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LINUX VS WINDOWS OPERATING SYSTEM

Comparison between linux and windows

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Introduction :

Windows is a series of operating systems developed by Microsoft. Each version of Windows includes a graphical user interface, with a desktop that allows users to view files and folders in windows. For the past two decades, Windows has been the most widely used operating system for personal computers PCs. Microsoft Windows is designed for both home computing and professional purposes. , Linux is a Unix like, open source and community-developed operating system for computers, servers, mainframes, mobile devices and embedded devices. Linux has access to source code and alters the code as per user need whereas Windows does not have access to source code. Linux will run faster than windows latest editions even with a modern desktop environment and features of the operating system whereas windows are slow on older hardware. In this following report will be about linux and windows operating system and there differences.

Windows operating system :

The first version of Windows, released in 1985, was simply a GUI offered as an extension of Microsoft's existing disk operating system . With the 2001 release of Windows XP, Microsoft united its various Windows packages under a single banner, offering multiple editions for consumers, businesses, multimedia developers, and others. Windows XP abandoned the long-used Windows 95 kernel (core software code) for a more powerful code base and offered a more practical interface and improved application and memory management. The highly successful

XP standard was succeeded in late 2006 by Windows Vista, which experienced a troubled rollout and met with considerable marketplace resistance, quickly acquiring a reputation for being a large, slow, and resource-consuming system. Responding to Vista's disappointing adoption rate, Microsoft in 2009 released Windows 7, an OS whose interface was similar to that of Vista but was met with enthusiasm for its noticeable speed improvement and its modest system requirements.

Windows 8 in 2012 offered a start screen with applications appearing as tiles on a grid and the ability to synchronize settings so users could log on to another Windows 8 machine and use their preferred settings. In 2015 Microsoft released Windows 10, which came with Cortana, a digital

LINUX OPERATING SYSTEM :

Linux first public released in 1992 by Linux Torvalds et al. Linux refers to the family of Unix-like PC Operating system using Linux kernel. Linux can be installed in number of different computers and video game consoles, to mainframes and supercomputers. Linux is the top server operating system, accounting for more than 50% of installations and runs on the fastest top 10 supercomputers in the world. Using Linux in desktops has increased in recent years. The name Linux comes from Linux kernel, created in 1991 by Linux Trovalds.

Linux is an operating system that runs on the Linux kernel which was created by Linus Torvalds back in the early 1990s in Finland. ... Like UNIX, Linux is a free operating system which can by run on your PC hardware and it provides you with more control over your operating

system. Linux is the leading operating system on servers and other big iron systems such as mainframe computers, and the only OS used on TOP500 supercomputers (since November 2017, having gradually eliminated all competitors). It is used by around 2.3 percent of desktop computers.

DIFFERENCES BETWEEN WINDOWS AND LINUX OPERATING SYSTEM :

There are many differences between windows and linux operating system. On those differences some are describe in below.

1. **Access** :

In windows every user wont have access to to the source code , only member of the selected group will have access to it .

In Linux user has access to the source code of kernel and alter rhe code according to his need . It has its own advantages like bugs in OS will fix at rapid peace and disadvantages like developers may take advantages of any weakness in OS if they found .

2. Flavors or Variety:

Windows has very few customization options available .   Linux has various distribution which are highly customizable based on user needs .

3. **Licensing** : In windows with Microsoft license , users wont have access you source code and based on number if license , we can install only those number of computer . Linux with GPL – Licensed operating system , users are free to Modify the software, can re-use in any number of system and even they can sell the modified version .

4. **Command line** :

In windows , we have command line . We need to go to rub and enter cmd then command line will open .   In Linux , command line is a very useful tool for administration and daily tasks but for end users it doesn't make much difference .

5. **Run level** :

   In windows , if we encounter any problem in order to fix it we need to reboot at run level 4 as an administration / root to find and fix the problem .
   Linux has inbuilt ability to stop at different run levels with this we can work using command line and GUI if anyone has an issue .

6. **Usability :**

   Windows gives users a simple system to operate but it will a longer time to install .
   Linux is complicated to install but has the ability to complete complex tasks easier .

7. **Support:**

Windows has support which is easily accessible, online forums / website and it has paid support also .
Linux has support via huge community of user forums/website and onine search .

8. **Updates :**

In windows , updates will come at inconvenient times such as you are giving a print to the printer but suddenly update pop up will come which makes users frustrate and took more to install .
In Linux , users have full control on updates , we can install whenever we needed and it will take less time without any reboot .

9. **Security** :

Windows is the major target for developers of viruses and malware and it is most vulnerable without anti-virus software .
Linux is more secure than windows where hackers or developers of virus will find difficulty to break through Linux .

Though both operator has their advantages and disadvantages . But programmers will find linux useful most . On the other hand , gamers or developers will find windows useful .

CONCLUSION :

After researching about these two operating systems along with the points that I have made and believe that Linux is the better operating system then windows operating system with better benefit. However as far as the hardware is concerned windows doesn't have the skill to work on the Power PC processors unlike Linux. Windows are costly so anyone can not afford it but besides linux is free so everyone afford it. Linux would be one of the growing operating systems in the world which would be the main rivals of windows in the future.