

# Today's Agenda

- 1) Kernel
- 2) Linux Boot Process
- 3) Runlevels
- 4) File-types in Linux
- 5) Package Managers

## Kernel

CPU, I/O,

1) Monolithic

1. Memory Manag

2 - Resource "

3 - Device Managem

4 - Resource Allocation

2) microkernel

3) Hybrid

Kernel

Software

Process

is Smaller

Kernel S

IPC

User Space

User

is initialized by user

executed by kernel

device - interf

Same

Size

Kernel Space

User Space

Monolithic

Monolithic

Advantages

- 1) CPU Scheduling
- 2) Memory Scheduling
- 3) File Management calls
- 4) System calls

OS

Updates

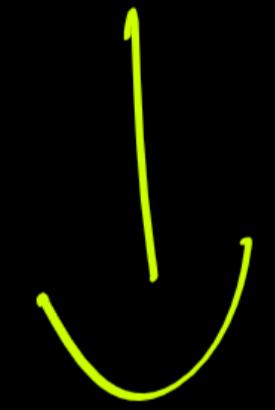
Dis

- 1) If it crashes, whole OS will crash
- 2) Entire updates needed to add new features to OS

Microkernel

Hybrid

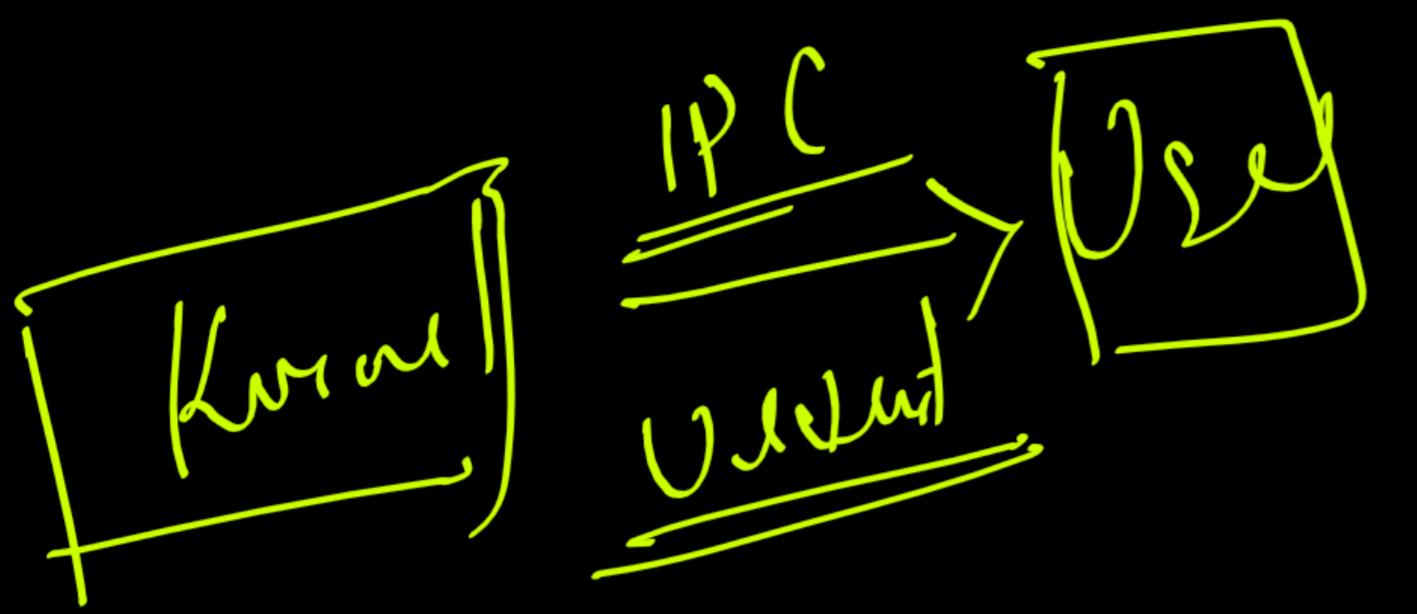
User



Kernel



Hardware

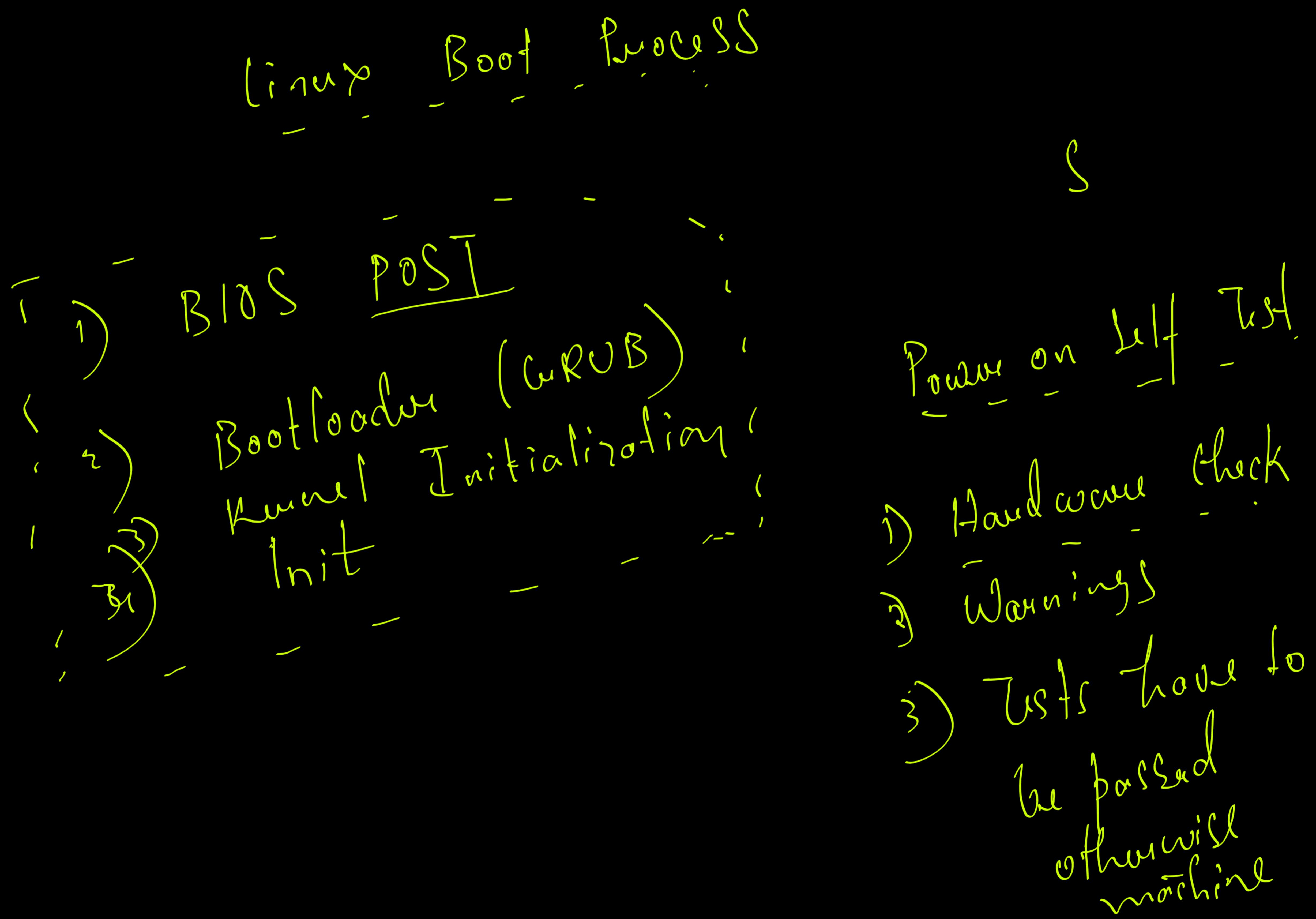


i) Size of OS is less

ii) Easy updates

iii)

Dis :- Time Execution is high.



2) Boot loader

Linux

GRUB (v2)

Grand Unified Boot Loader

loaded into the memory.

Sym with Windows

Windows Bootloader

GRUB

Linux

Windows

Dual-Boot

Windows 7/10

GRUB

Linux → GRUB

Windows → Windows Boot

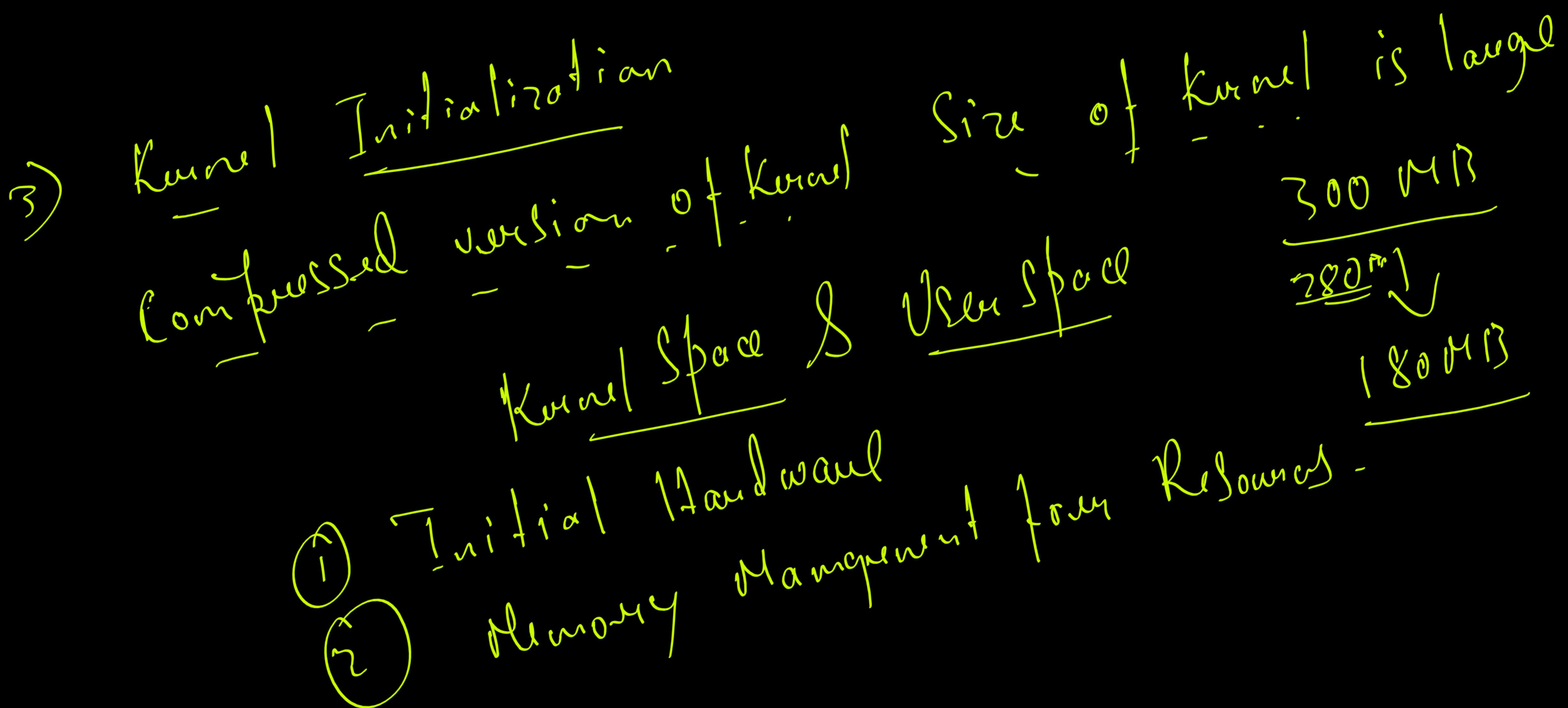
Mint

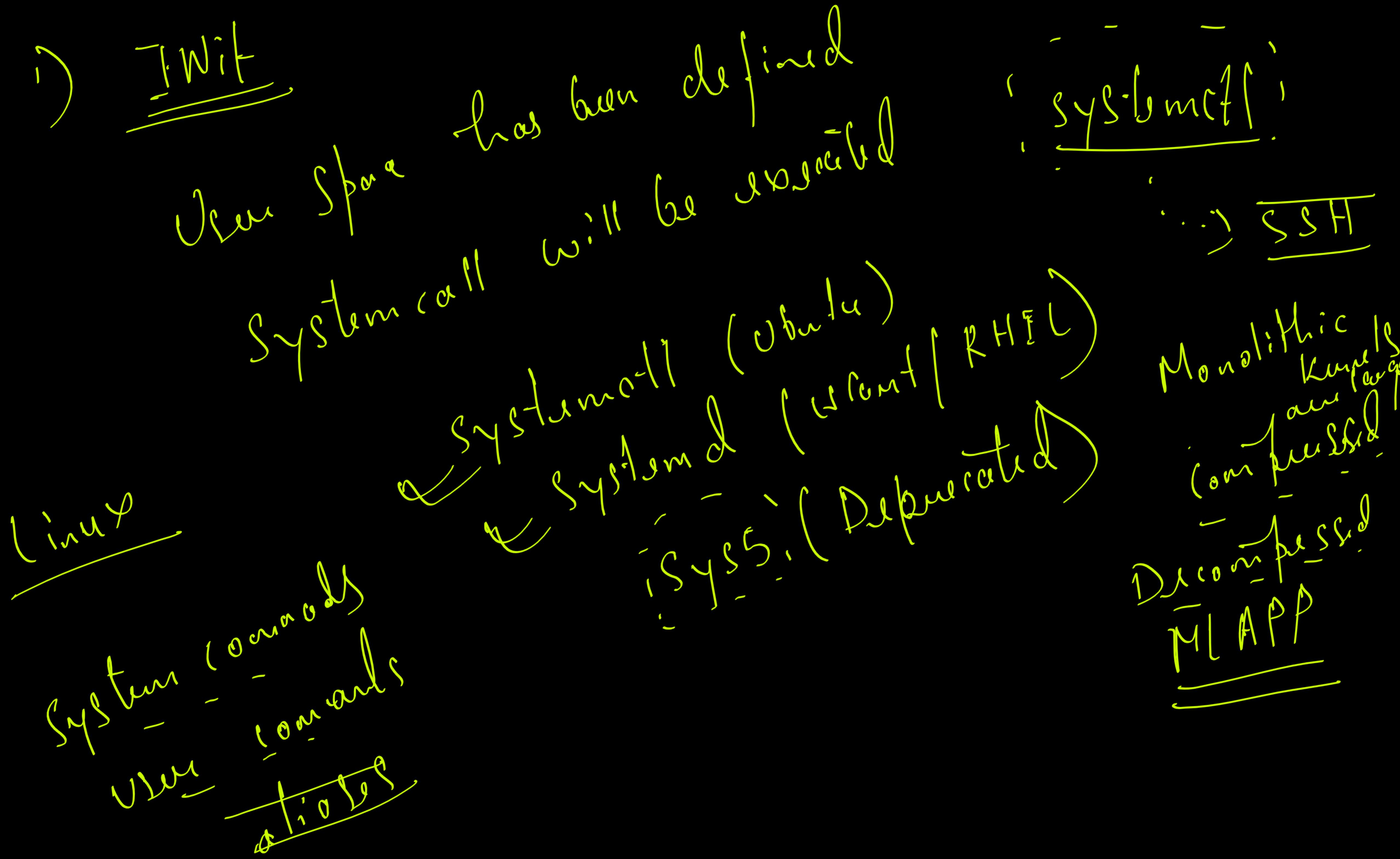
Pop

Wubi → Windows

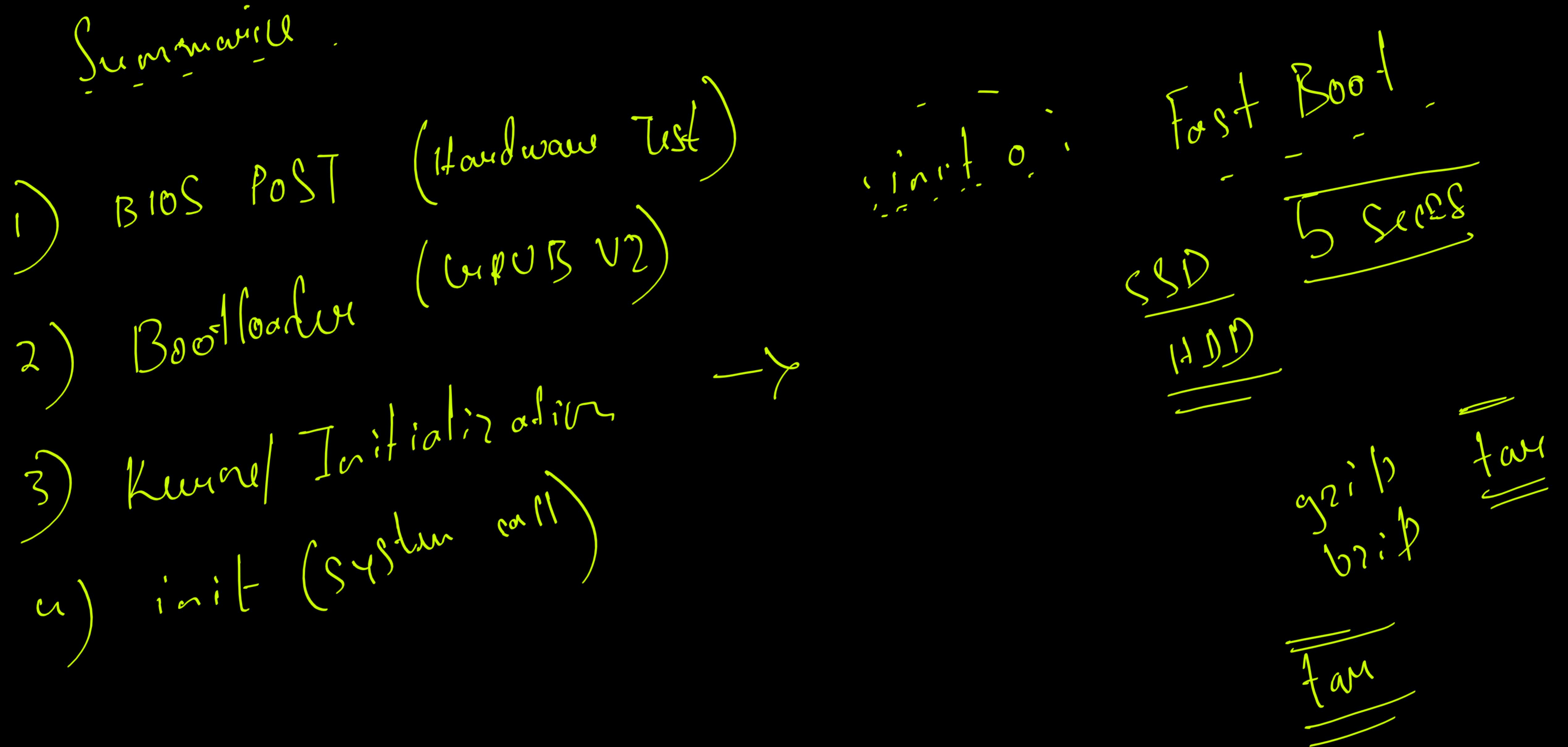
Windows -> W.B.L  
Ubuntu - GRUB

GRUB  
→ Ubuntu  
→ Windows



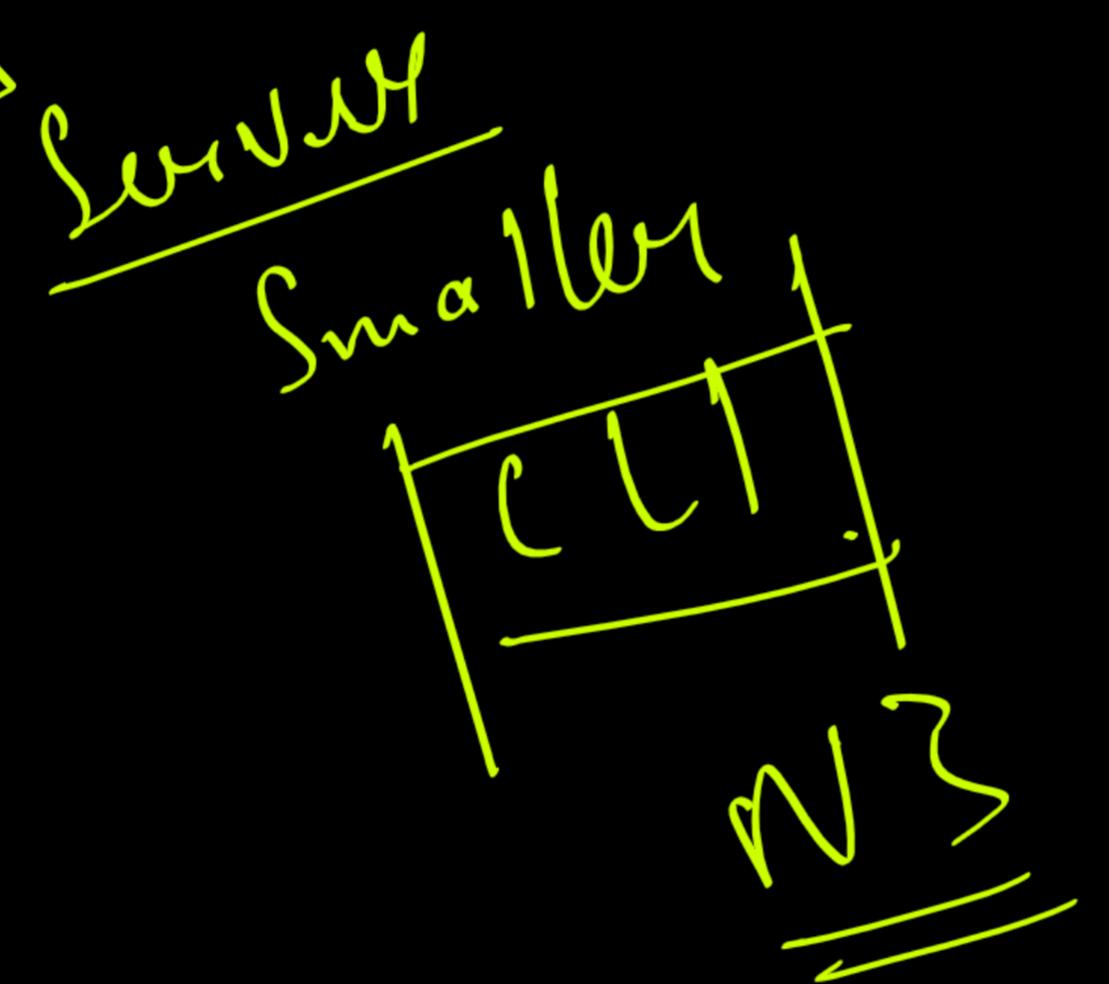


Monolithic Kernel  
 Complicated  
 Decomposed  
 ML APP



# Runlevels in linux

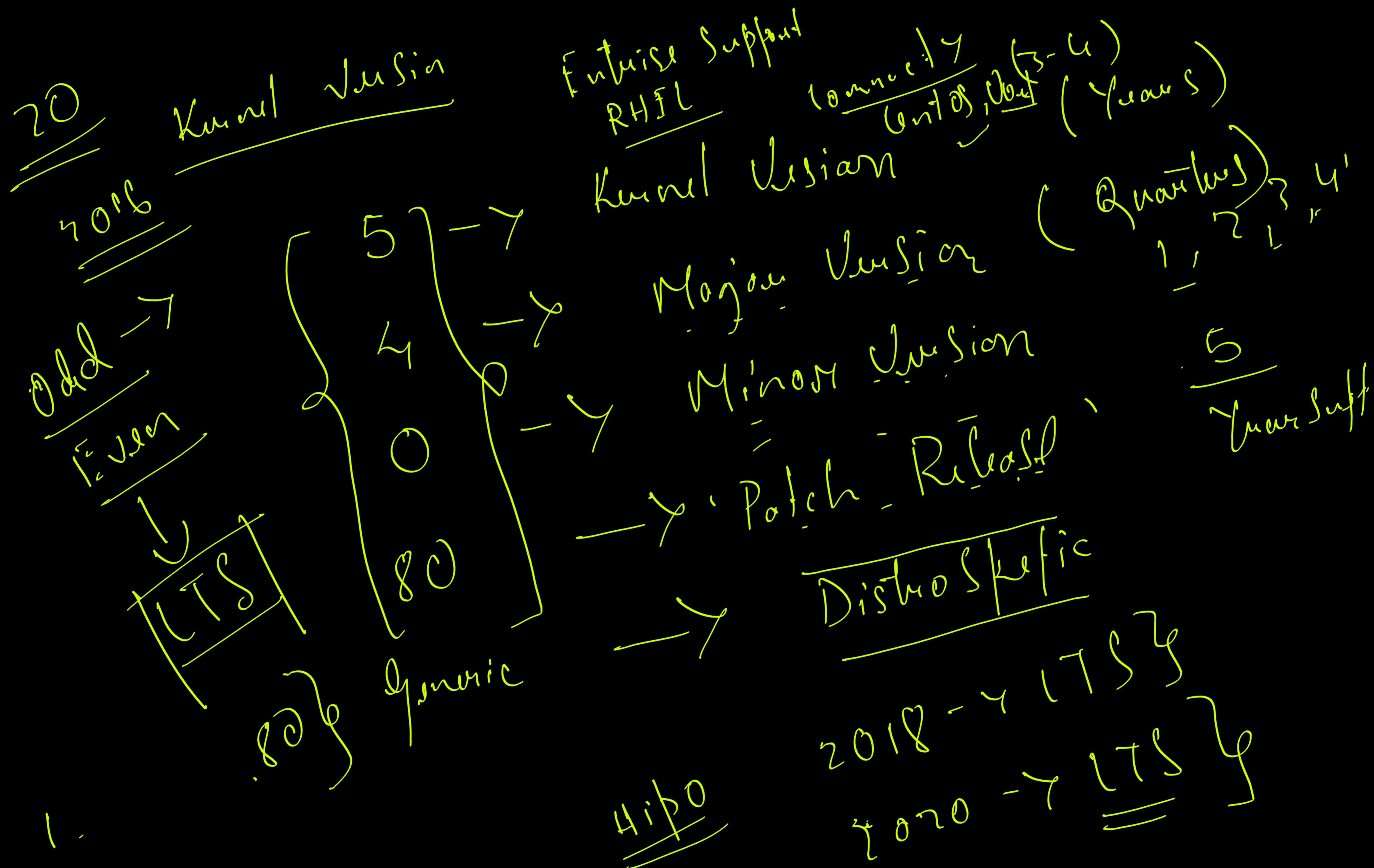
Ubuntu  
Desktop  
large  
GUI  
WS



Smaller  
↳ Display Managers  
KDE, Gnome, Xfce, Unity

Desktop

Safe Mode  
Runlevel  
0  
1  
2  
3  
4  
5



Fundamental

Ubuntu

Linux

↳ live & play

Windows

↳ wo play

File Types in Linux

Boot Menu

Install

line

Safe  
Rescue

Power of OS

flavours

Distro

Linux

+

Software

[OS]

Ubuntu

fedora

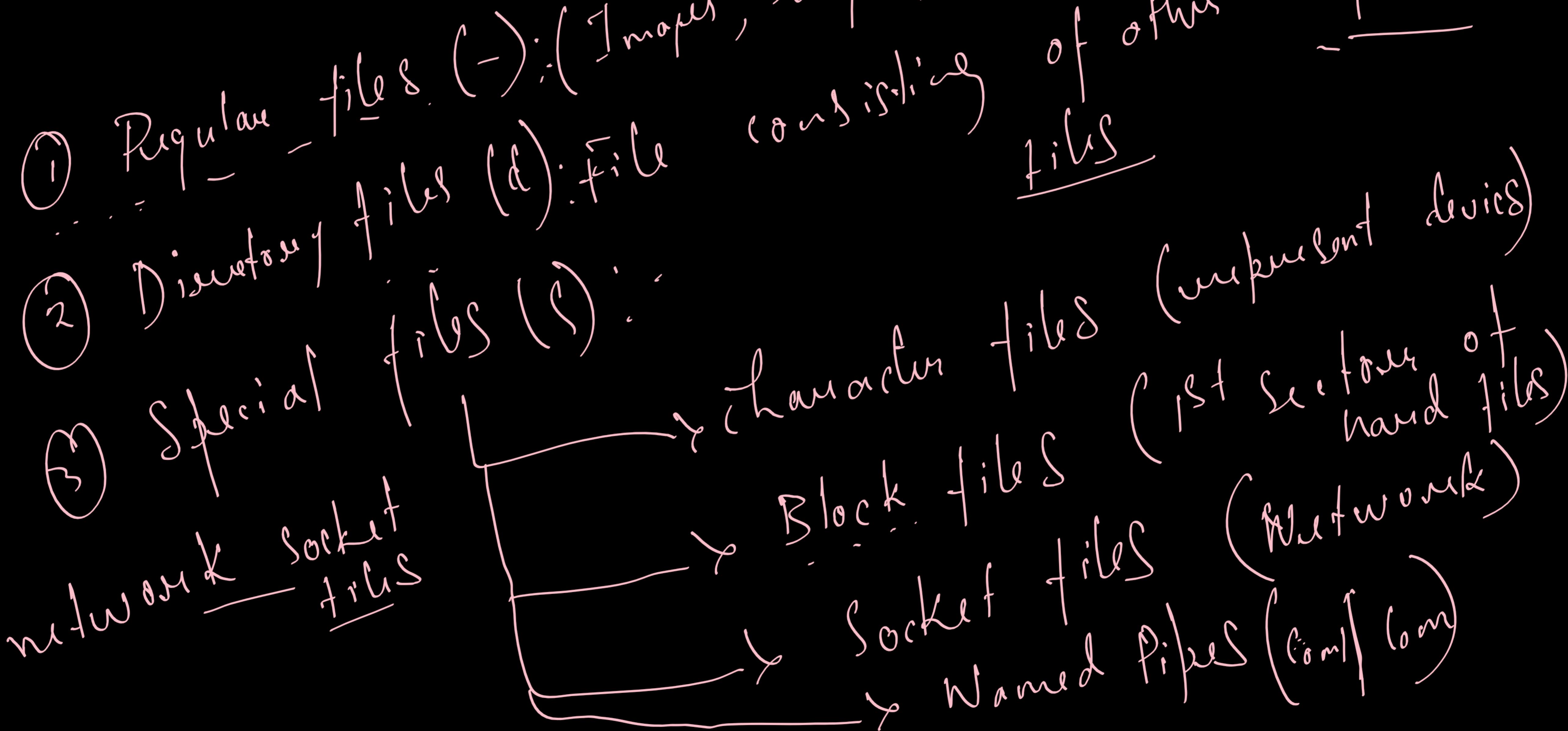
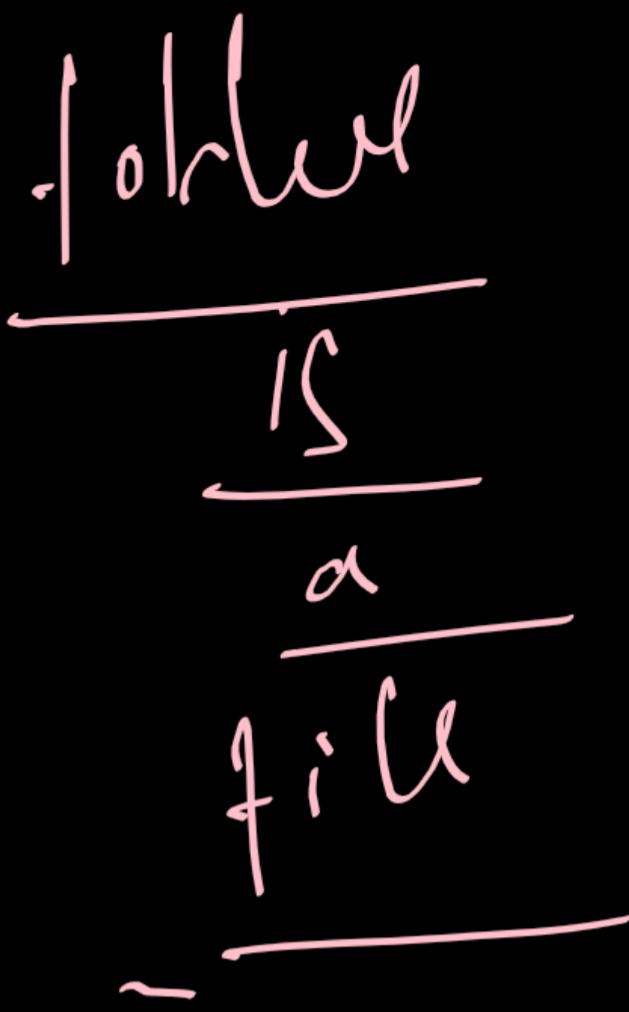
RHEL

Cyber Security

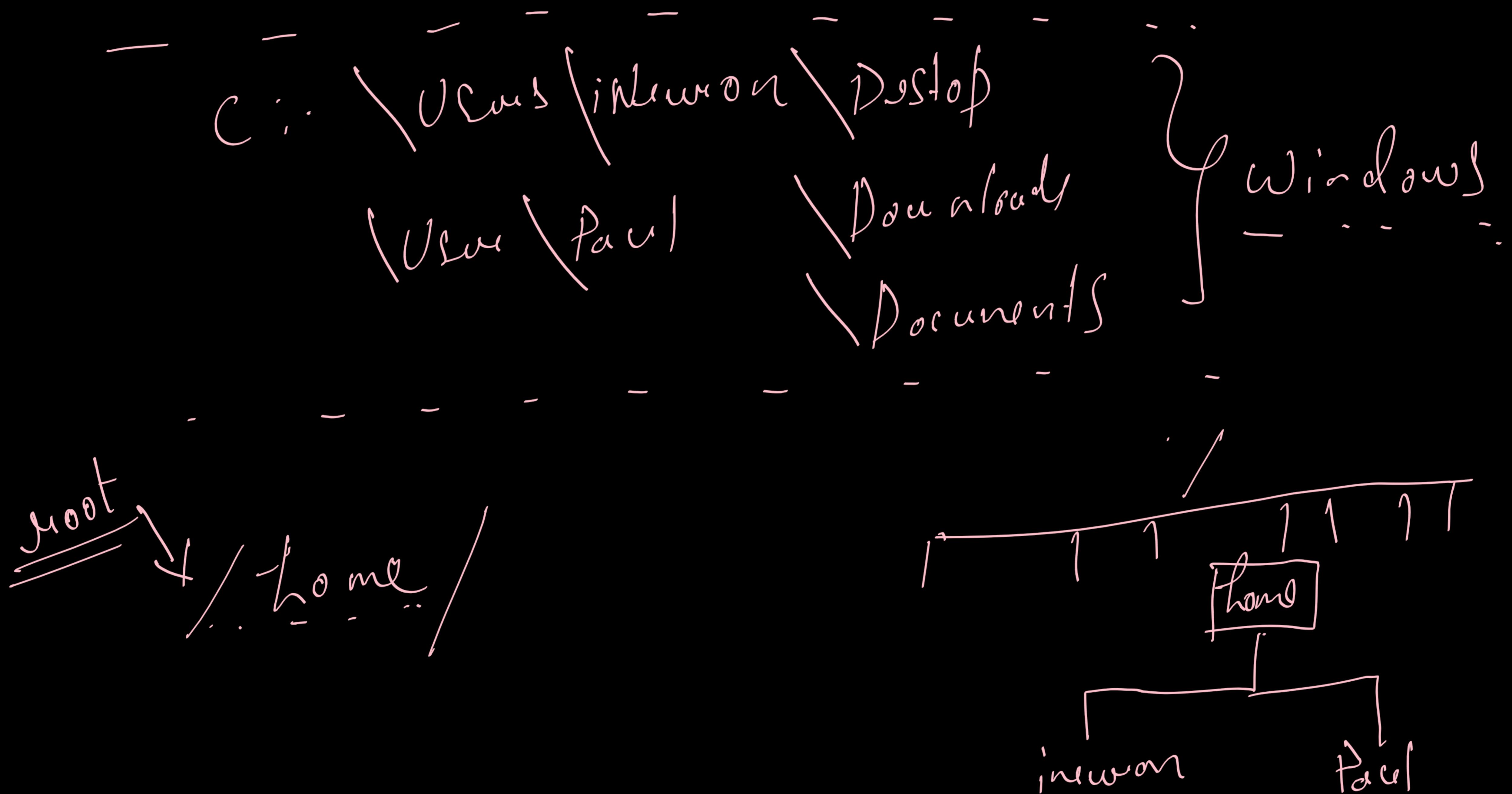
in Linux

## File Types in Linux

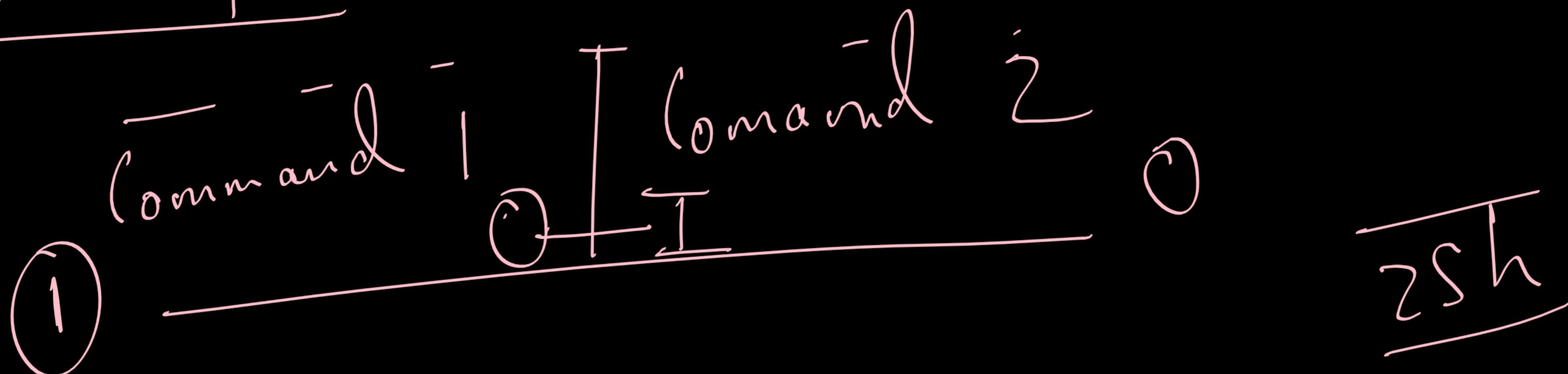
installing OS →



# Basic file System Structure



## Named Pipes



Kernel

Shells

Bourne

Korn

Bourne Again  
TCSH

Shell

(BASH)

# Different types of Shell

200  
|||

- 1) Bourne Shell
  - 2) Korn Shell
  - 3) TCSH Shell
  - 4) Bourne Again (BASH)
  - 5) POSIX
  - 6) fish & zsh
- Initial Command

File      Globbing  
Auto Completion  
Debugging (macro)

Folder

482

No Debugging

· jpg

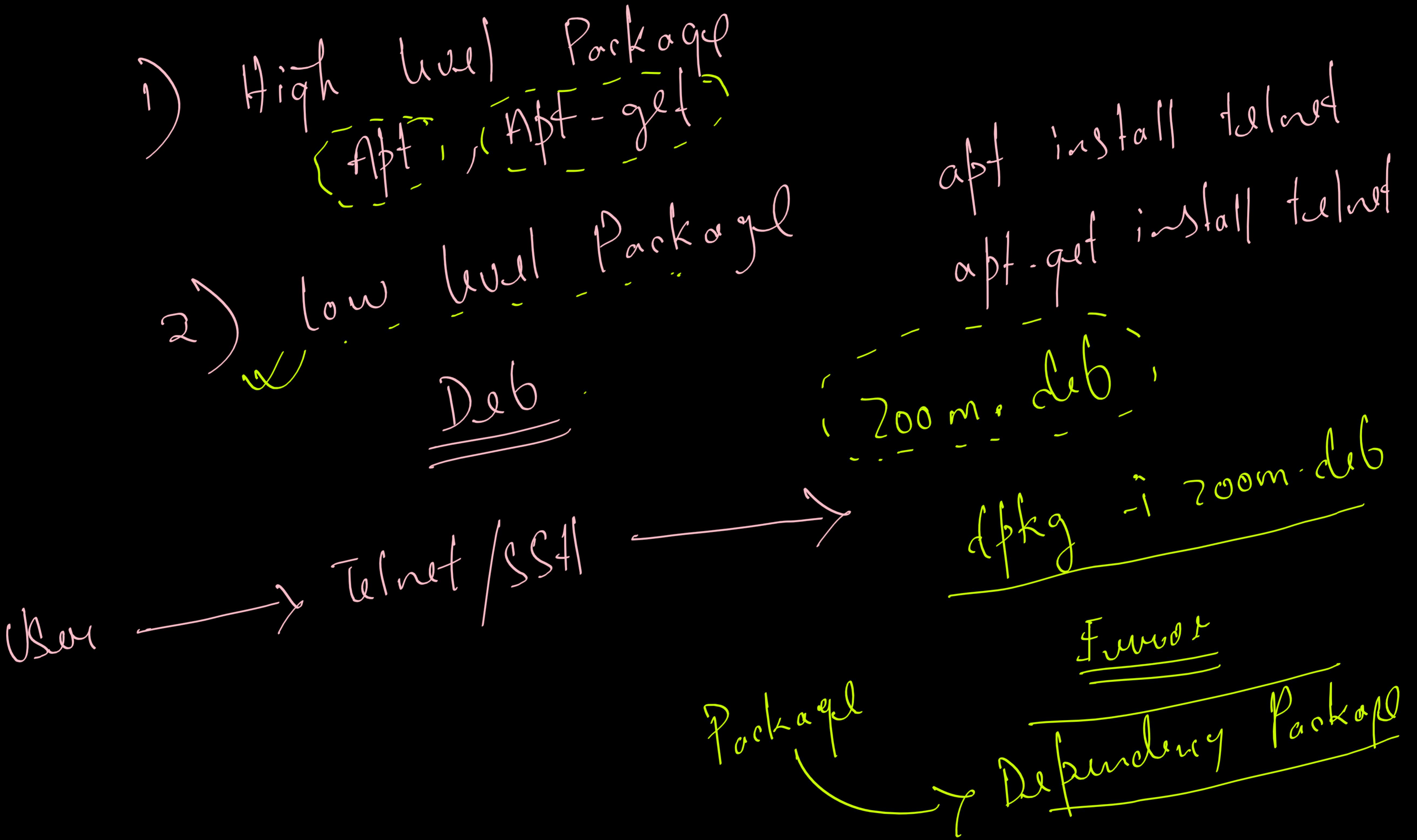
· pdf  
docx

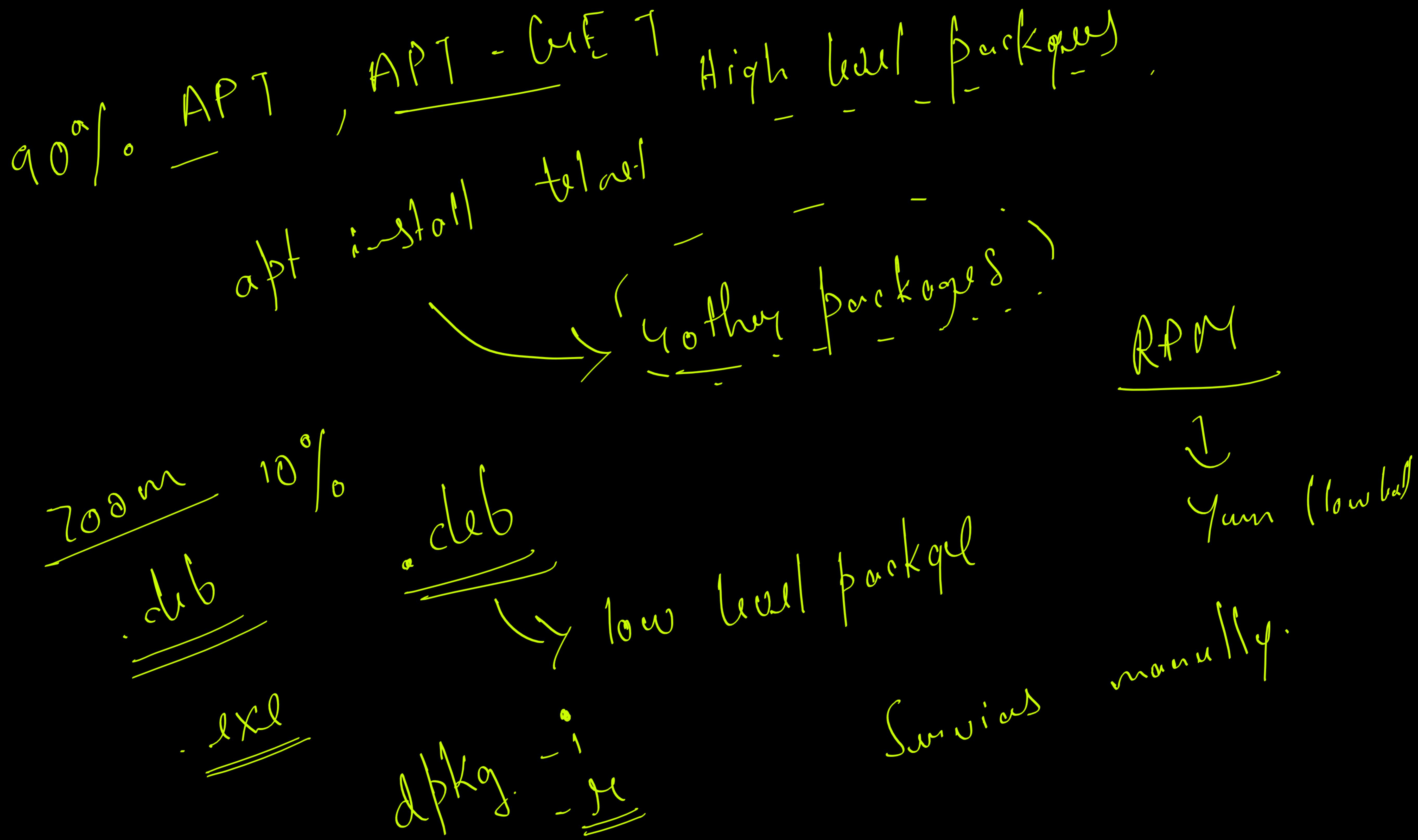
99% {  
  2021-  
  BAS!!  
  FISH  
  ZST}

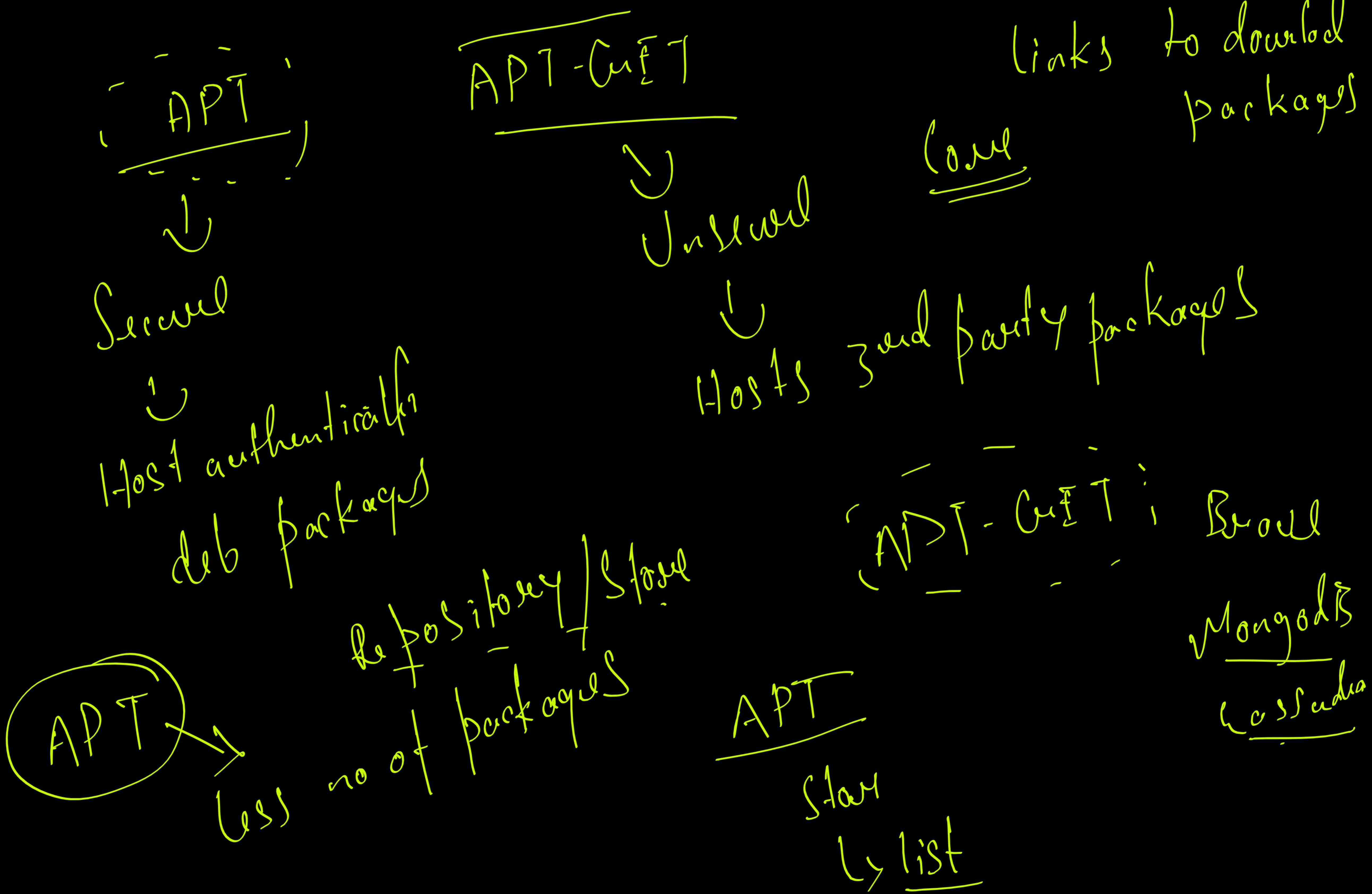
## Package

## Manager's

- 1) RPM , YUM
- 2) DEB , APT , APT - MET ✕
- 3) Pacman
- 4) Chocolatey
- 5) \* Snap ✕
- 6) \* Flatpak ✕







Add the 'repo' to your Sources.list

apt update

apt install browser

