* **Windows**: Windows is a Proprietary **Operating System designed by Microsoft mainly for** computers. The first version of windows was released in 1985.
* **Ubuntu**: Ubuntu is Linux based Operating system developed by Canonical for both computers and smartphones. The first official release (version 4) of Ubuntu was in 2004.

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| Windows | Ubuntu |
| Windows is a licenced operating system property of a company and is distributed to its users(clients) with some fee, and requires specific specs to run on a device | Ubuntu is a **free light weight open-source** operating system **distro** of **Linux-OS** built by its **users**, which can run on virtually almost **any device**. |
| Windows has a robust and complex permission system and is highly advantageous for office, network environment, it’s a multipurpose operating system room for everything, it also opens vulnerability due to its complexity which may take time to be found and thus is a target for attackers,  thus, requiring third party anti-virus system, but the new updates from 1801 build windows 10 the in-built windows defender is quite good to catch malwares. | Ubuntu (Linux) is **highly secure**, since it’s maintained by its user community, **vulnerability is** **quickly found and fixed**, thus does not require the need for any separate anti-virus software. Ubuntu is slowly emerging to mainstream multipurpose operating system thanks to its huge **community support**. It’s mainly used for **server back end, networks, programming** etc. |
| Windows is very easy to use and beginner friendly, it has a great navigation system and helper assist. It has a variety of useful software’s and support, both inbuilt and third party. It also has an amazing support for old version/legacy software and is highly backward compatible. | Ubuntu (Linux) might seem **intimidating** for novice users, the navigation, searching, running of software’s, use of **terminal commands** can be **confusing** and **uncomforting** for some, but if the concept/use is understood correctly, it can be a **boon** for many |
| Windows does a neat work in resource and power distribution and management for various background and foreground tasks, it uses all the resources to its full extent when necessary and halts its uses when no longer required. | Ubuntu (Linux) performs very well on **benchmarks**, in fact better than Windows, but when it comes to distribution and management of load and its smart utilization, it **fluctuates** and **does not give peek performance**. |
| Windows is highly optimized and has support for gamming, such as the .NET framework and DirectX a competitive graphic framework. | Ubuntu (Linux) has recently emerged into the gamming scene and shows promising future, though it has higher **Vulcan scores** it **still needs optimization** for rendering and frame rates. |
| Windows has a complex installation and management of software downloads, this involves permissions, the right stable version, browsing for the download link. One should also note that Windows sometimes requires a reboot for the changes to take full effect. This might sometimes be difficult and time consuming to find the exact software one’s looking for and might end up installing malware or  get scammed by fishing websites. | Ubuntu (Linux) has a great **package managing tool** to download and install, remove, and modify various software with **one simple command** (**sudo apt**) from a **centralized software Repository**, one additional benefit about Ubuntu (Linux) is that it **doesn’t require reboot** for the changes to take effect, in fact one can update the OS **without a reboot**. This makes is very easy **fast and reliable** for users who frequently install/work with many software or **develop** new software. It is also a great OS for **server-based** networks or any **digital environment which keeps changing**. |
| Windows comes with premium look and feel, majority might not find any need for customization, but if required it is a painstaking task to mend windows to fit the user’s imagination. | Ubuntu (Linux) is **very customizable** in all sense, it can be **modified** to the user’s wish, one can build their environment suited to them and have a **greater** **productivity**. |
| Windows has a low frequency of error messages thanks to its optimization and handles, however if one’s to get one its is difficult and non-user friendly to find the cause of the error, also the same error message can be caused by a lot  of factors which may be related or not, added to that one must wait for the next update for the bug to get fixed after reporting the error | Ubuntu (Linux) has a very **good** **error message system**; the error message includes **crucial information** which can help the user to resolve problems and bugs **faster and easier**.  Also, if one has enough knowledge, they could **fix the bug themselves** and patch it on the open-source community. |

* Though I use windows mainly and used very little of Ubuntu, after going through the advantages and disadvantages of both the software, I would lean towards Ubuntu (Linux) over Windows for programming mainly because of its ***package management and terminal command-line-based approaches***, as I experienced that its ***very beneficial that way***. The other key points I would like to mention whose details can be obtained above:
  + **free light weight open source**
  + **highly secure**
  + **community support**
  + **terminal commands**
  + **centralized software Repository**
  + **package managing tool**
  + **fast and reliable**
  + **greater** **productivity**
  + **good** **error message system**
  + **faster and easier**