
Overview of Computers

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Operating Systems

Operating System

Operating System

Operating System (OS) -

A collection of programs that controls -

how the CPU, memory, and I/O
devices work together and provides an
interface to users/applications

Operating System

Kernel:

Operating System

Kernel:

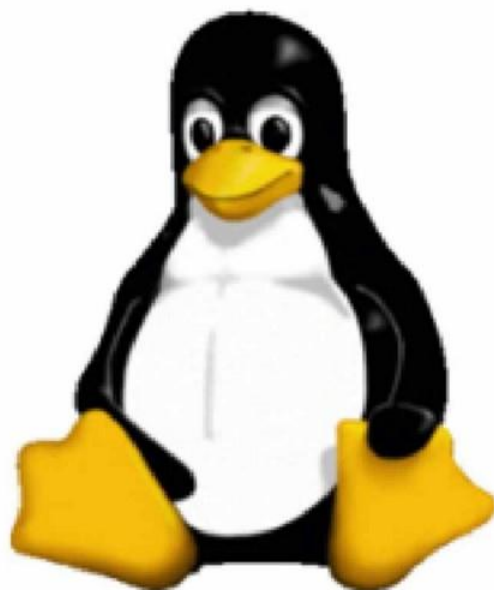
Manages the CPU's operations

Controls how data and instructions are loaded and executed by the CPU

Coordinates other hardware components

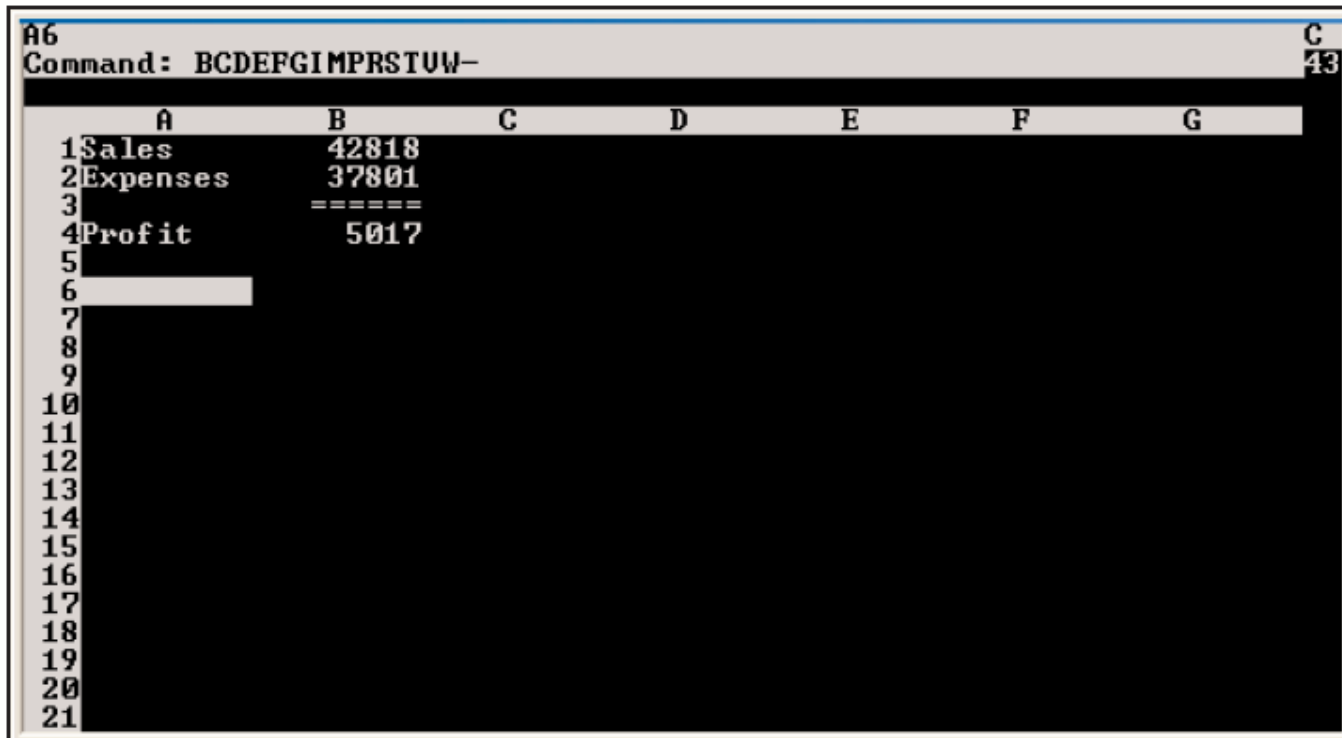
Operating System Types

?????????



DOS

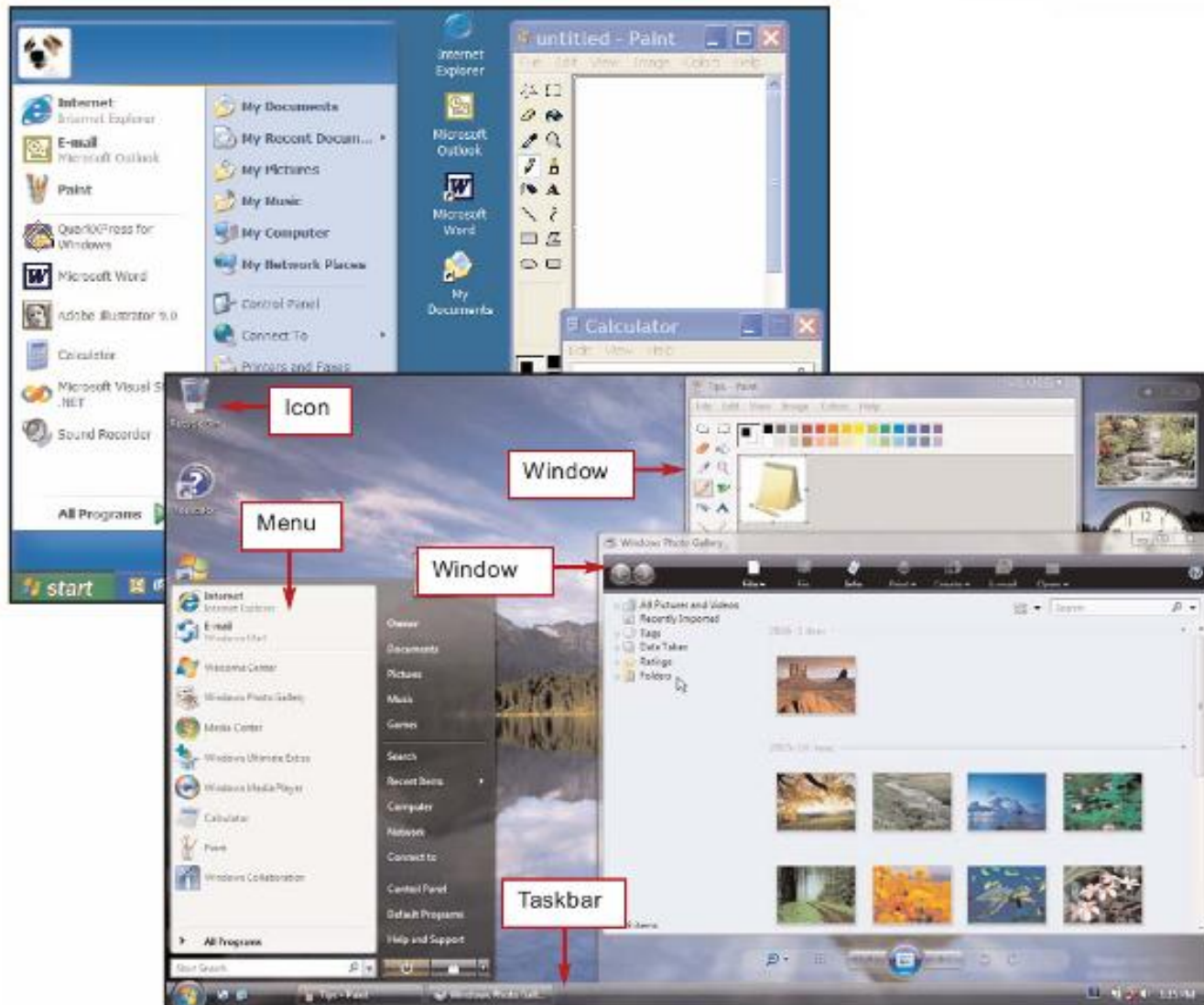
- Disk Operating System
- First operating system that many used



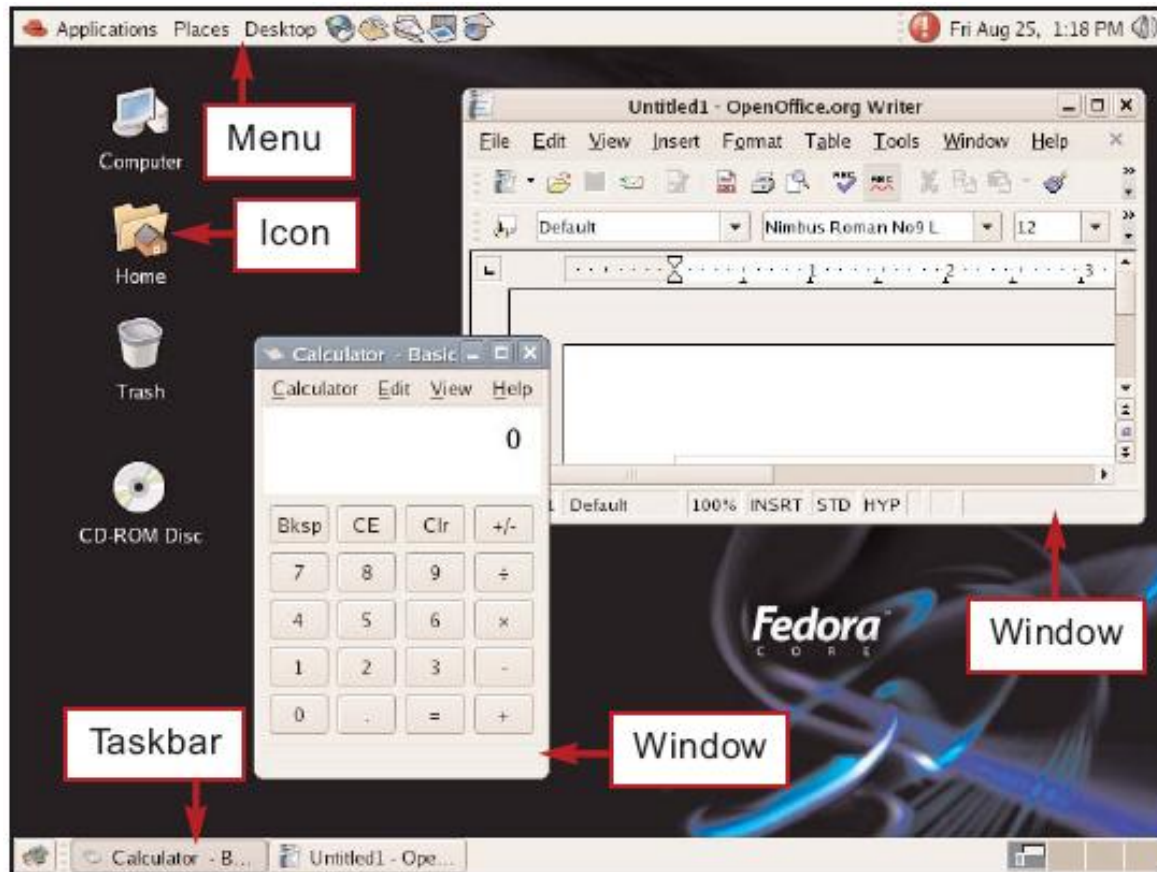
A screenshot of a DOS command prompt window. The title bar at the top reads 'A6' on the left and 'C 43' on the right. Below the title bar, the command line shows 'Command: BCDEFGIMPRSTUV-'. The main area of the window displays a simple text-based accounting program. It has a header row with columns labeled A, B, C, D, E, F, and G. The data is as follows:

	A	B	C	D	E	F	G
1	Sales	42818					
2	Expenses	37801					
3		=====					
4	Profit	5017					
5							
6							
7							
8							
9							
10							
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Microsoft Windows

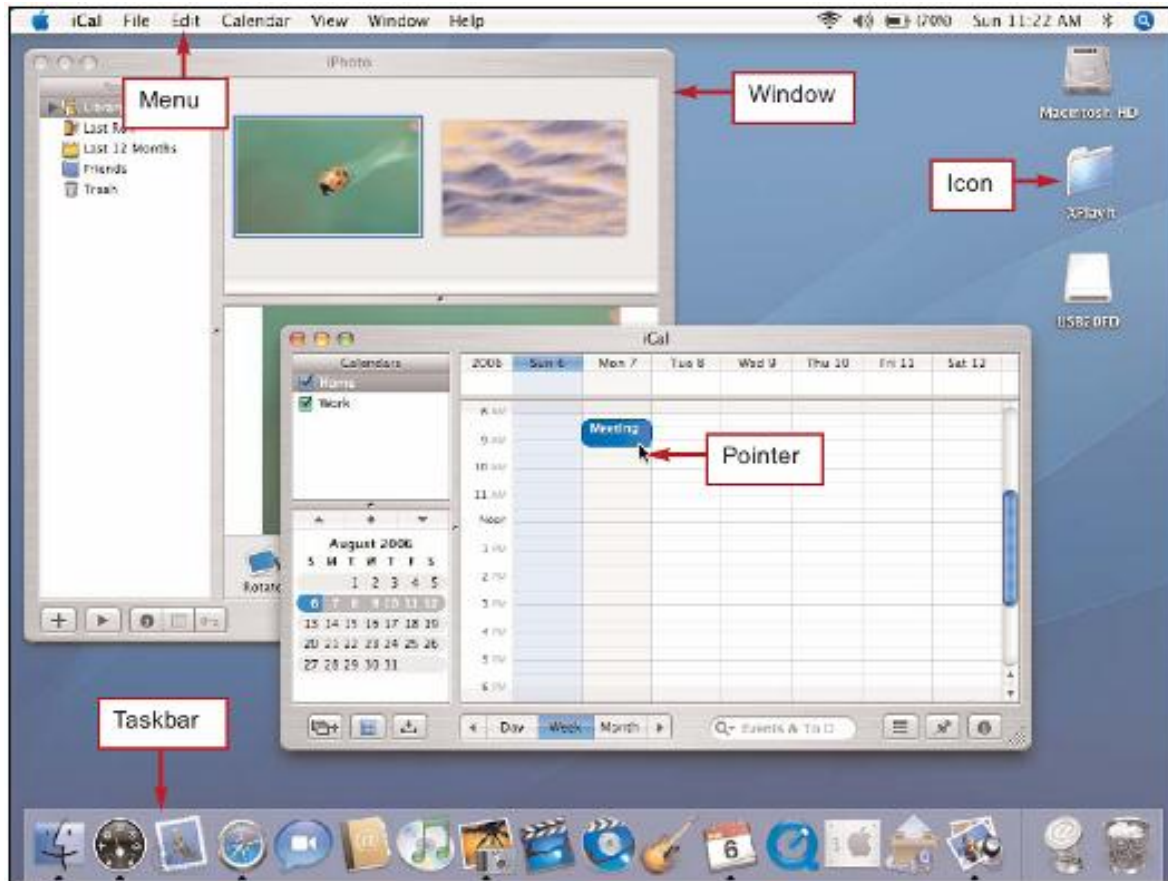


UNIX and Linux



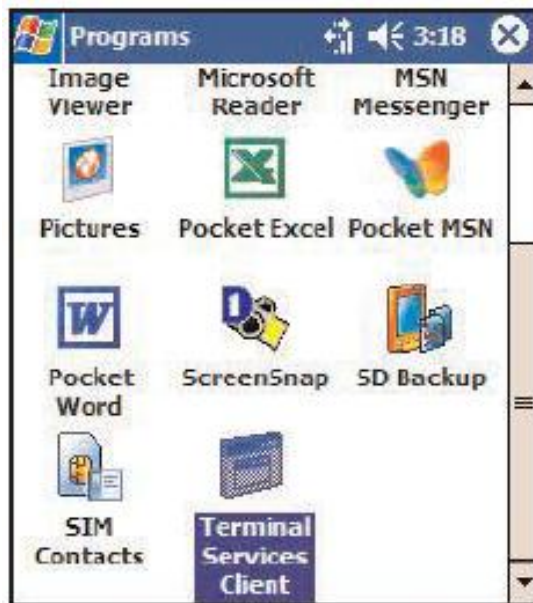
Linux users can choose from several graphical interfaces. Pictured here is the popular KDE graphical desktop.

Mac OS



You can tell when you're using Mac OS by the Apple logo that appears on the menu bar. The Mac OS X interface includes all the standard elements of a GUI, including icons, menus, windows, and taskbars.

Handheld Operating Systems



Windows Mobile OS



Palm OS



iPhone OS X



Symbian OS

User Interface

User Interface

❑ User interface

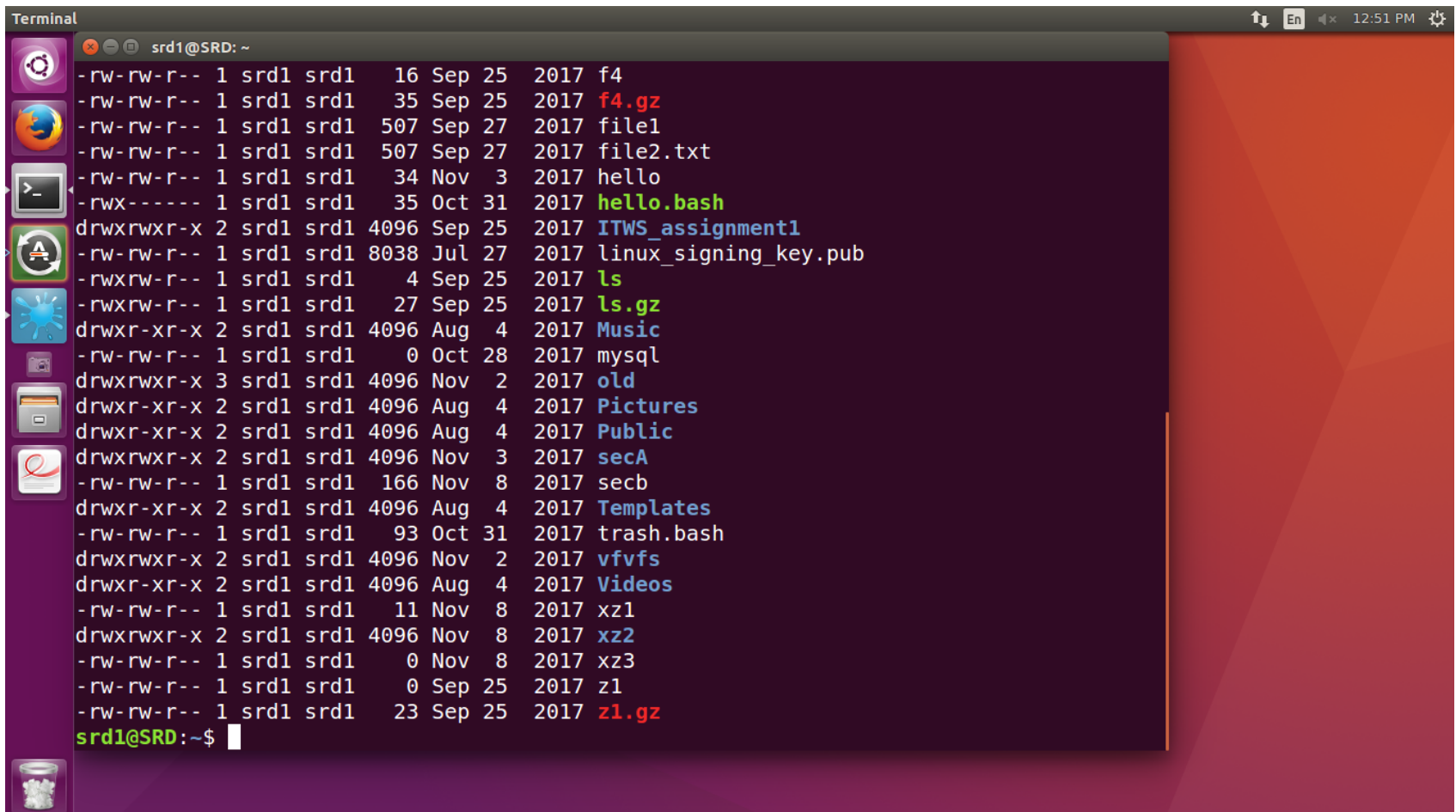
- A function of the operating system that allows individuals to access and command the computer



Command-based user interface

Command-based user interface

- A particular user interface that requires text commands be given to the computer to perform basic activities. E.g., Unix, DOS

A screenshot of a Linux terminal window titled "Terminal" with a dark purple background. The window shows the output of a command, likely 'ls -l', displaying a list of files and directories with their permissions, owner, group, size, date, and name. The files are listed in a table-like format. The terminal window is part of a desktop environment with a purple sidebar on the left containing various application icons. The top of the window shows system status icons and the time "12:51 PM".

```
Terminal
srd1@SRD: ~
-rw-rw-r-- 1 srd1 srd1 16 Sep 25 2017 f4
-rw-rw-r-- 1 srd1 srd1 35 Sep 25 2017 f4.gz
-rw-rw-r-- 1 srd1 srd1 507 Sep 27 2017 file1
-rw-rw-r-- 1 srd1 srd1 507 Sep 27 2017 file2.txt
-rw-rw-r-- 1 srd1 srd1 34 Nov 3 2017 hello
-rwx----- 1 srd1 srd1 35 Oct 31 2017 hello.bash
drwxrwxr-x 2 srd1 srd1 4096 Sep 25 2017 ITWS_assignment1
-rw-rw-r-- 1 srd1 srd1 8038 Jul 27 2017 linux_signing_key.pub
-rwxrw-r-- 1 srd1 srd1 4 Sep 25 2017 ls
-rwxrw-r-- 1 srd1 srd1 27 Sep 25 2017 ls.gz
drwxr-xr-x 2 srd1 srd1 4096 Aug 4 2017 Music
-rw-rw-r-- 1 srd1 srd1 0 Oct 28 2017 mysql
drwxrwxr-x 3 srd1 srd1 4096 Nov 2 2017 old
drwxr-xr-x 2 srd1 srd1 4096 Aug 4 2017 Pictures
drwxr-xr-x 2 srd1 srd1 4096 Aug 4 2017 Public
drwxrwxr-x 2 srd1 srd1 4096 Nov 3 2017 secA
-rw-rw-r-- 1 srd1 srd1 166 Nov 8 2017 secb
drwxr-xr-x 2 srd1 srd1 4096 Aug 4 2017 Templates
-rw-rw-r-- 1 srd1 srd1 93 Oct 31 2017 trash.bash
drwxrwxr-x 2 srd1 srd1 4096 Nov 2 2017 vfvfs
drwxr-xr-x 2 srd1 srd1 4096 Aug 4 2017 Videos
-rw-rw-r-- 1 srd1 srd1 11 Nov 8 2017 xz1
drwxrwxr-x 2 srd1 srd1 4096 Nov 8 2017 xz2
-rw-rw-r-- 1 srd1 srd1 0 Nov 8 2017 xz3
-rw-rw-r-- 1 srd1 srd1 0 Sep 25 2017 z1
-rw-rw-r-- 1 srd1 srd1 23 Sep 25 2017 z1.gz
srd1@SRD:~$
```


Graphical user interface (GUI)

Graphical user interface (GUI)

- A user interface that uses pictures (icons) and menus displayed on the screen to send commands to the computer system
- E.g. Windows, MAC OS

