

A thick black L-shaped frame surrounds the text. The top-left corner is closed, while the bottom-right corner is open.

HOW COMPUTER MEMORY WORKS

[Video](#)


Plug-ins

- A **plugin** is a piece of software that acts as an add-on to a web browser


Flash Player Plug in (Deprecated)

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Important Message: On the next page you may need to click the gold bar at the top of the browser window to allow the install.



IF THE INFO BAR APPEARS ABOVE THE NEXT PAGE, CLICK THE BAR TO INSTALL

⚠ You must close all other browser windows before installing.

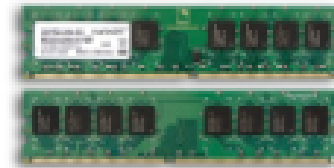
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Computer Ram

- **RAM** gives applications a place to store and access data on a short-term basis.

Random-access memory

Random-access memory is a form of computer memory that can be read and changed in any order, typically used to store working data and machine code. [Wikipedia](#)

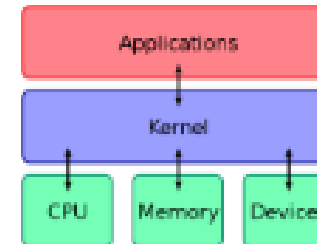


Kernel

Kernel

Operating System

The kernel is a computer program at the core of a computer's operating system and has complete control over everything in the system. It is the "portion of the operating system code that is always resident in memory", and facilitates interactions between hardware and software components. [Wikipedia](#)



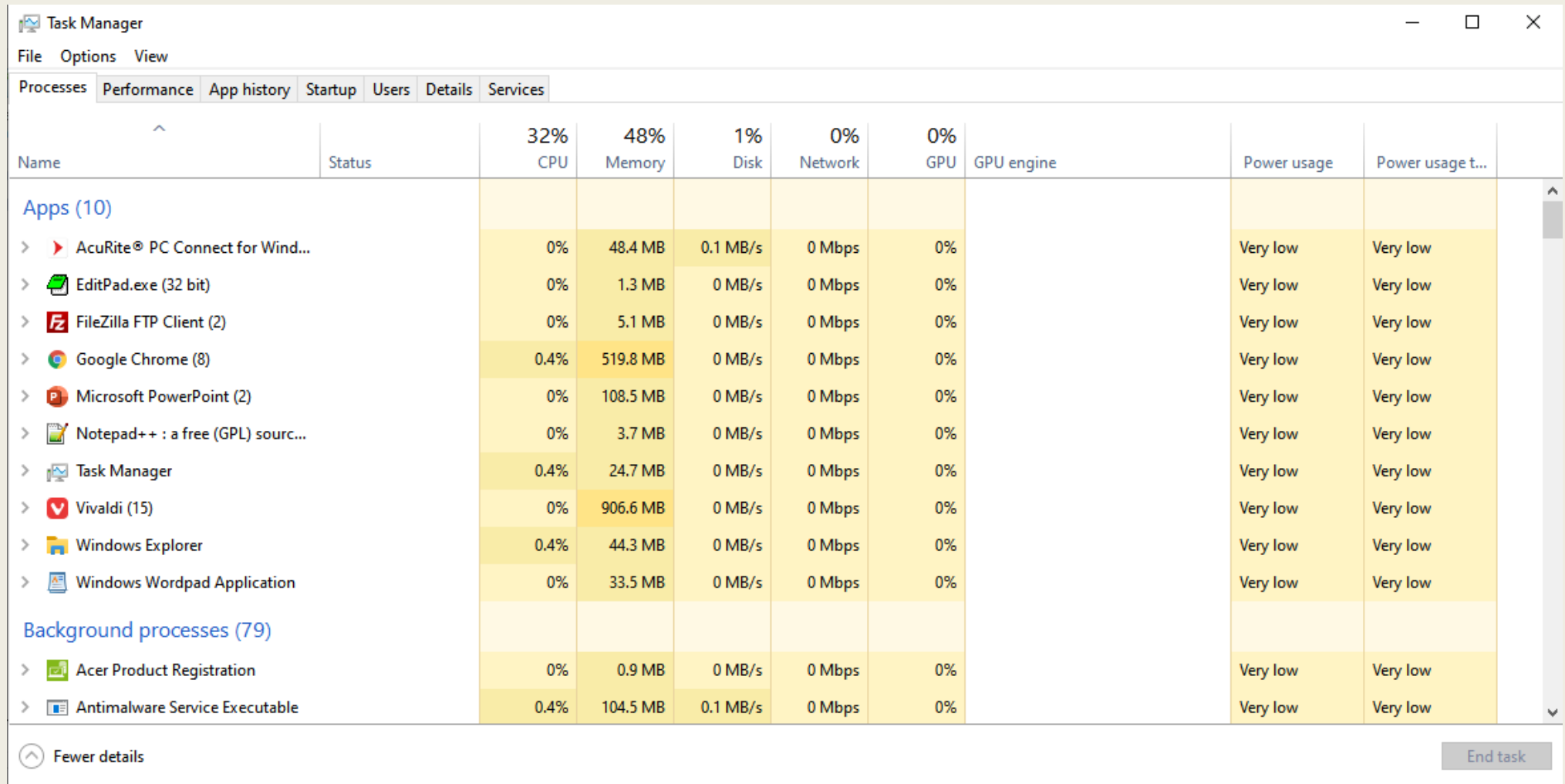
Graphics Server

- GPU computing is the use of a GPU (**graphics** processing unit) as a **co-processor** to accelerate CPUs

Memory & Swap file Activity

- **Swap File** A **swap file** is a **file** that contains data retrieved from RAM.
- Transferring data from RAM to a secondary **storage device** in the form of a **swap file**.
- Frees up memory for other programs.
- **Swap files** are a type of virtual memory.

Checking Memory Usage (Task Manager `ctrl-alt-del`)



The screenshot shows the Windows Task Manager Performance tab. At the top, it displays overall system performance: CPU 32%, Memory 48%, Disk 1%, Network 0%, and GPU 0%. Below this is a table of running processes, categorized into 'Apps (10)' and 'Background processes (79)'. The table columns include Name, Status, CPU, Memory, Disk, Network, GPU, GPU engine, Power usage, and Power usage t... (truncated). The 'Memory' column is highlighted in yellow, indicating the current focus of the task. The 'Apps (10)' section lists various applications like AcuteRite, EditPad, FileZilla, Google Chrome, Microsoft PowerPoint, Notepad++, Task Manager, Vivaldi, Windows Explorer, and Windows Wordpad. The 'Background processes (79)' section lists Acer Product Registration and Antimalware Service Executable. At the bottom left, there is a 'Fewer details' button, and at the bottom right, there is an 'End task' button.

Name	Status	CPU	Memory	Disk	Network	GPU	GPU engine	Power usage	Power usage t...
Apps (10)									
> AcuteRite® PC Connect for Wind...		0%	48.4 MB	0.1 MB/s	0 Mbps	0%		Very low	Very low
> EditPad.exe (32 bit)		0%	1.3 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> FileZilla FTP Client (2)		0%	5.1 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Google Chrome (8)		0.4%	519.8 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Microsoft PowerPoint (2)		0%	108.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Notepad++ : a free (GPL) sourc...		0%	3.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Task Manager		0.4%	24.7 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Vivaldi (15)		0%	906.6 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Windows Explorer		0.4%	44.3 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Windows Wordpad Application		0%	33.5 MB	0 MB/s	0 Mbps	0%		Very low	Very low
Background processes (79)									
> Acer Product Registration		0%	0.9 MB	0 MB/s	0 Mbps	0%		Very low	Very low
> Antimalware Service Executable		0.4%	104.5 MB	0.1 MB/s	0 Mbps	0%		Very low	Very low