

Once loaded, the operating system's tasks fall into six broad categories:

1. **Processor management** - Breaking the tasks down into manageable chunks and prioritizing them before sending to the CPU
2. **Memory management** - Coordinating the flow of data in and out of RAM and determining when virtual memory is necessary
3. **Device management** - Providing an interface between each device connected to the computer, the CPU and applications
4. **Storage management** - Directing where data will be stored permanently on hard drives and other forms of storage
5. **Application Interface** - Providing a standard communications and data exchange between software programs and the computer
6. **User Interface** - Providing a way for you to communicate and interact with the computer

You open up a word processing program and type a letter, save it and then print it out. Several components work together to make this happen:

- Ø The keyboard and mouse send your input to the operating system.
- Ø The operating system determines that the word-processing program is the active program and accepts your input as data for that program.
- Ø The word-processing program determines the format that the data is in and, via the operating system, stores it temporarily in RAM.
- Ø Each instruction from the word-processing program is sent by the operating system to the CPU. These instructions are intertwined with instructions from other programs that the operating system is overseeing before being sent to the CPU.
- Ø All this time, the operating system is steadily providing display information to the graphics card, directing what will be displayed on the monitor.
- Ø When you choose to save the letter, the word-processing program sends a request to the operating system, which then provides a standard window for selecting where you wish to save the information and what you want to call it. Once you have chosen the name and file path, the operating system directs the data from RAM to the appropriate storage device.
- Ø You click on "Print." The word-processing program sends a request to the operating system, which translates the data into a format the printer understands and directs the data from RAM to the appropriate port for the printer you requested.

Once again, the operating system coordinates all of the action. This time, though, the computer receives input from another source, the Internet, as well as from you. The operating system seamlessly integrates all incoming and outgoing information.

You close the Web browser and choose the "Shut Down" option.

The operating system closes all programs that are currently active. If a program has unsaved information, you are given an opportunity to save it before closing the program.

The operating system writes its current settings to a special configuration file so that it will boot up next time with the same settings.

If the computer provides software control of power, then the operating system will completely turn off the computer when it finishes its own shut-down cycle. Otherwise, you will have to manually turn the power off.