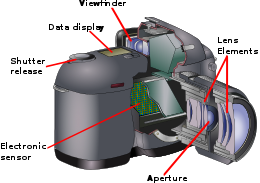
**EXPERIMENT 4**

**Surveillance**

**Camera:**

A **camera** is an [optical](https://en.wikipedia.org/wiki/Optics) instrument for recording or capturing [images](https://en.wikipedia.org/wiki/Image), which may be stored locally, transmitted to another location, or both. The images may be individual still [photographs](https://en.wikipedia.org/wiki/Photograph) or sequences of images constituting [videos](https://en.wikipedia.org/wiki/Video) or [movies](https://en.wikipedia.org/wiki/Movies). The camera is a [remote sensing](https://en.wikipedia.org/wiki/Remote_sensing) device as it senses subjects without any contact. The word *camera* comes from [*camera obscura*](https://en.wikipedia.org/wiki/Camera_obscura), which means "dark chamber" and is the [Latin](https://en.wikipedia.org/wiki/Latin) name of the original device for projecting an image of external reality onto a flat surface. The modern photographic camera evolved from the camera obscura. The functioning of the camera is very similar to the functioning of the [human eye](https://en.wikipedia.org/wiki/Human_eye). The first permanent [photograph](https://en.wikipedia.org/wiki/Photograph) was made in 1826 by [Joseph Nicéphore Niépce](https://en.wikipedia.org/wiki/Joseph_Nic%C3%A9phore_Ni%C3%A9pce).

How Camera Works:



A camera works with the [light](https://en.wikipedia.org/wiki/Light) of the [visible spectrum](https://en.wikipedia.org/wiki/Visible_spectrum) or with other portions of the [electromagnetic spectrum](https://en.wikipedia.org/wiki/Electromagnetic_spectrum). A [still camera](https://en.wikipedia.org/wiki/Still_camera) is an optical device which creates a single [image](https://en.wikipedia.org/wiki/Photograph) of an object or scene and records it on an [electronic sensor](https://en.wikipedia.org/wiki/Image_sensor) or [photographic film](https://en.wikipedia.org/wiki/Photographic_film). All cameras use the same basic design: light enters an enclosed box through a [converging lens](https://en.wikipedia.org/wiki/Lens_(optics)#Types_of_simple_lenses)/[convex](https://en.wikipedia.org/wiki/Lens_(optics)) lens and an image is recorded on a light-sensitive medium(mainly a [transition metal](https://en.wikipedia.org/wiki/Transition_metal)-[halide](https://en.wikipedia.org/wiki/Halogen)). A [shutter](https://en.wikipedia.org/wiki/Shutter_(photography)) mechanism controls the length of [time](https://en.wikipedia.org/wiki/Time) that light can enter the camera. Most photographic cameras have functions that allow a person to view the scene to be recorded, allow for a desired part of the scene to be in [focus](https://en.wikipedia.org/wiki/Focus_(optics)), and to control the [exposure](https://en.wikipedia.org/wiki/Exposure_(photography)) so that it is not too bright or too dim. A display, often a [liquid crystal display](https://en.wikipedia.org/wiki/Liquid_crystal_display) (LCD), permits the user to view the scene to be recorded and settings such as ISO speed, exposure, and shutter speed.

A [movie camera](https://en.wikipedia.org/wiki/Movie_camera) or a [video camera](https://en.wikipedia.org/wiki/Video_camera) operates similarly to a still camera, except it records a series of static images in rapid succession, commonly at a [rate](https://en.wikipedia.org/wiki/Frame_rate) of 24 frames per second. When the images are combined and displayed in order, the [illusion](https://en.wikipedia.org/wiki/Illusion) of motion is achieved.

**Digital Video Recorder:**

A **digital video recorder** (**DVR**) is an [electronic device](https://en.wikipedia.org/wiki/Electronic_device) that records video in a digital format to a [disk drive](https://en.wikipedia.org/wiki/Disk_drive), [USB flash drive](https://en.wikipedia.org/wiki/USB_flash_drive), SD [memory card](https://en.wikipedia.org/wiki/Memory_card), [SSD](https://en.wikipedia.org/wiki/SSD) or other local or networked [mass storage](https://en.wikipedia.org/wiki/Mass_storage) device. The term includes [set-top boxes](https://en.wikipedia.org/wiki/Set-top_box) with [direct to disk recording](https://en.wikipedia.org/wiki/Direct_to_disk_recording), [portable media players](https://en.wikipedia.org/wiki/Portable_media_player) and [TV gateways](https://en.wikipedia.org/wiki/TV_gateway) with recording capability, and digital [camcorders](https://en.wikipedia.org/wiki/Camcorder).Personal computers are often connected to [video capture](https://en.wikipedia.org/wiki/Video_capture) devices and used as DVRs; in such cases the [application software](https://en.wikipedia.org/wiki/Application_software) used to record video is an integral part of the DVR. Many DVRs are classified as [consumer electronic](https://en.wikipedia.org/wiki/Consumer_electronic) devices; such devices are sometimes referred to as **personal video recorders** (PVRs).