*Compare Linux and Windows:*

**The similarities**

The starting point of Windows and Linux is the same, both provide users with an operating system service, and set up a platform between hardware and application programs for users to use. This is the biggest common denominator.

So specifically, Windows and Linux both support multiple file systems, support multiple network protocols, support multiple physical device interfaces, support multiple users and group policies, and so on.

**The differences**

* Linux is an open source operating system whereas Windows OS is a commercial operating system.
* Linux has access to the source code and changes the code according to the needs of the user, while Windows does not have access to the source code.
* Even with modern desktop environments and operating system capabilities, Linux runs faster than the latest versions of Windows, and Windows runs slower on older hardware.
* Linux distributions do not collect user data, while Windows collects all user details that lead to privacy protection.
* Linux is more reliable than Windows because in Linux you can kill applications if execute kill command, whereas in Windows we need to try multiple times to kill them.
* Linux supports more free software than Windows, but Windows has a lot of video game software.
* In Linux the software cost is almost free as all programs, utilities, complex applications like open office are free, but there are also many free programs and utilities for Windows, but most programs are commercial.
* Linux is highly secure because it is easy to identify bugs and fix them, while Windows has a large user base and is a target for virus and malware developers.
* Linux is used by enterprise organizations as a server and operating system for security purposes by Google, Facebook, Twitter, etc., while Windows is mostly personal used by gamers and business users.

**Features of Windows**

1. Graphical interface

Windows graphical user interface, easy to understand, learn and use.

1. Multitasking

It allows users to run multiple applications at the same time, or do several things in one program at the same time. User can switch between different applications

1. Device independence.

When users buy a new device, they don't have to consider whether a particular application software supports the device, as long as Windows supports it.

1. Support hardware hot plug, plug and play.
2. Automated memory management
3. Graphics API

DirectX 12 can support many existing graphics cards. In addition to benefiting gamers, it can also accelerate other graphics applications, including CAD

1. Technical Support

You can find Windows tips in Cortana, or communicate with Microsoft's technical support staff.

**Features of Linux**

1. High degree of modularity

The Linux kernel design is very delicate, some modules can be inserted or removed from the kernel in real time according to the needs of users, making the Linux system The kernel can be cut very small, which is very suitable for the needs of embedded systems.

1. Open source code

Linux system has been closely integrated with the GNU project from the very beginning, anyone and any organization can freely use the Linux source code as long as they abide by the terms of the GPL

1. Extensive hardware support

Linux can support microprocessors of various architectures such as x86, ARM, MIPS, ALPHA and PowerPC. It has been successfully ported to dozens of hardware platforms and can run on almost all popular processors.

1. Good safety and reliability

The efficiency and stability of the Linux kernel has been verified by a large number of facts in various fields.

1. Files and Devices system

In the Linux system, all devices are treated as a special kind of file, and the user operates the device as a normal file, thereby realizing device independence.

1. Fully compatible with UNIX