## Abstract

While still a student, Finish Software engineer, Linus Torvalds, began to develop a system similar to Minix, a UNIX operating system, intended to be more freely available and "a better Minix than Minix". Linux first officially debuted in late 1991 with version 0.02 running bash and gcc and what originally began as a hobby endeavor has led to one of the most widely used operating systems. Fresh off its 30th 'birthday', Linux is now essentially a UNIX clone and can run almost all major software making it more useful and versatile than the original iterations. While Linux and UNIX have many similarities they differ in multiple ways, namely in their access and debugging. Linux is an open-source system upkept and developed by communities of programmers online while Unix was originally developed by AT&T Labs and commercial vendors meaning only copyrights have access to Unix. This also leads into the time it takes to fix bugs or threats, since Linux is open-sourced bugs can be detected and solved much quicker through online collaboration. Similarly, MacOSX was privately developed by Apple Inc. in 2001 specifically for Apple Mac computers and is the second most used operating system for personal computers. MacoOSX is also proprietary rather than open sourced and can't be installed on just any computer. Lastly, Windows OS is the most widely used operating system on personal computers which is very straightforward as it is designed to not give programming information and for industrial business use. The first distinction made is that Windows is not open source/free and must be used with a license while providing less security and less efficiency. When comparing operating systems however, things aren't always quite so simple, and users must evaluate their needs, devices, and budget when deciding on the best system.

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