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# Linux History

1. Denis Ritchie and Ken Thomson created in 1969 UNICS(Uniplexed Information & Computing System),then version in1975 came as UNIX.
2. As above system was open source, multiple vendors created their own versions using UNIX i.e. IBM-AIX, Mac OS,SUN Solaris and created paid OS
3. However for Linux Terald no open source unix was available, hence he created Linux (1991)from then free available Minux OS(Created by Teneum bum for education purpose).Linux was open source
4. Linux is kernel and Linux+GNU(which was open source software scheme)=Operating System
5. Other companies took advantage of free Linux and created their own versions like Red Hat Linux, Fedora, Debian, Few other free-Ubuntu, CentOS, Amazon Linux, Kali Linux
6. Meaning -> Ubuntu=Team Work, CentOS-Community Enterprise OS
7. Linux is not Unix derivative”
8. Linux is case sensitive command based

# WHY LINUX

1. Open Source/Free
2. Secure- 1) if virus attacked on particular folder, it doesn’t spread over other files/locations 2) Linux is difficult to hack
3. Easy to update
4. Lightweight- Occupies less space for installation i.e. uses less RAM
5. Fast processing as it has command line interface, hence time required to interpret user interface is reduced
6. Multi User/Multi tasking

# Linux –WINDOWS COmparison

|  |  |
| --- | --- |
| **Windows** | **Linux** |
| Hardware-> OS ->Shell->User | Hardware-> Kernel->Shell->User |
| Folders | Directory |
| Software | Packages |
| Administrator User | Root user |
| Default Drive C: | Default location : “/” top level root directory |
|  |  |

# LINUX Architecture

* /home- default directory for any user other than root
* /root- default directory for root user
* /boot- it contains bootable files for Linux while starting (i.e. checking stage and activate required inactive stages)
* /etc –configuration files are stored in this location (i.e. hardware, hard disk, RAM/Memory related files)
* /usr- default location where software’s are installed
* /bin-contains command used by all users and root(like ifconfig)
* /sbin – commands which can only be used by root user
* /opt- optional application software packages directory
* /dev- contains information of peripheral device information
* Linux kernel-is heart of OS, responsible for Device management, Memory Management,

# What is the shell?

It is a command line interpreter and it translates every command entered by the user into the language understood by the Kernel. It is used to call a program or a function by the user in Linux by entering the command at the command-line interface.