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Comparing between Windows,MAC&Linux

The basis of Comparison	Windows	MAC	Linux
Basic difference and history	Windows was first released in 1985. It was supposed to be a graphical user interface on top of MS-DOS. All features of MS-DOS were later integrated with Windows 95 release. It was a huge success in and led to the Windows transition.	This operating system from Apple stands older than Windows. It was first released in 1984. It began as a graphical user interface right from its inception. In 2005 the design and structure of MAC OS were changed to Intel x86 based architecture.	It was initially developed at Finnish University. It was released in 1991 and designed for GNU developers. GNU developers later integrated it into Linux. It is open to consumers, and everyone can use it as per their specifications.
File structure	Windows follows a directory structure to store the different kinds of files of the user. It has logical drives and cabinet drawers. It also has folders. Some common folders like documents, pictures, music, videos, and downloads. All these files can be stored in these folders, and also new folders can be created. It also has files which can be a spreadsheet or an application program. It can have extensions as .txt, .jpg etc.	The file structure of MAC is commonly known as MAC OS X. If you go to dig into your MAC's hard disk through the finder, you will see many directories. The root directory of MAC may encounter when they visit their own MAC book. You can explore the file system and directory structure by going to directories like /Application, /Developer, /sbin, /tmp, etc.	Linux has a completely different file structure form Windows and MAC. It was developed with a different code base. It stores data in the form of a tree. There is a single file tree, and all your drives are mounted over this tree.

	In addition to this, Windows also provides a recycle bin where all deleted files can be stored. Recycle bin can be configured to increase its size.		
Registry	Windows registry is a master database that is used to store all settings on your computer. It is responsible for storing all user information with its passwords, and device relate information. The registry also has an editor which allows you to view all keys and values or even drivers if necessary.	MAC stores all application settings in a series of .plist files, which have the various preferences folder in MAC. This .plist file contains all properties in either plain text or binary format. These are stored at: /Library/Preferences folder	Linux also does not have a specific registry of its own. All application setting is stored on a program basis under the different users in the same hierarchy format of the files being stored. There is no centralized database for storing these details, and so periodic cleaning is also not required.
Interchangeable Interfaces	Windows interface was not interchangeable until Windows 8. Windows XP had some improvements but not par. Start menu, taskbar, system tray, and Windows Explorer.	MAC has a facility to bridge virtual network interfaces. This can be done by going to system preferences and managing the interfaces.	Linux is easy to switch interfaces. You can switch the environment without having to carry all installations. There are utilities like GNOME and KDE which help in catering to these needs. They help in focusing on different aspects.
Command terminal	A terminal or command prompt is a black box ideally used to execute commands. It is also called the Windows Command Processor. It is	MAC provides a console as a terminal application. It has a console, command line, prompt and terminal. A Command-line is used to type your commands. Prompt will provide you	Linux also provides a terminal. You can find terminal at: Applications -> System or Applications -> Utilities. In addition to this, there is also a shell prompt. The most common shell used

	used to execute commands and different batch files. It can also be used for administrative functions and troubleshoot and solve all windows issues.	with some information and also enable you to run commands. A terminal is an actual interface that will provide the modern graphical user interface as well. You can find the terminal at Applications -> Utilities.	in bash. It defines how the terminal will behave and look when it is run.

10 Top Most Popular Linux Distributions of 2021

1. MX Linux
2. Manjaro
3. Linux Mint
4. Ubuntu
5. Debian
6. Elementary OS
7. Solus
8. Zorin OS
9. Fedora
10. Deepin

The basis of Comparison	Ubuntu	Linux Mint	MX Linux
GUI	By default, Ubuntu Server does not include a Graphical User Interface (GUI). A GUI takes up system resources (memory and processor) that are used for server-oriented tasks. However, certain tasks and applications are more manageable and work better in a GUI environment.	By default, Linux Mint Server does not include a Graphical User Interface (GUI). A GUI takes up system resources (memory and processor) that are used for server-oriented tasks. However, certain tasks and applications are more manageable and work better in a GUI environment.	KDE is well known for its advanced desktop “Plasma” and a wide variety of powerful applications. MX Linux – KDE has the following features: *Excellent tools such as Dolphin file manager and KDEConnect ease common tasks. *MX Tools such as Snapshot or Package Installer are at your fingertips. *Activities with different icons, wallpapers and general look and feel can be set up. *Extra themes, icon packs, cursors, widgets and splash screens are ready to be enabled.

Kernel	At the core of the Ubuntu operating system is the Linux kernel, which manages and controls the hardware resources like I/O (networking, storage, graphics and various user interface devices, etc.), memory and CPU for your device or computer. It is one of the first software programs a booting device loads and runs on the central processing unit (CPU). The Linux kernel manages the system's hardware environment so other programs like the operating system's user space programs and application software programs can run well without modification on a variety of different platforms and without needing to know very much about that underlying system.	The Linux kernel development team releases new kernels regularly, with updated drivers and new drivers for hardware not supported in previous versions, as well as other improvements.You might find that your kernel is significantly older than the latest kernel release. That's because certain distros, like Linux Mint, ship with older kernels to ensure stability. That older kernel is more reliable and more likely to work with the distro's unique software, thus reducing the chance of kernel failures.Fortunately for you, Linux Mint allows you to upgrade to certain newer kernels with ease using the kernel management tool in Mint's Update Manager.	• Kernels (secured against known vulnerabilities) • 32bit: latest Debian 5.10 PAE (non-PAE kernel: antiX). Very stable kernel for many machines. • 64bit: latest Debian 5.10. Recent stable kernel for newer machines. • Easy kernel upgrade or downgrade with MX Package Installer