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GUI vs CLI

To understand the differences between a Graphical User Interface (GUI) and the Command Line Interface (CLI), one must first know the basics about each one. Access to command lines first popped up on terminals in the mid-1960s to provide an alternative input method for users. On the other hand, the first GUI did not pop up until 1973, on the Alto personal computer, and was the first time the desktop was displayed as a graphical interface to be interacted with. Until this point, all user actions performed on a computer were done so with textual commands.

As mentioned above, the most noticeable difference between a GUI and CLI is the appearance on the machine. While CLIs are text command based, GUIs use graphical elements such as menus, icons, windows, etc. Due to the greater memory consumption involved with graphics, the response time is slower comparative to simple text commands. However, the graphics make the GUI a much more user-friendly option of navigating computers and have opened up technology to people with little to no computer literacy!

Several other differences are as follows:

* CLIs offer a higher level of precision that its GUI counterparts.
* CLIs only require the use of a keyboard for input and do not use any type of pointing device, whereas a GUI needs both a keyboard and a mouse (or touch).
* CLIs cannot be altered in appearance, but GUIs can be changed unlimitedly.
* CLIs do not offer, or even use, any graphics or menus, also meaning that any information displayed will be entirely text-based. GUIs can not only display text, but can also present media files, videos, photographs, gifs, etc.
* CLIs usually require information to be input directly into the command prompt whereas GUIs can accept information anywhere on the computer screen.

Thus are some of the main differences between the Graphical User Interface and the Command Line Interface laid out.

# References

*Difference between CLI and GUI*. (2023). Retrieved from BYJU'S Exam Prep: https://byjus.com/gate/difference-between-cli-and-gui/#:~:text=GUI%20lets%20a%20user%20interact,offer%20both%20CLI%20and%20GUI.