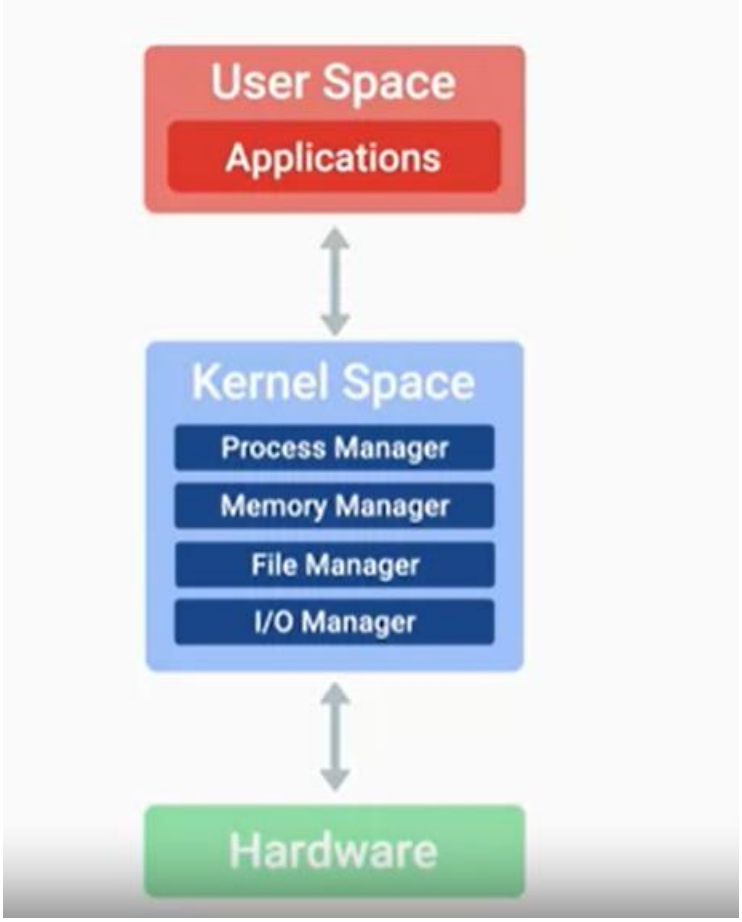
Operating System

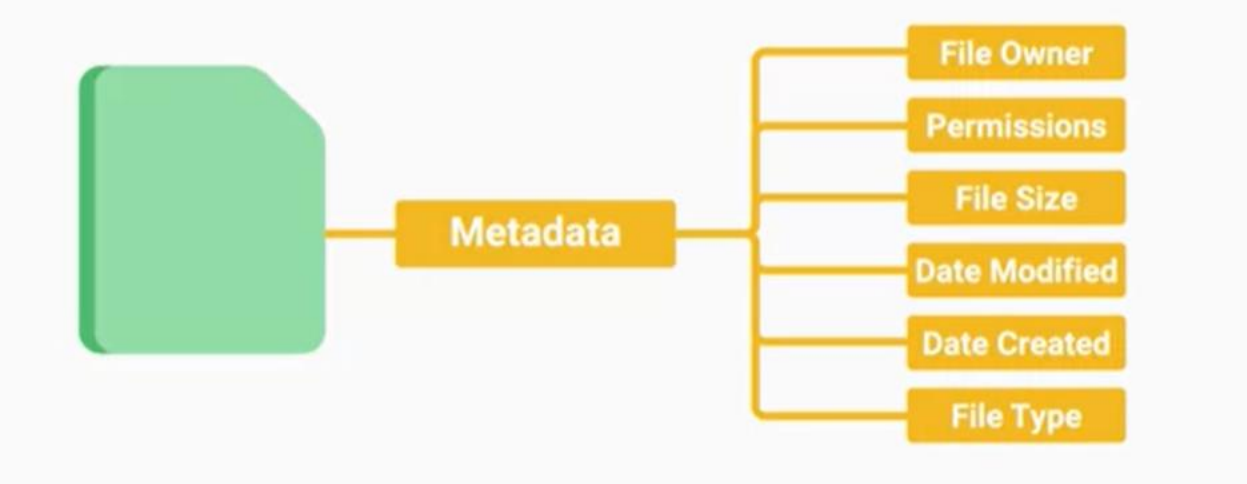
The whole package that manage our computer resources and help us Interact with it.



Components that make up an OS:
Kernel Space and User Space
File and File System
Three main components of Handling File on OS:
File Data
Meta Data
File System

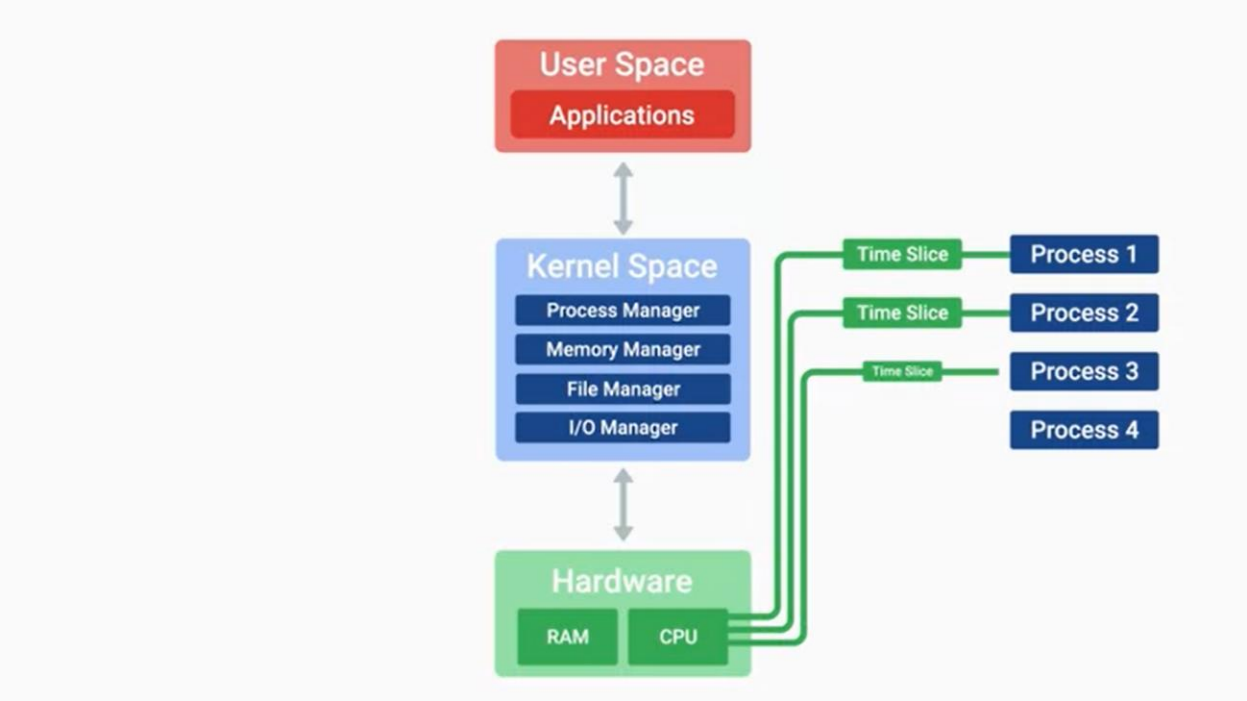
Default File System:
Windows: NTFS ReFS (developing)
MacOS: HFS+
Linux: ext4

We write Data to Hard Drive in form of Data Blocks.
Block storage improve faster handling of Data because Data isn't stored as one long piece and can be accessed quickly.

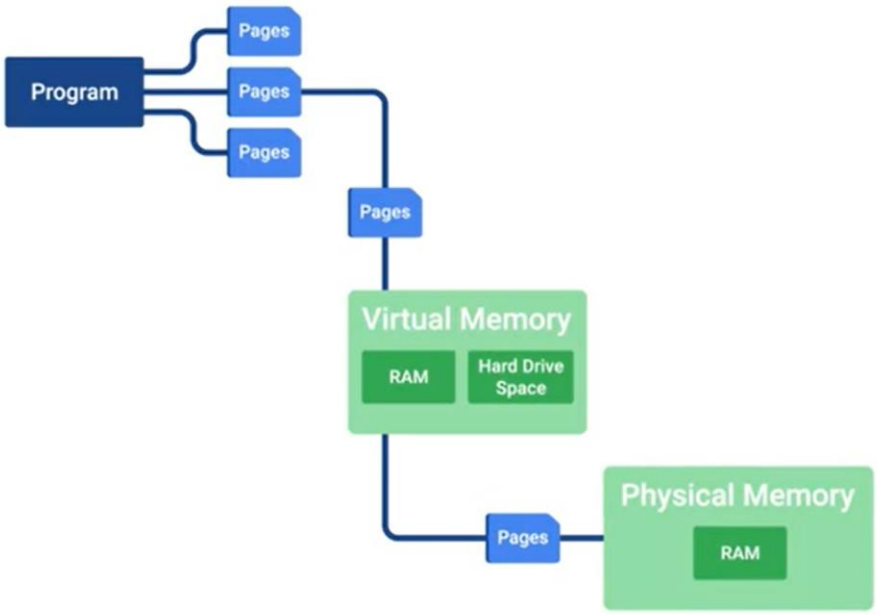


A file extension: Appended part of file name that tell us what type of file it is in certain OS.

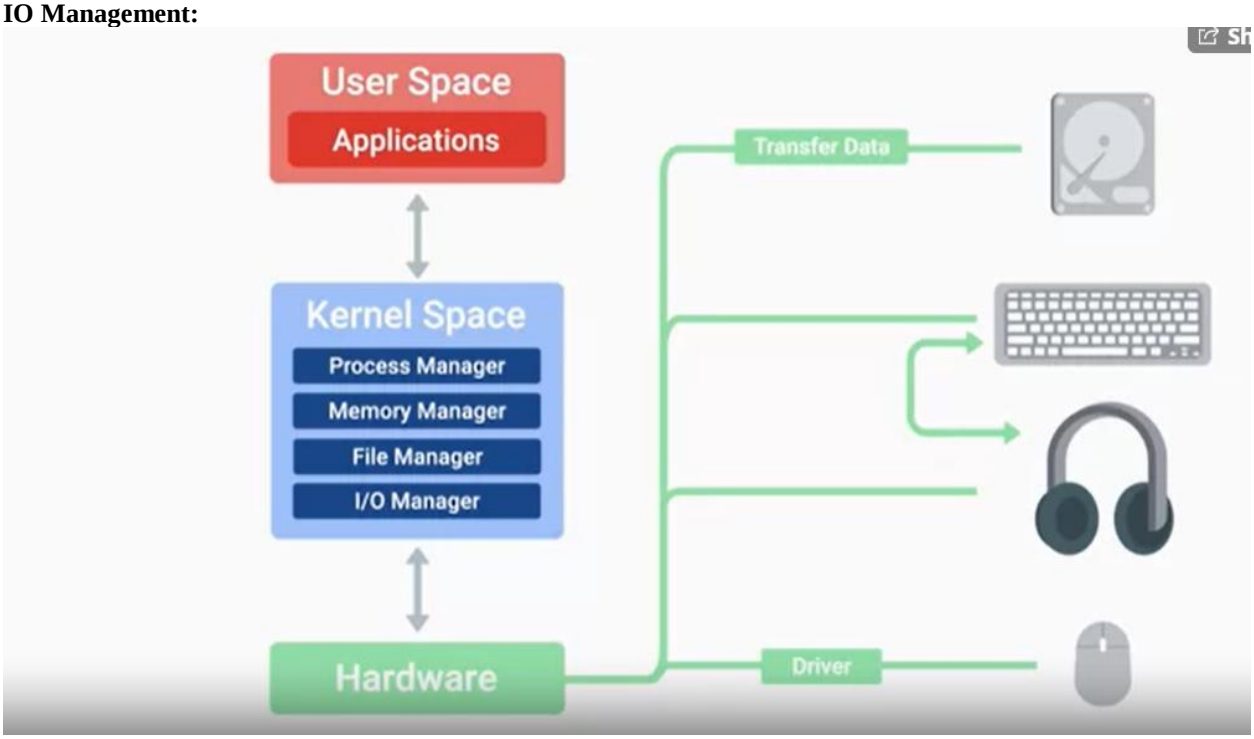
PROCESS MANAGEMENT:
The kernel creates processes, efficiently schedules them, and manages how processes are terminated.



Memory Management:
Virtual memory is a combination of hard drive space and RAM that acts like memory that our processes can use. When we execute a process, we take the data of the program in chunks we call pages. We store these pages in virtual memory. If we want to read and execute these pages, they have to be sent to physical memory or RAM.



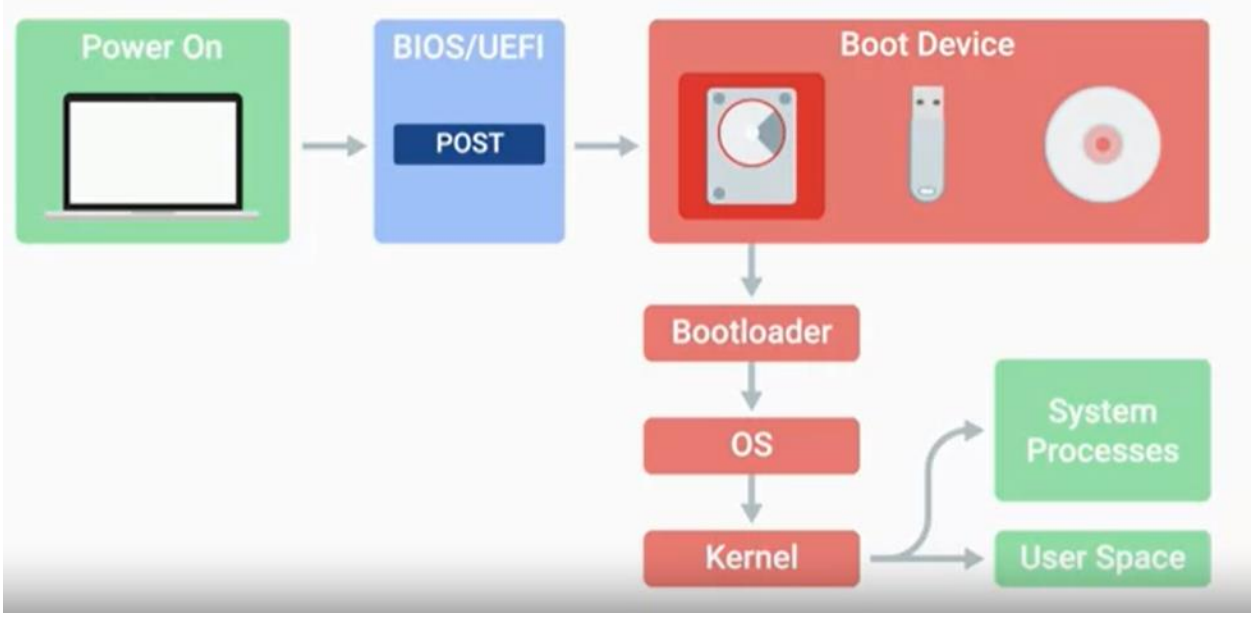
IO Management:



Interact with User Space
GUI
Shell: A program that interpret the text command and send them to the OS to execute.

Logs: Files that record system events on our computer just like a System Diary.

Boot Process: The BIOS/UEFI is a low-level software that initializes our computer's hardware to make sure everything is good to go
Bootloader: A small program that load OS



Virtual machine use physical resources like Memory, Storage and RAM, but they can be useful for running more than one OS.

Chrome OS have different purpose: TO be secure and simple way for used to interact with the web.
Chrome OS machine are Interchangeable because most data is stores in Cloud.
Defend against Threat.