

## BASIS OF COMPARISON

### INPUT DEVICE

### OUTPUT DEVICE

<b>1.Description</b>	An input device is any hardware device which enables the user to enter data and instructions into a computer.	An output device is any hardware component that use received data from a computer to perform a task.
<b>2.Functionality</b>	An input device can send data to another device but it cannot receive data from another device.	An output device can receive data from another device and generate output with that data, but it cannot send data to another device.
<b>3.Necessity</b>	Input devices are necessary for a computer to receive commands from its users and data to process.	Output devices are necessary for a computer to share its results and prompt users for more information and commands.
<b>4.Control</b>	Input devices are controlled by the user.	Output devices are controlled by the computer.
<b>5.Nature</b>	Input devices are relatively complicated as they have complex coding that ensures that the user can interact with the computer correctly.	Output devices are simpler for the user since they only see the results and do not have to learn the processes.

<b>Common Input Devices</b>	Common input devices include mouse, keyboard, scanner, microphone and web-cam. The mouse and the keyboard are the most important input devices as all programs, including the operating system (OS), are designed to be navigated through and controlled with these devices. The mouse, a pointing device, is a small hemispherical object with a flat bottom; the contours fit	The most common output devices in modern computers are the display monitor, speaker, printer and the sound and video cards. The monitor works in conjunction with the video card, sometimes referred to as the graphics adapter, to generate and display images. The display monitor in a modern computer is flat-panel LCD screen able to display bright images with full clarity. Size
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	<p>into the palm of the hand, translating physical motions of the operator to cursor movement on the screen. In laptop computers, the mouse has been replaced with a flat, pressure-sensitive panel, operated by a finger. Another critical input device, the keyboard is a flat panel with rows of alphanumeric keys and other special keys with unique computing functions.</p>	<p>of the display unit may vary, depending on computer function and setting---usually it is between 14 and 21 inches. Computer speakers play sounds, based on signals from the audio card. In a modern computer, the speakers can either be integrated into the hardware or added as a peripheral device.</p>
<p><b>Computing Sequence</b></p>	<p>In computing, input devices are used before output devices. A user uses the keyboard and mouse to type in and navigate to a video on the Internet. The processor processes the information and plays the video back as moving images on screen and accompanying audio on the speakers. In computing, data input comes before data output. When you play an audio clip stored in disk, all the processes you carry out, including double-clicking the file, are inputs. You instruct the computer by using input devices to open a folder, locate the file, load the media player and play the audio clip. The computer takes in these instructions, executes them and gives you an output in the form of sound from the speakers. The same sequence is carried out in all computing processes, whether you edit a word document or browse the Internet.</p>	

<b>Form</b>	Input devices are physically interacted with by the user and have buttons, keys, a lens or some other component that is responsible for the actual data input.	. Output devices are never contacted, are usually larger, and typically have a screen or set of speakers for data output.
<b>Accessibility</b>	An input device is used to take instructions from a user and give it to the computer and therefore has to be easily accessible to the user. If the mouse, instead of being on top of the table, was inside the computer's tower casing, it would be cumbersome (and dangerous) to operate the device.	. Output devices, on the other hand, do not rely on any form of physical contact with the computer user and may be present as an internal component. Examples are the expansion cards (sound and video) that are fitted into slots in the motherboard.
<b>Output Types</b>	Data output can be of two different types. When a monitor shows an open document, it is known as a "soft copy" because the image can be replaced by closing the window. When a printer prints the document, it is known as a "hard copy" because the printed information is permanent and cannot be replaced.	

## EXAMPLES OF INPUT AND OUTPUT DEVICES

### INPUT DEVICES

**Example** keyboard and mouse, microphone, webcam, image scanner, Microphone, pointing device, touch screens, graphics table, Optical character reader (OCR), joystick etc.

### OUTPUT DEVICES

Printer, monitor, speakers, projector LCD projection panels, computer output

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