

CONQUER
BLOCKS

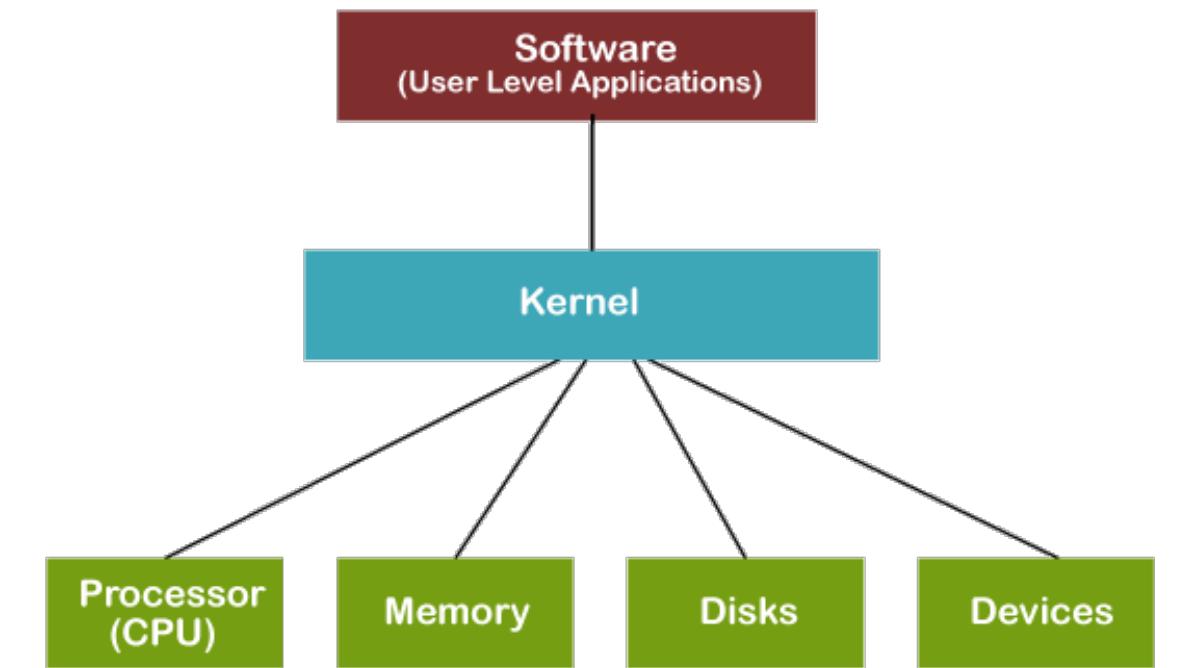
QUÉ ES LA SHELL

GUI VS CLI



CONCEPTOS BÁSICOS

La shell es un software que da a los usuarios de un sistema operativo acceso al *kernel* por medio de una interfaz



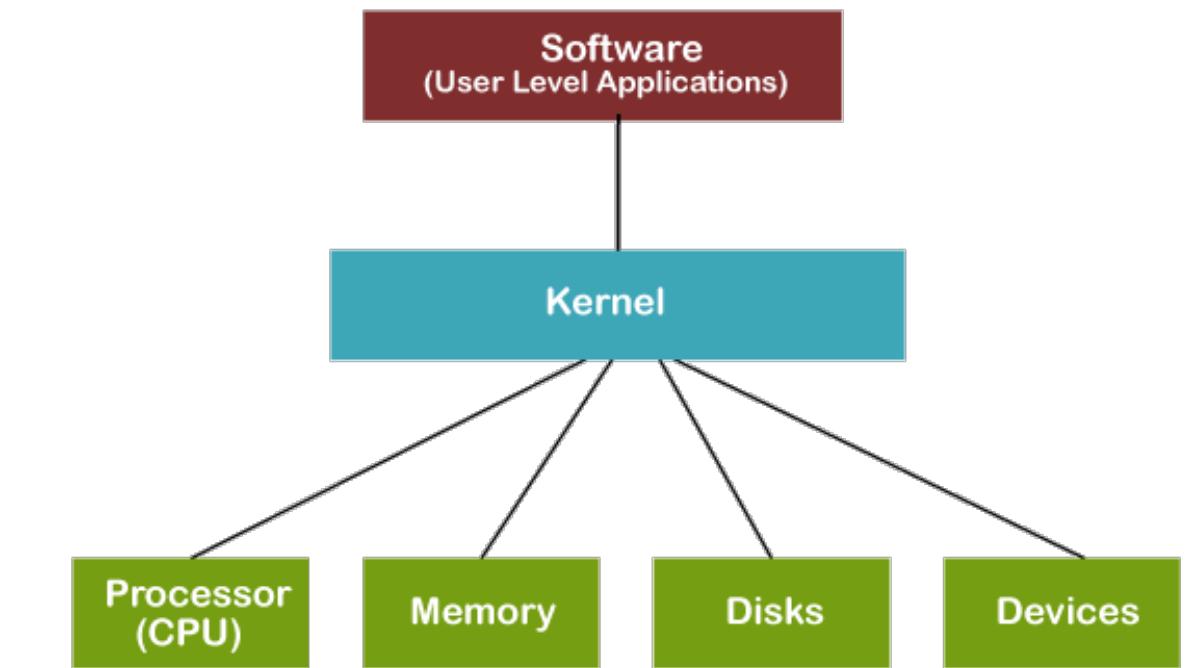


CONCEPTOS BÁSICOS

La shell es un software que da a los usuarios de un sistema operativo acceso al *kernel* por medio de una interfaz

Shell = Cáscara →

Capa superficial de la interfaz
de un sistema operativo





CONCEPTOS BÁSICOS

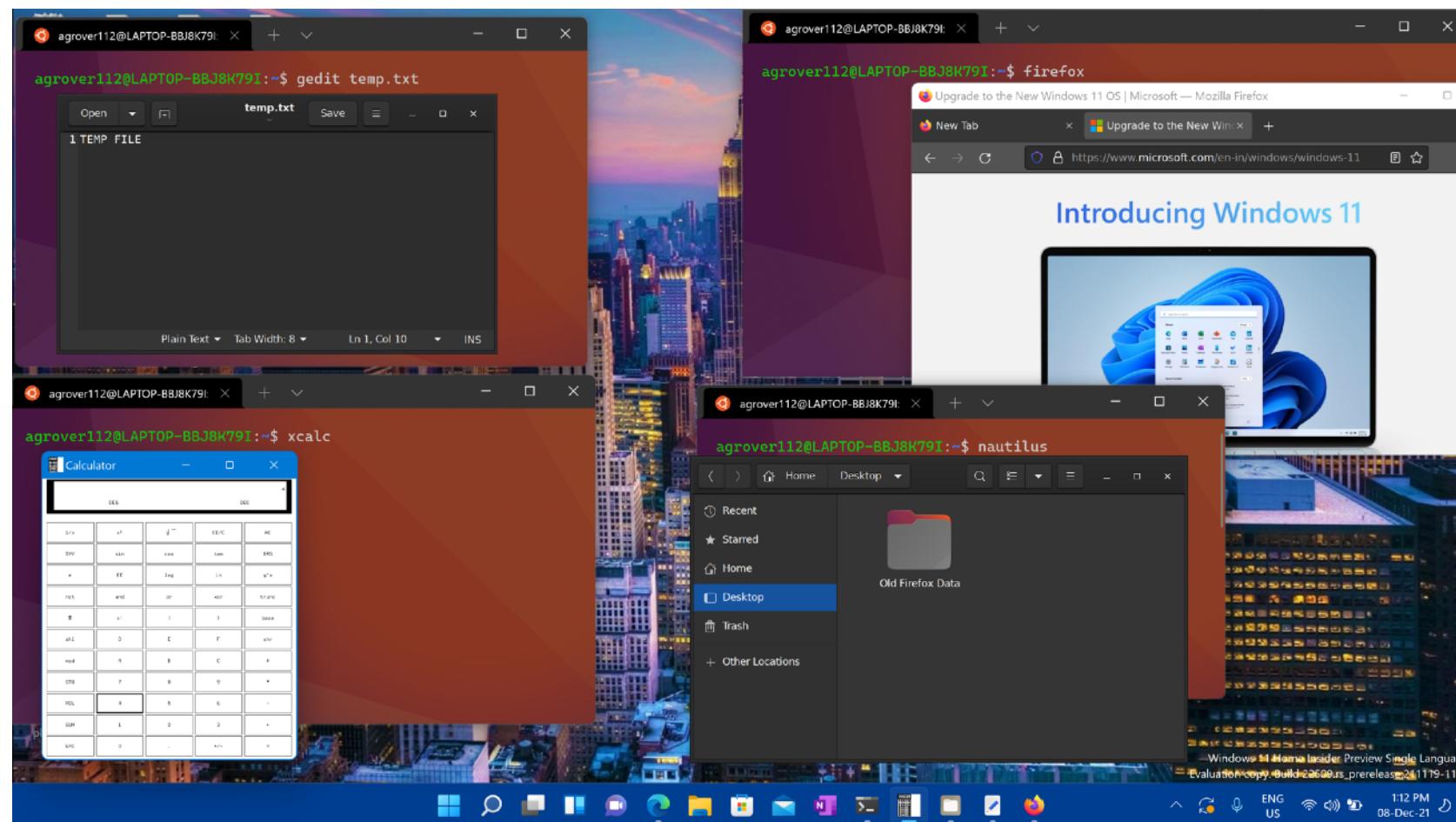
La shell es un software que da a los usuarios de un sistema operativo acceso al *kernel* por medio de una interfaz

Shell = Cáscara



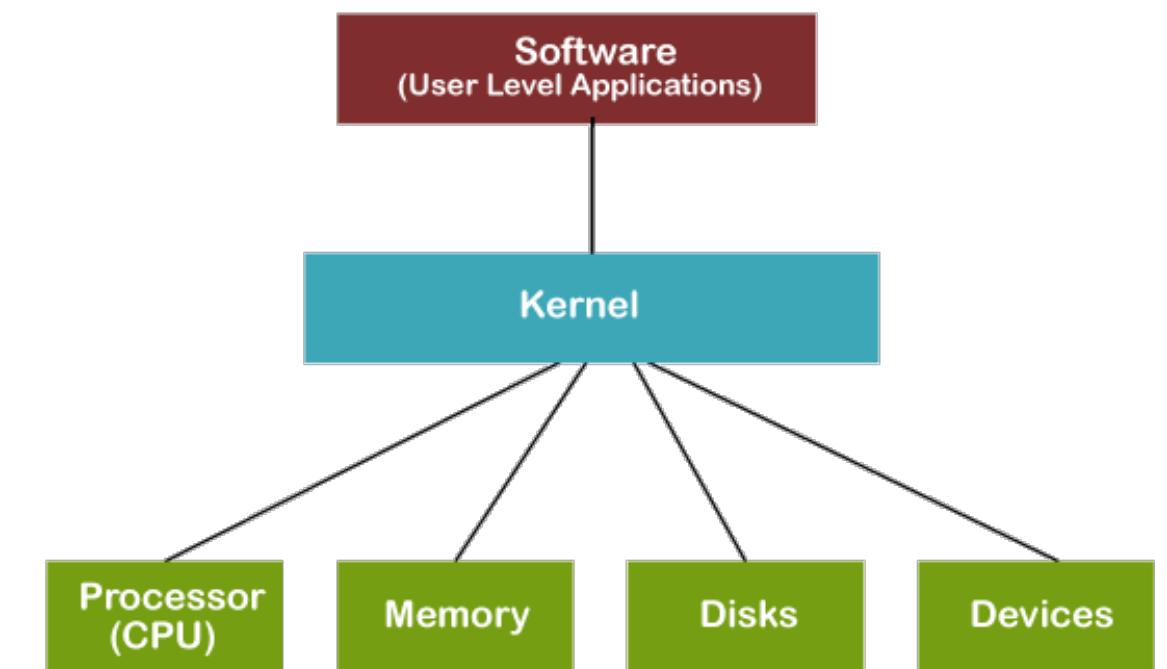
Capa superficial de la interfaz
de un sistema operativo

Graphical User Interface (GUI)
Interfaz Gráfica de Usuario



Command Line Interface (CLI)
Interfaz de Comandos

```
override@Atul-HP:~$ ls -l
total 212
drwxrwxr-x 5 override override 4096 May 19 03:45 acadenv
drwxrwxr-x 4 override override 4096 May 27 18:20 acadview_demo
drwxrwxr-x 12 override override 4096 May 3 15:14 anaconda3
drwxr-xr-x 6 override override 4096 May 31 16:49 Desktop
drwxr-xr-x 2 override override 4096 Oct 21 2016 Documents
drwxr-xr-x 7 override override 40960 Jun 1 13:09 Downloads
-rw-r--r-- 1 override override 8980 Aug 8 2016 examples.desktop
-rw-rw-r-- 1 override override 45005 May 28 01:40 hs_err_pid1971.log
-rw-rw-r-- 1 override override 45147 Jun 1 03:24 hs_err_pid2006.log
drwxr-xr-x 2 override override 4096 Mar 2 18:22 Music
drwxrwxr-x 21 override override 4096 Dec 25 00:13 Mydata
drwxrwxr-x 2 override override 4096 Sep 20 2016 newbin
drwxrwxr-x 5 override override 4096 Dec 20 22:44 nltk_data
drwxr-xr-x 4 override override 4096 May 31 20:46 Pictures
drwxr-xr-x 2 override override 4096 Aug 8 2016 Public
drwxrwxr-x 2 override override 4096 May 31 19:49 scripts
drwxr-xr-x 2 override override 4096 Aug 8 2016 Templates
drwxrwxr-x 2 override override 4096 Feb 14 11:22 test
drwxr-xr-x 2 override override 4096 Mar 11 13:27 Videos
drwxrwxr-x 2 override override 4096 Sep 1 2016 xdm-helper
override@Atul-HP:~$
```

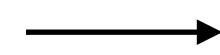




CONCEPTOS BÁSICOS

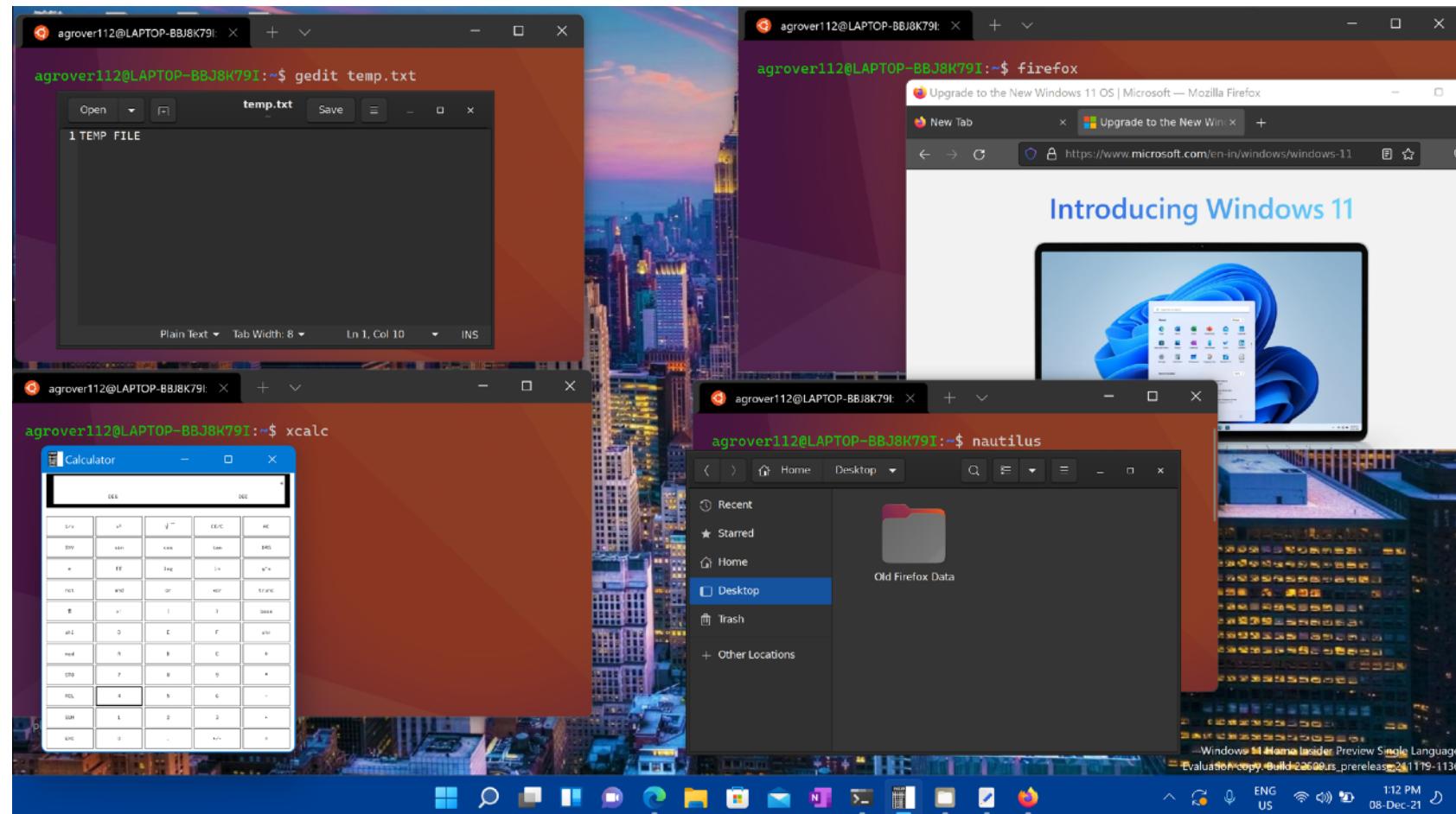
La shell es un software que da a los usuarios de un sistema operativo acceso al *kernel* por medio de una interfaz

Shell = Cáscara



Capa superficial de la interfaz
de un sistema operativo

Graphical User Interface (GUI)
Interfaz Gráfica de Usuario



Command Line Interface (CLI)
Interfaz de Comandos

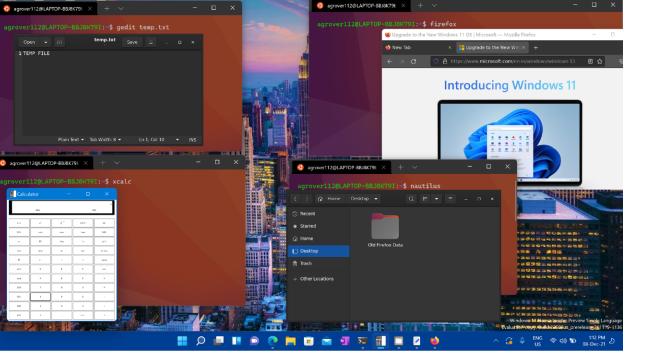
```
override@Atul-HP:~$ ls -l
total 212
drwxrwxr-x 5 override override 4096 May 19 03:45 acadenv
drwxrwxr-x 4 override override 4096 May 27 18:20 acadview_demo
drwxrwxr-x 12 override override 4096 May 3 15:14 anaconda3
drwxr-xr-x 6 override override 4096 May 31 16:49 Desktop
drwxr-xr-x 2 override override 4096 Oct 21 2016 Documents
drwxr-xr-x 7 override override 40960 Jun 1 13:09 Downloads
-rw-r--r-- 1 override override 8980 Aug 8 2016 examples.desktop
-rw-rw-r-- 1 override override 45005 May 28 01:40 hs_err_pid1971.log
-rw-rw-r-- 1 override override 45147 Jun 1 03:24 hs_err_pid2006.log
drwxr-xr-x 2 override override 4096 Mar 2 18:22 Music
drwxrwxr-x 21 override override 4096 Dec 25 00:13 Mydata
drwxrwxr-x 2 override override 4096 Sep 20 2016 newbin
drwxrwxr-x 5 override override 4096 Dec 20 22:44 nltk_data
drwxr-xr-x 4 override override 4096 May 31 20:46 Pictures
drwxr-xr-x 2 override override 4096 Aug 8 2016 Public
drwxrwxr-x 2 override override 4096 May 31 19:49 scripts
drwxr-xr-x 2 override override 4096 Aug 8 2016 Templates
drwxrwxr-x 2 override override 4096 Feb 14 11:22 test
drwxr-xr-x 2 override override 4096 Mar 11 13:27 Videos
drwxrwxr-x 2 override override 4096 Sep 1 2016 xdm-helper
override@Atul-HP:~$
```

Objetivo:

- Invocar y ejecutar otros programas
- Visualizar archivos
- Comprobar el estado de los procesos en nuestro ordenador



CONCEPTOS BÁSICOS



Graphical User Interface (GUI)
Interfaz Gráfica de Usuario

Se basa en iconos

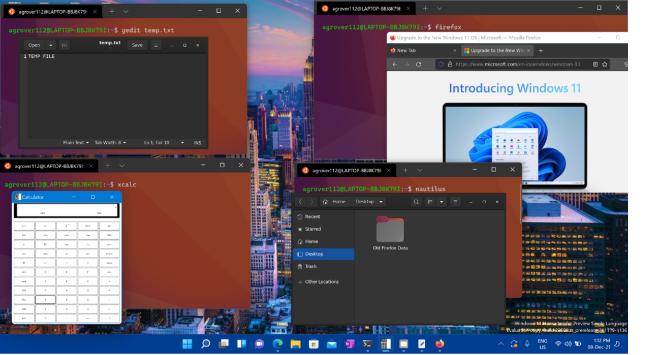
```
override@Atul-HP:~$ ls -l
total 212
drwxrwxr-x  5 override override 4096 May 19 03:45 acadenv
drwxrwxr-x  4 override override 4096 May 27 18:20 acadview_demo
drwxrwxr-x 12 override override 4096 May 3 15:14 anaconda3
drwxrwxr-x  2 override override 4096 Oct 21 2016 apt
drwxr-xr-x  2 override override 4096 Oct 21 2016 Documents
drwxr-xr-x  7 override override 4096 Jun 1 13:09 Downloads
drwxrwxr-x  1 override override 4096 May 28 01:48 hs_err_pid1271.log
drwxrwxr-x  1 override override 45147 Jun 1 03:24 hs_err_pid2000.log
drwxrwxr-x  21 override override 4096 Sep 28 2016 newbin
drwxrwxr-x  2 override override 4096 Dec 25 00:13 mydata
drwxrwxr-x  2 override override 4096 Aug 8 2016 Public
drwxrwxr-x  2 override override 4096 May 31 20:46 Pictures
drwxr-xr-x  2 override override 4096 Aug 8 2016 Public
drwxrwxr-x  2 override override 4096 Aug 8 2016 Templates
drwxrwxr-x  2 override override 4096 Feb 14 11:22 test
drwxrwxr-x  2 override override 4096 Mar 11 13:27 Videos
drwxrwxr-x  1 override override 4096 Sep 1 2016 xdm-helper
override@Atul-HP:~$
```

Command Line Interface (CLI)
Interfaz de Comandos

Se basa en comandos



CONCEPTOS BÁSICOS



Graphical User Interface (GUI)
Interfaz Gráfica de Usuario

Se basa en iconos

Es facil de usar

Muy lenta

Consumo mucha memoria

Es poco precisa

Más capas de protección

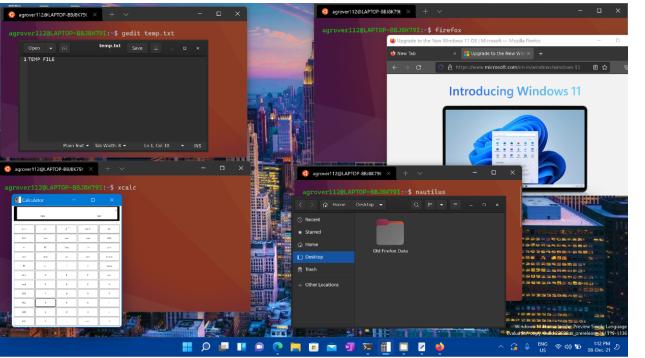
```
override@Atul-HP:~$ ls -l
total 212
drwxrwxr-x  5 override override 4096 May 19 03:45 acadenv
drwxrwxr-x  4 override override 4096 May 27 18:28 acadview_demo
drwxrwxr-x 12 override override 4096 May 3 15:14 anaconda3
drwxrwxr-x  2 override override 4096 Oct 21 2016 apt
drwxr-xr-x  2 override override 4096 Oct 21 2016 Documents
drwxr-xr-x  7 override override 4096 Jun 1 13:09 Downloads
drwxrwxr-x  1 override override 4096 May 28 01:48 hs_err_pid1271.log
drwxrwxr-x  1 override override 45147 Jun 1 03:24 hs_err_pid2000.log
drwxrwxr-x 21 override override 4096 Dec 25 00:13 hydata
drwxrwxr-x  2 override override 4096 Sep 28 2016 newbin
drwxrwxr-x  4 override override 4096 May 31 20:46 Pictures
drwxr-xr-x  2 override override 4096 Aug 8 2016 Public
drwxrwxr-x  2 override override 4096 Aug 8 2016 Templates
drwxrwxr-x  2 override override 4096 Feb 14 11:22 test
drwxrwxr-x  2 override override 4096 Mar 11 13:27 Videos
drwxrwxr-x  1 override override 4096 Sep 1 2016 xdm-helper
override@Atul-HP:~$
```

Command Line Interface (CLI)
Interfaz de Comandos

Se basa en comandos



CONCEPTOS BÁSICOS



Graphical User Interface (GUI)
Interfaz Gráfica de Usuario

Se basa en iconos

Es facil de usar

Muy lenta

Consumo mucha memoria

Es poco precisa

Más capas de protección

```
override@Atul-HP:~$ ls -l
total 212
drwxrwxr-x  5 override override 4096 May 19 03:45 acadenv
drwxrwxr-x  4 override override 4096 May 27 18:20 acadview_demo
drwxrwxr-x 12 override override 4096 May 3 15:14 anaconda3
drwxrwxr-x  2 override override 4096 Oct 21 2016 apt
drwxr-xr-x  2 override override 4096 Oct 21 2016 Documents
drwxr-xr-x  7 override override 4096 Jun 1 13:09 Downloads
drwxr-xr-x  1 override override 4096 Dec 25 08:13 desktop
-rw-rw-r--  1 override override 45805 May 28 01:40 hs_err_pid1271.log
drwxrwxr-x  3 override override 45147 Jun 1 03:24 hs_err_pid2000.log
drwxrwxr-x 21 override override 4096 Dec 25 08:13 hydata
drwxrwxr-x  2 override override 4096 Sep 28 2016 newbin
drwxrwxr-x  2 override override 4096 Aug 8 2016 Pictures
drwxr-xr-x  2 override override 4096 Aug 8 2016 Public
drwxrwxr-x  2 override override 4096 Aug 8 2016 Templates
drwxrwxr-x  2 override override 4096 Feb 14 11:22 test
drwxrwxr-x  2 override override 4096 Mar 11 13:27 Videos
drwxrwxr-x  1 override override 4096 Sep 1 2016 xdm-helper
override@Atul-HP:~$
```

Command Line Interface (CLI)
Interfaz de Comandos

Se basa en comandos

Es dificil de usar

Mucho más rápido

Consumo poca memoria

Es muy precisa

Acceso a opciones avanzadas



CONCEPTOS BÁSICOS

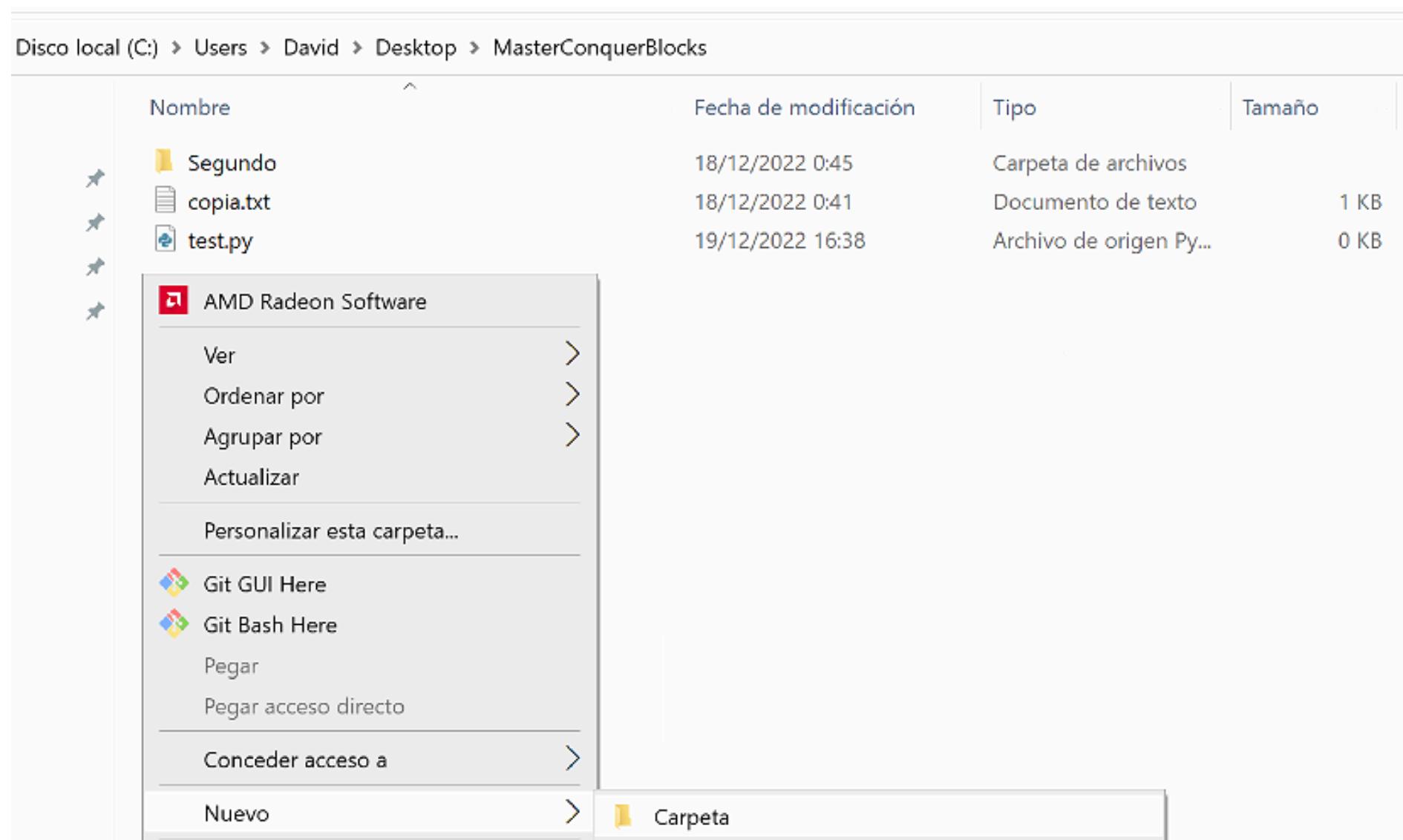
¿Qué es un comando?

Es una expresión corta (por ejemplo mv, rm, cd etc.) que tiene asociada una ruta a un ejecutable.

```
● Username@MacBook-Pro-2 MasterConquerBlocks % mkdir modulo3
● Username@MacBook-Pro-2 MasterConquerBlocks % ls
modulo1                         modulo2                         modulo3
○ Username@MacBook-Pro-2 MasterConquerBlocks %
```

mkdir nombreDelDirectorio= **make directory**

Crea un directorio

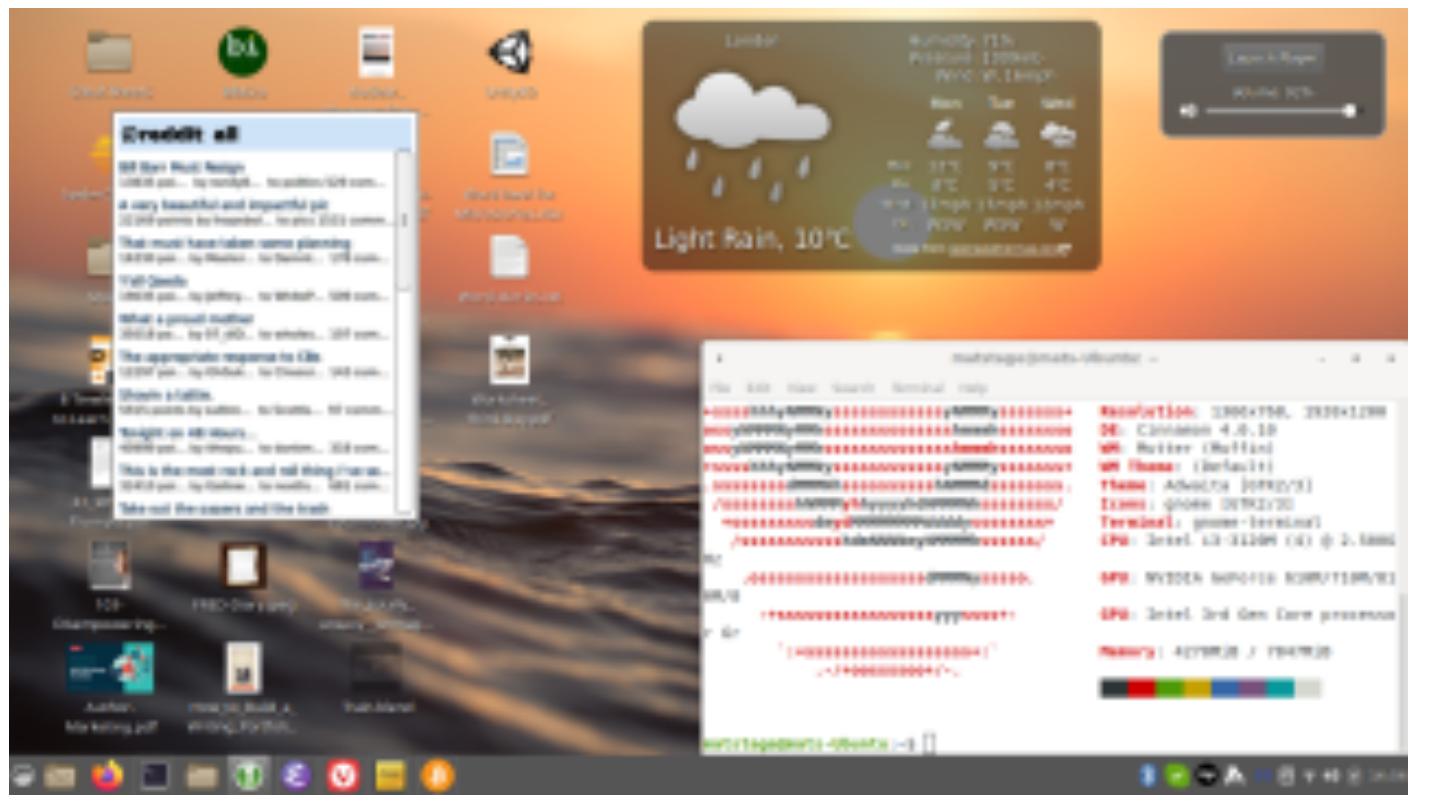


Click Izquierdo > Nuevo > Crear Carpeta
> Click Derecho > Editar Nombre

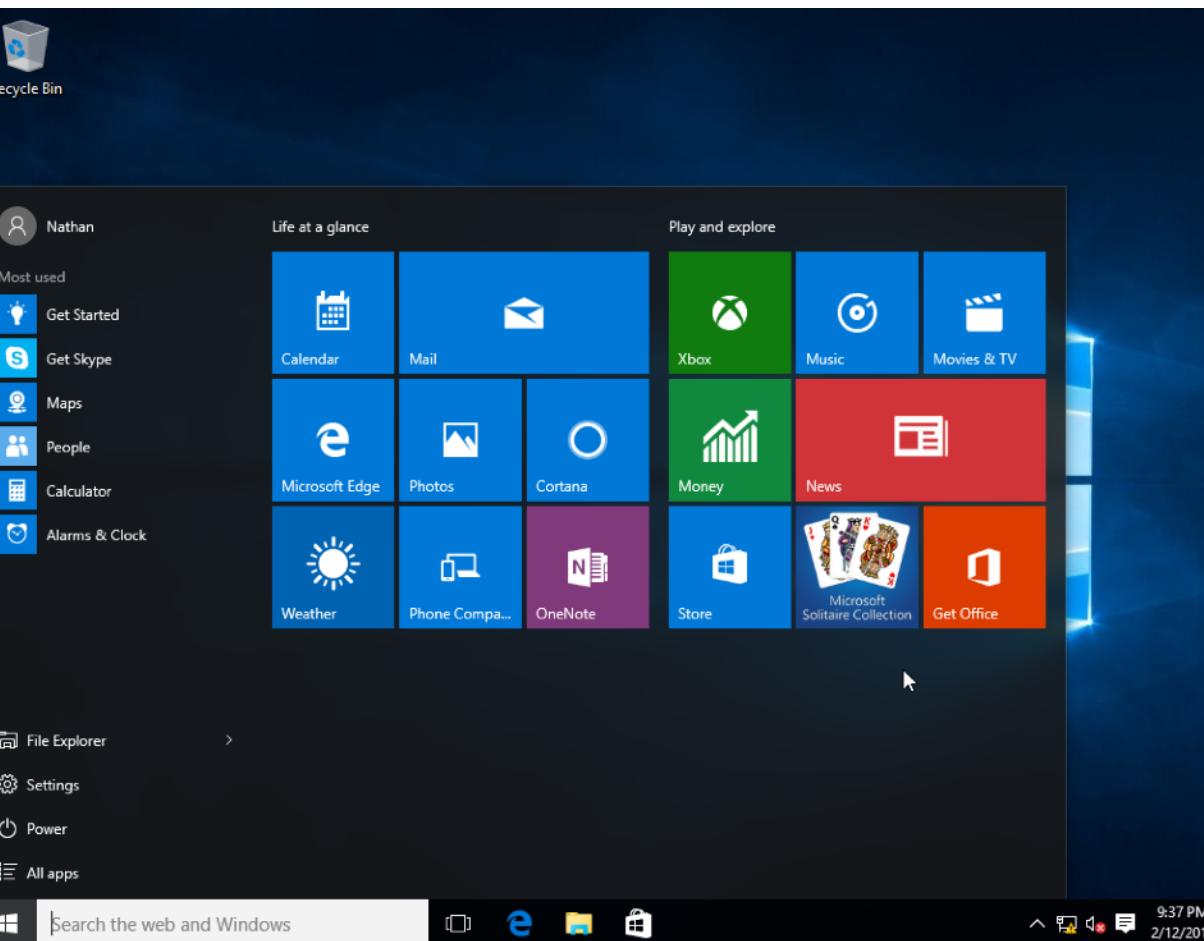


TIPOS DE CLI

LINUX



WINDOWS



MACOS





TIPOS DE CLI

- Tienen expresiones ligeramente diferentes -

LINUX

Bourne Shell (sh)

GNU Bourne-Again Shell (bash)

C Shell (csh)

Korn Shell (ksh)

Z Shell (zsh)

...

WINDOWS

Command Shell

PowerShell

MACOS

Z Shell (zsh)

GNU Bourne-Again Shell (bash)



SHELL SCRIPTING

En la terminal podemos trabajar por comandos uno a uno

```
● (base) MacBook-Pro-2:MasterConquerBlocks TuNombreDeUsuario $ ((sum=25+35))
● (base) MacBook-Pro-2:MasterConquerBlocks TuNombreDeUsuario $ echo $sum
  60
○ (base) MacBook-Pro-2:MasterConquerBlocks TuNombreDeUsuario $ █
```

Y podemos crear shell scripts:

```
$ ejemplo.bashrc ●  
Users > TuNombreDeUsuario > Desktop > MasterConquerBlocks > $ ejemplo.bashrc  
1 #!/bin/bash  
2  
3 # Suma dos numeros  
4 ((sum=25+35))  
5  
6 #Imprime el resultado por pantalla  
7  
8 echo $sum  
9
```

PROBLEMAS SALIDA TERMINAL CONSOLA DE DEPURACIÓN bash - MasterConquerBlocks

```
● (base) MacBook-Pro-2:MasterConquerBlocks TuNombreDeUsuario $ ls
ejemplo.bashrc
● (base) MacBook-Pro-2:MasterConquerBlocks TuNombreDeUsuario $ source ejemplo.bashrc
60
```



NOTAS IMPORTANTES

Todas las Shells son válidas



Lo importante es que os acostumbréis a navegar por los archivos usando la terminal, sea bash, powershell o cualquier otra.

Existen miles de comandos, cada uno con muchísimas opciones diferentes y por lo tanto es imposible conocerlos todos.



Es necesario investigar constantemente qué comandos necesitas para aquello que quieras hacer.

CONQUER
BLOCKS