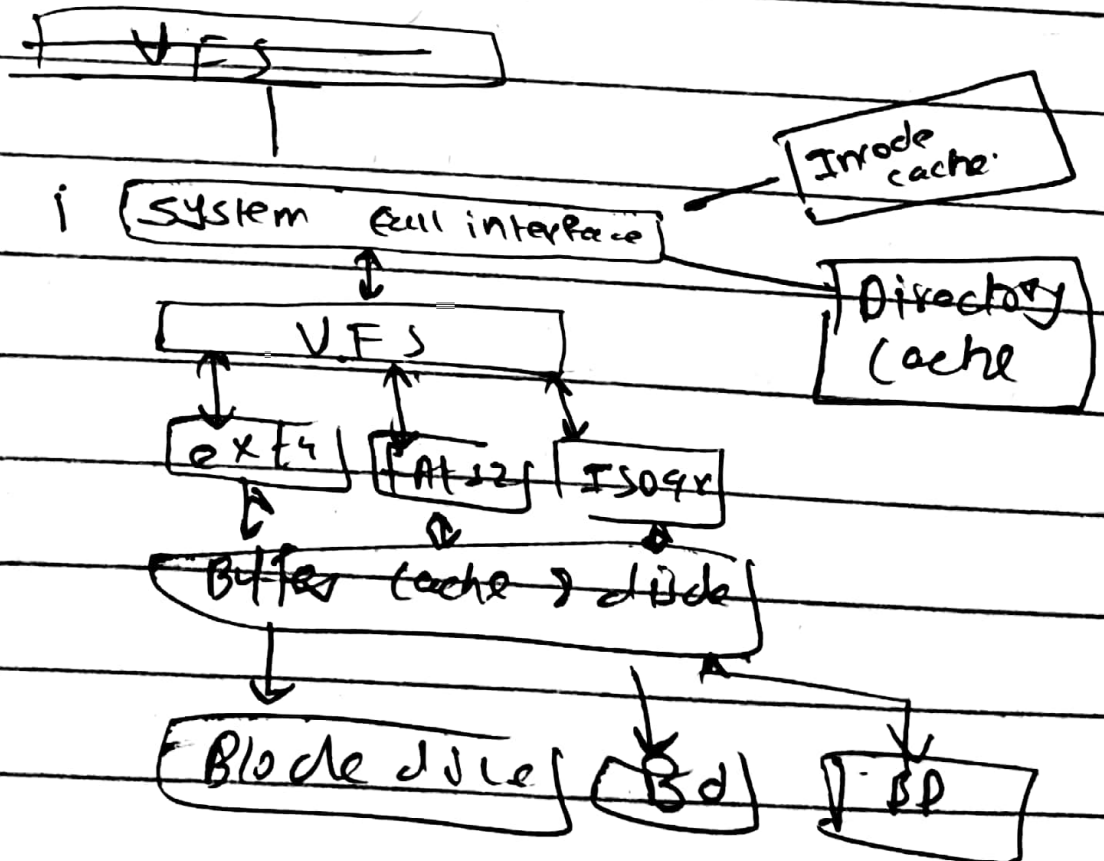
Virtual file system interface

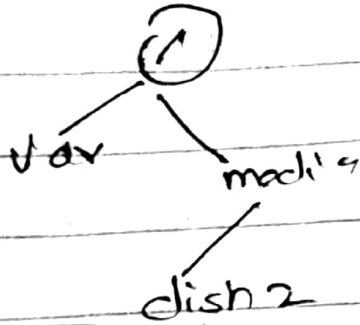Whenever we connet to cbuice to computer How compute interact with it this is the concept of virtual filesystem. offic Call System call then show **Virtual File system system** then virted fie system interact with All types of douice
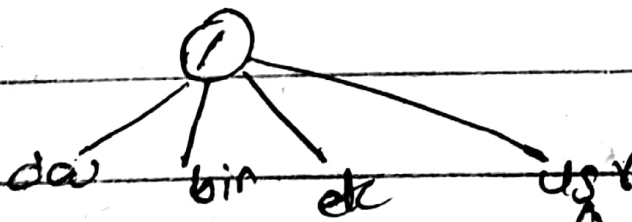
```
┌─────────────────┐
│     VFS         │
└────────┬────────┘
         │
```

i [System Call interface] ────── [Inrode cache]

```
           ↕
    ┌─────────────┐
    │    V.F.S    │ ──────────── [Directory Cache]
    └──┬────┬───┬─┘
       ↕    ↑   ↓
   [eXT4] [FAT32][ISO9r]
      ↕      ↕      ↓
   [Buffer Cache & disk]
       ↓              ↑
   [Blode dJLe] [Bd]   [BD]
```

Multiple Volume

```
        (/)
       /    \
     var    media
              \
             dish 2
```

2

| Metadata | ──────→ | Implementation |

Mounting

↳ Any device to connect with
   OS this process is
   called Mounting

```
           (/)
        /  |  |      \
      dev bin etc    usr
                      /\
                     /  \
                    /____\  ──→ File system
                         /urs/ a. text
                       / usr / b. txt
```

Avoid the used to pointer base
Data structures

_____

(12) file System Design
Abstraction

=> Syscalls

=> Virtual memory ——>

logical view
Hota hai o
Hardware per
khai or save Hota
Hai!
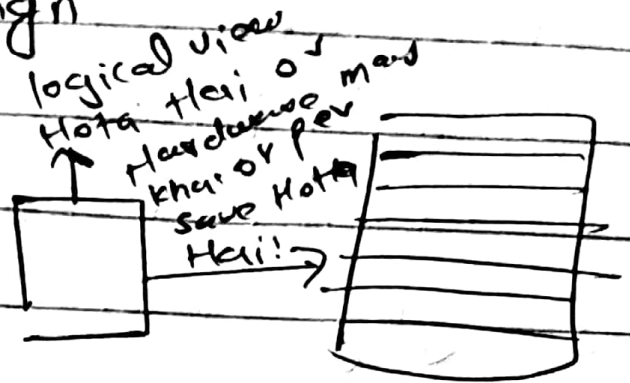
=> File system
  └—> look Today??   Application
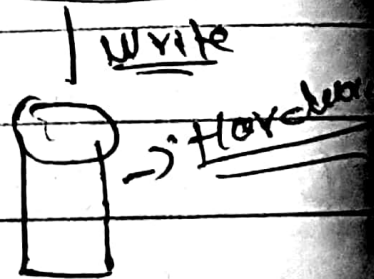   OS

for example: Aghar Hum a.txt file say karty
Hai Hardware k: upper ya flash drive,
USB et to khesy kaay ghy becaue
Eetry company Haselwave have different
logic To Hor ilc ko to Handle
nai kar saledy

To is k liye Hum a.text File ko
[OS] ko dyty Hai & wo kam
kary gha Now How He will
dono that is concept of
2 Abstraction or is procedure
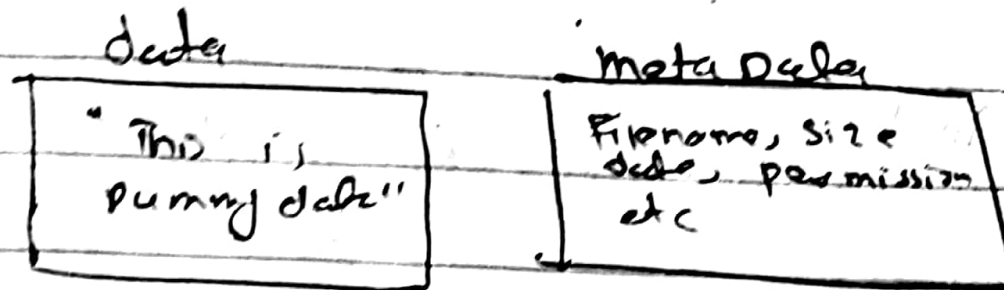k darmiyan Jo Parts use
ho ghy us ko [File System]
ichrty plai

④ [a..txt] ——→ [OS] ——— {Save in Harder are

| write
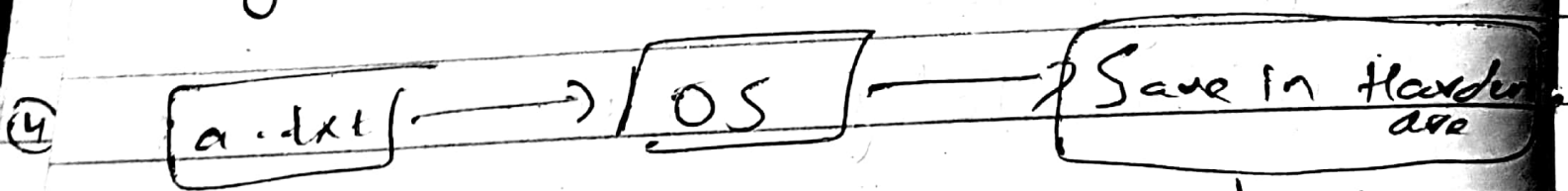
tab When Application Programmes [Hardware]
say to save a.txt, then OS
will start the work How
would 4 save it in the Hardware

So what is file system generally??
Organization of data and metaData

data   metaData

| " This is Dummy data " | Filename, Size date, permission etc |

=> file system interact with block device
Stream device
   └→ that has no concept of addressing like network card, printer etc

Design Choice
   └→ Namespace

metadata ku 5th thesy save karty Hai
   fixed, Attorichorical or other?
      └→ Amazon S3