

USER INTERFACE/USER EXPERIENCE

AN OVERVIEW IN IoT

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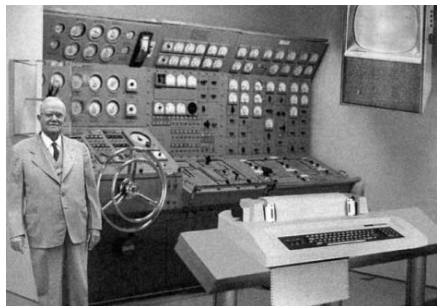
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- UI** the means by which the user and a computer system interact, in particular the use of input devices and software;
- UX** the overall experience of a person using a product such as a website or computer application, especially in terms of how easy or pleasing it is to use.

EARLY INTERFACES

- Input via Punch card
- Output via Line Printer or (small) monochrome screen (or even LEDs)



CLI A command-line interface or command language interpreter (CLI), also known as command-line user interface, console user interface and character user interface (CUI), is a means of interacting with a computer program where the user (or client) issues commands to the program in the form of successive lines of text (command lines).

A program which handles the interface is called a command language interpreter or shell.

```

root@kali:~# cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
games:x:5:12:games:/usr/games:/usr/sbin/nologin
uucp:x:6:6:uucp:/var/spool/uucp:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
irc:x:10:10:irc:/var/spool/irc:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
_apt:x:100:100:_apt:/var/lib/apt/lists:/usr/sbin/nologin

```

Unix is the prime example today

GUI The graphical user interface, is a type of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, instead of text-based user interfaces, typed command labels or text navigation.

Windows, X Windows are best known examples (see also Smalltalk)



MOBILE DEVICE INTERFACES

- Output via Small Screen and Audio
- Phone and Tablet
- Input via touch and voice
- Output via audio and screen
- Android, OS-X and Windows



WEARABLE INTERFACES

- May have no or tiny screen
- May not have full (or easy) access
- Input via ?
- Output via ?
- Fitbit, Smartwatch, etc.



ALTERNATE INTERFACES

- MMI
- NLP
- Video
- Gesture
- Output via ?

