Operating systems

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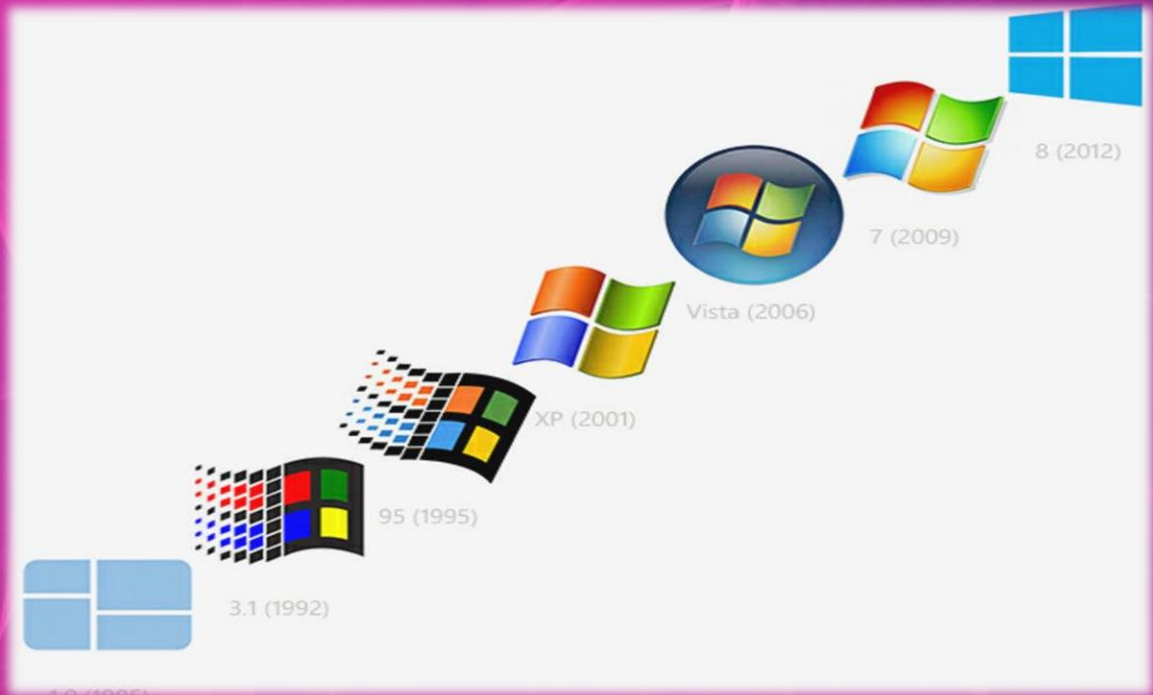
What is Operating systems?

- An operating system is the program that manages all the application programs in a computer system. This also includes managing the input and output devices, and assigning system resources.

- Operating systems evolved as the solution to the problems that were evident in early computer systems, and coincide with the changing computer systems

Windows

When referring to an operating system, **Windows** or **win** is an operating environment created by Microsoft that provides an interface, known as a Graphical User Interface (GUI), for computers. Windows eliminates the need to memorize commands for the command line (MS-DOS) by using a mouse to navigate through menus, dialog boxes, buttons, tabs, and icons. If you are using a PC (IBM) computer you are most likely using a version of Windows. If you are on an Apple computer you are using macOS.
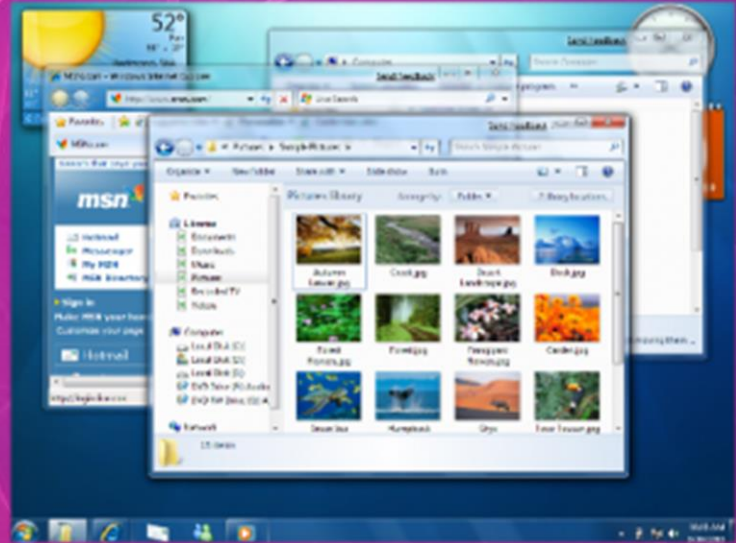
Microsoft Windows was first introduced with version 1.0 on November 10, 1983. Since its release, there have been over a dozen versions of Windows. The most current version of Windows for end users is Windows 10.

2009: Windows 7

Windows 7 is built on the Vista kernel. Windows 7 had the visuals of Vista with better start up and program speed. It was easier on memory and more reliable. To many end users, the biggest changes between Vista and Windows 7 are faster boot times, new user interfaces and the addition of Internet Explorer 8.

2012: Windows 8

Windows 8 was released with a number of enhancements and the new Metro UI. Windows 8 takes better advantage of multi-core processing, solid state drives (SSD), touch screens and other alternate input methods. However users found it awkward, like switching between an interface made for a touch screen and one made for a mouse -- with neither one entirely suited to the purpose. Generally Windows 7 retained market leadership.

2015: Windows 10

Microsoft announced Windows 10 in September 2014, skipping Windows 9. Version 10 includes the start menu, which was absent from Windows 8. A responsive design feature called Continuum adapts the interface depending on whether the touch screen or keyboard and mouse are being used for input. New features like an on-screen back button simplify touch input. The OS is designed to have a consistent interface across user devices including PCs, laptops, phones and tablets.

Unix

Unix -- often spelled *UNIX*, especially as an official trademark -- is a multi-user operating system designed for flexibility and adaptability. Originally developed in the 1970s, Unix was one of the first operating systems to be written in C language.

Linux

Linux is a [Unix](#)-like, open source and community-developed [operating system](#) for computers, servers, mainframes, mobile devices and embedded devices. It is supported on almost every major computer platform including x86, ARM and [SPARC](#), making it one of the most widely supported operating systems.

Linux Operating System:

Advantages:

- ✓ **Performance:** Linux provides high performance on workstations and on networks. It also helps in making old computers sufficient and usable again and also can handle many users at a time.

- ✓ **Stability:** You don't have to reboot periodically to maintain performance. It can handle large number of users and does not hang up or slow down due to memory issues. Continuous up time upto a year or so is common.

- ✓ **Flexibility:** It is used for high performance applications, desktop applications and embedded applications. You can save disk space by installing components required for a particular use. You can restrict specific computers instead of all computers.

- ✓ **Security:** The security aspect of the linux is very strong as it is very secure and it is less prominent to viruses, even if there is an attack there would be immediate step taken by the developers all over the world to resolve it.

- ✓ **Choice:** Choice is one of the greatest advantage of Linux. It gives the power to control every aspect of the operating system. Main features that you have control is look and feel of desktop by Windows Manager and kernel.

Disadvantages:

- ✓ **Understanding:** To become familiar with Linux you need to have a lot of patience and desire to read and explore about it.
- ✓ **Software:** Linux has a limited selection of available softwares.
- ✓ **Ease:** Even though Linux has improved a lot in ease of use but windows is much easier.
- ✓ **Hardware:** Linux doesnot support many hardware devices.

Windows Operating System:

Advantages:

- ✓ **Ease:** Microsoft Windows has made much advancement and changes which made it easy to use the operating system. Even though it is not the easiest, it is easier than linux.
- ✓ **Software:** Since there are more number of Microsoft users there are more software programs, games and utilities for windows. All most all games are compatible to windows, some CPU intensive and graphic intensive games are also supported.
- ✓ **Hardware:** All hardware manufacturers will support Microsoft windows. Due to large number of Microsoft users and broader driver, all the hardware devices are supported.
- ✓ **Front Page Extension:** When using a popular web design program having windows hosting makes it lot more easier. You don't have to worry if it supported or not.
- ✓ **Development:** If you plan to develop windows based applications then windows platform is most suggested as linux does not support windows applications.

Disadvantage:

- ✓ **Price:** Microsoft windows is costly compared to Linux as each license costs between $50.00-$100.00.
- ✓ **Security:** When compared to linux it is much more prone to viruses and other attacks.
- ✓ **Reliability:** It needs to be rebooted periodically else there is a possibility of hang up of the system.
- ✓ **Software Cost:** Even though the windows have softwares,games for free most of the programs will cost more than $200.

Unix Operating System:

Advantages:

- ✓ Full multitasking with protected memory. Multiple users can run multiple programs each at the same time without interfering with each other or crashing the system.
- ✓ A rich set of small commands and utilities that do specific tasks well -- not cluttered up with lots of special options. Unix is a well-stocked toolbox, not a giant do-it-all Swiss Army Knife.
- ✓ Ability to string commands and utilities together in unlimited ways to accomplish more complicated tasks -- not limited to preconfigured combinations or menus, as in personal computer systems.
- ✓ A powerfully unified file system. Everything is a file: data, programs, and all physical devices. Entire file system appears as a single large tree of nested directories, regardless of how many different physical devices (disks) are included.
- ✓ A lean kernel that does the basics for you but doesn't get in the way when you try to do the unusual.
- ✓ Available on a wide variety of machines - the most truly portable operating system.
- ✓ Optimized for program development, and thus for the unusual circumstances that are the rule in research.

Disadvantage:

- ✓ The traditional command line shell interface is user hostile -- designed for the programmer, not the casual user.
- ✓ Commands often have cryptic names and give very little response to tell the user what they are doing. Much use of special keyboard characters - little typos have unexpected results.
- ✓ To use Unix well, you need to understand some of the main design features. Its power comes from knowing how to make commands and programs interact with each other, not just from treating each as a fixed black box.
- ✓ Richness of utilities (over 400 standard ones) often overwhelms novices. Documentation is short on examples and tutorials to help you figure out how to *use* the many tools provided to accomplish various kinds of tasks.

Conclusion:

Both Windows, Unix and Linux Hosting have advantages and disadvantages. Based on your requirements you need to opt which hosting suits better.

List of sources used:

https://www.quora.com/
http://searchdatacenter.techtarget.com/definition/Unix

Presentation ended
Thank you for your attention!