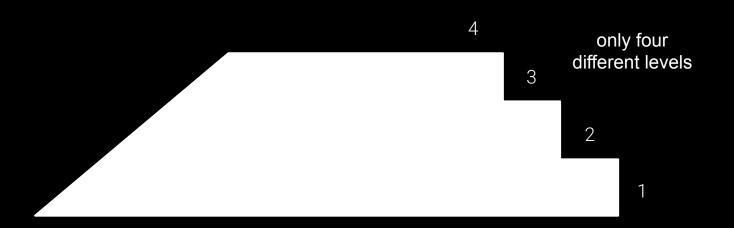
# ANALOG VS. DIGITAL











#### analog and digital clocks



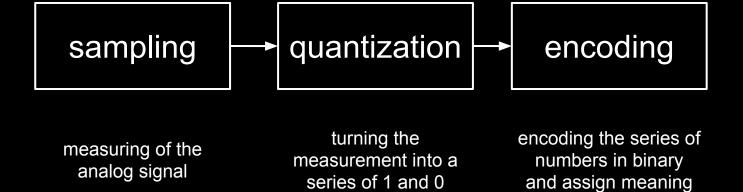
Image source: Wikipedia

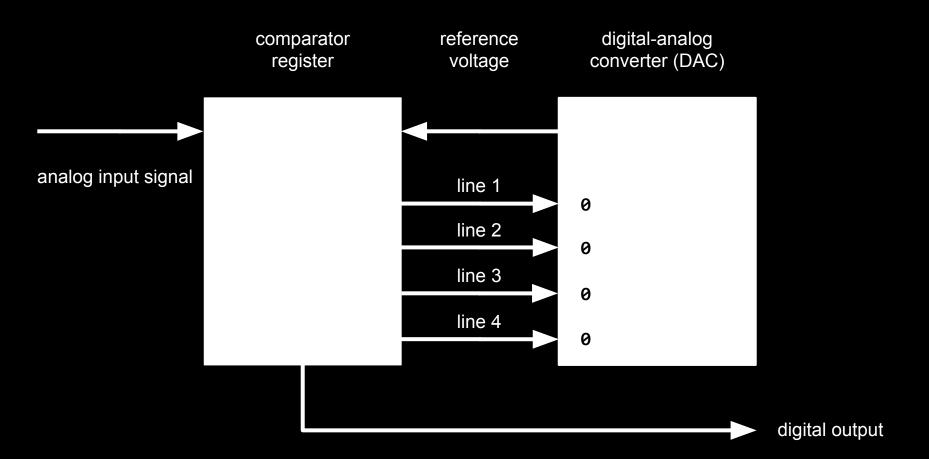


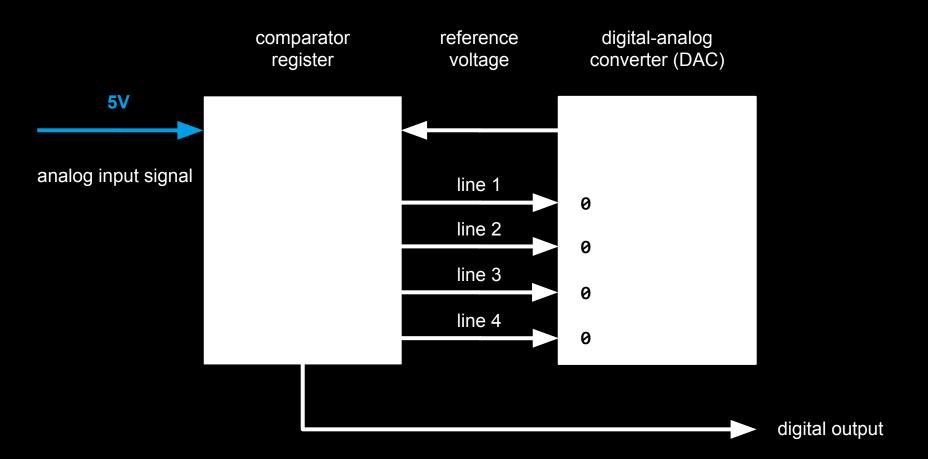
Image source: Wikipedia

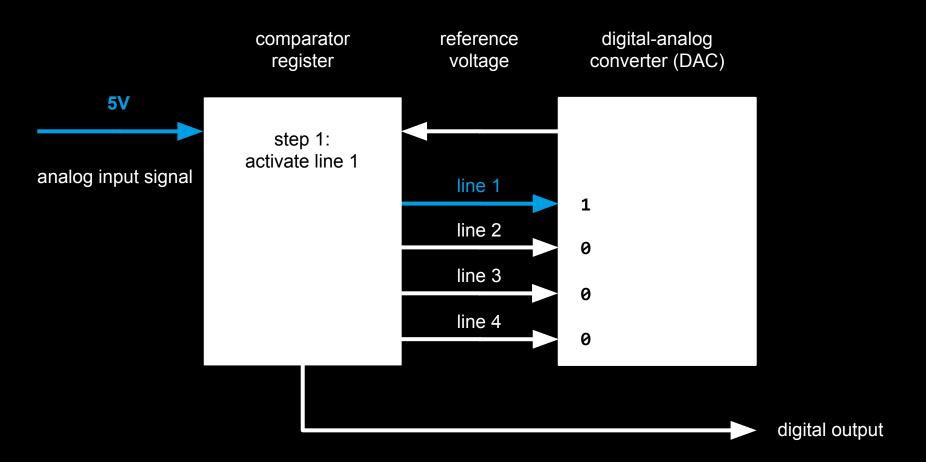
"Digitization is the representation of an object, image, sound, document or signal by generating a series of numbers that describe a discrete set of its points or samples"

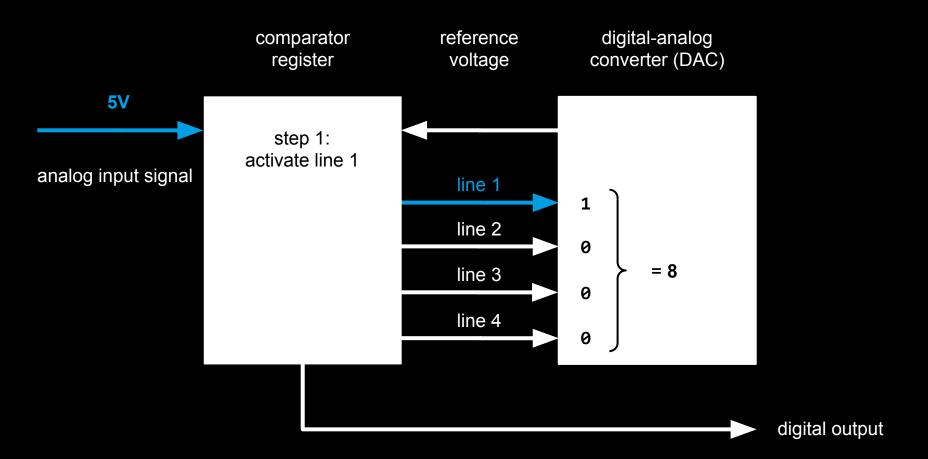
analog-to-digital converter (ADC)

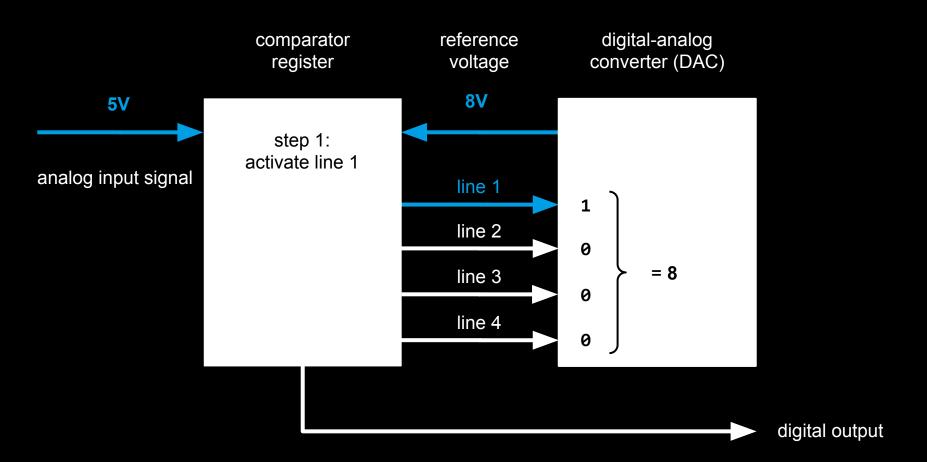


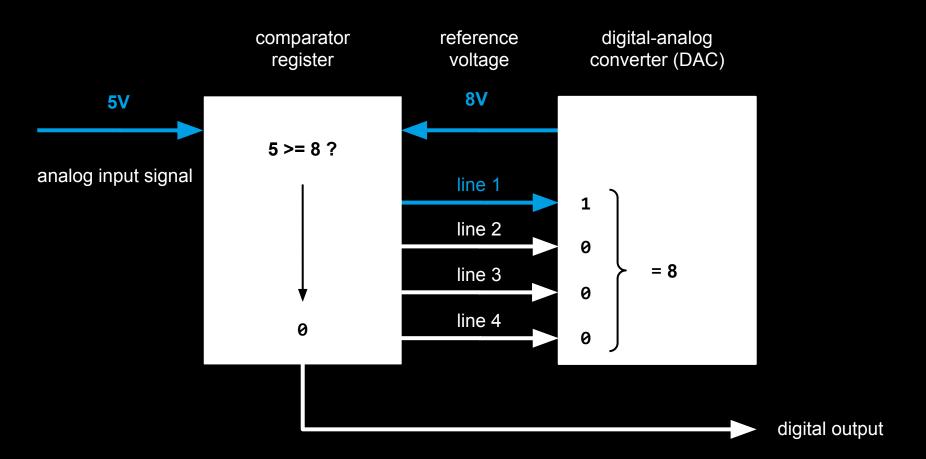


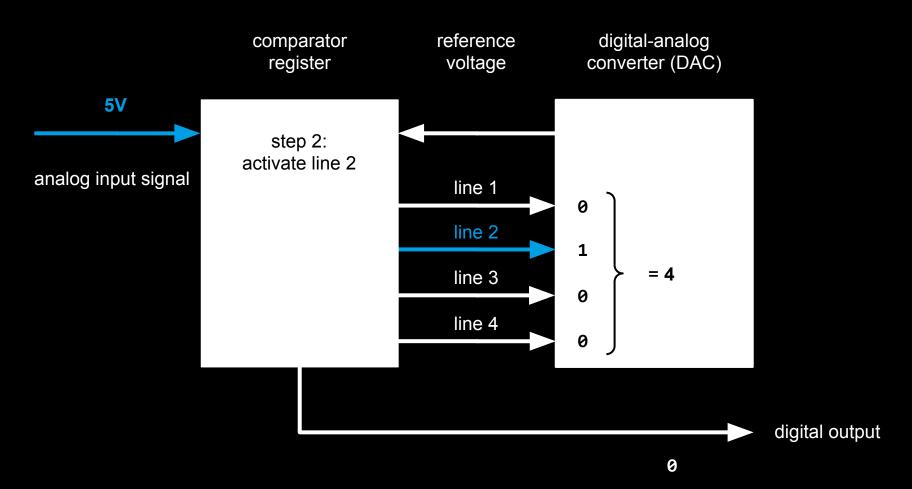


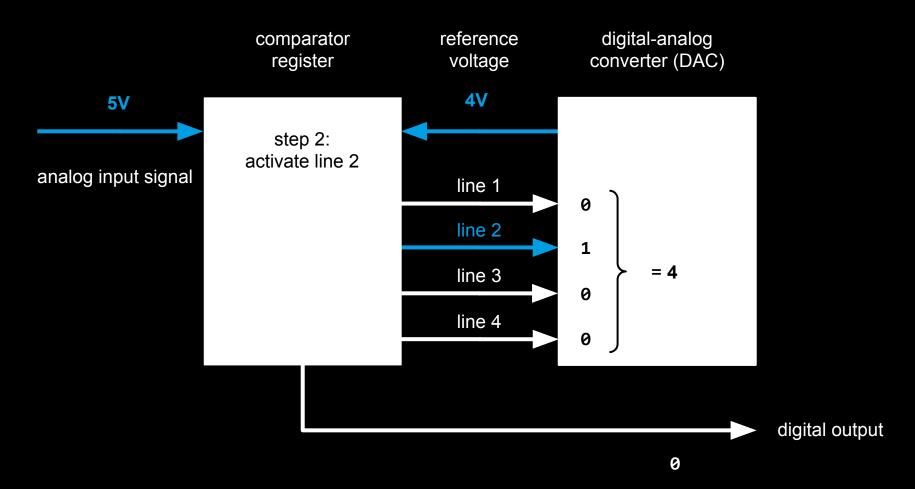


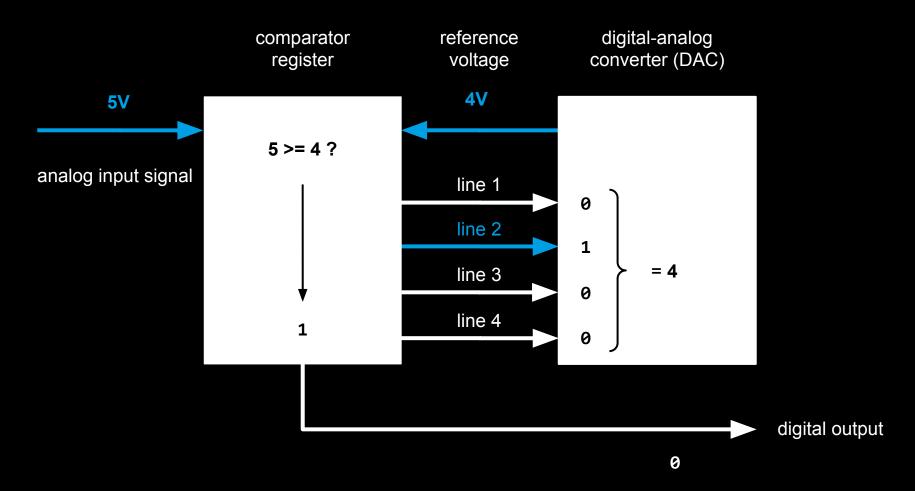


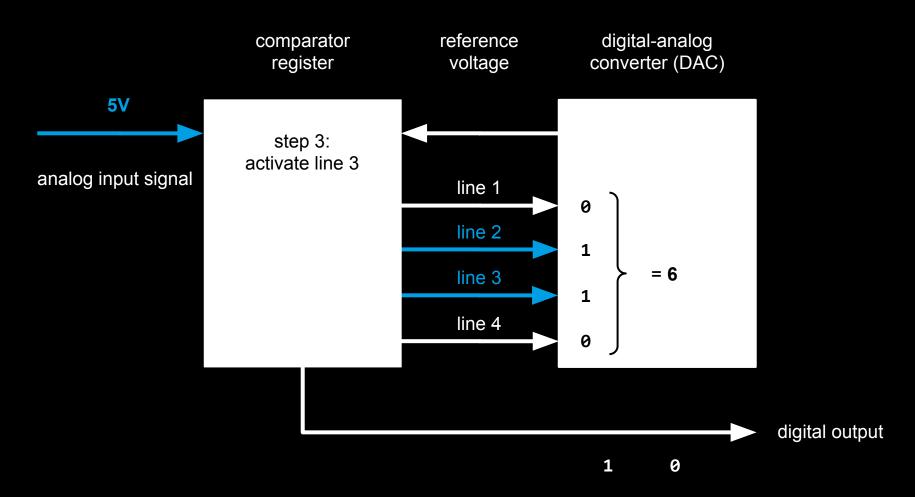


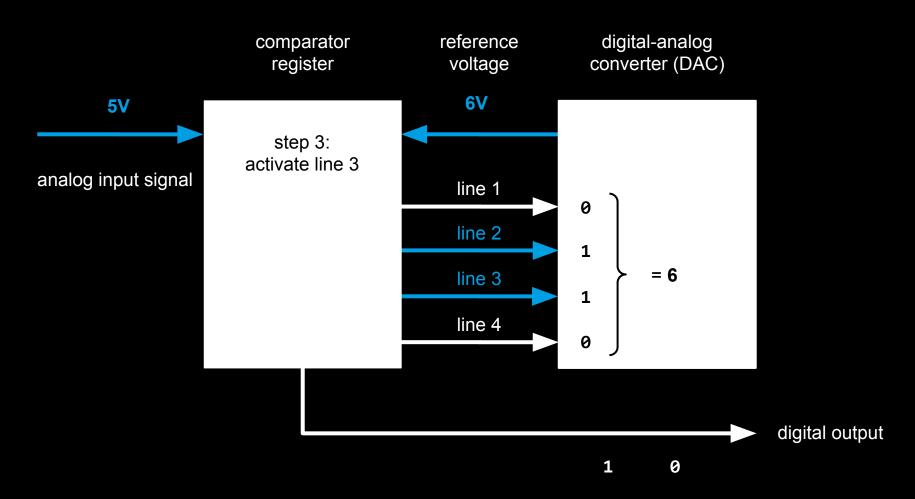


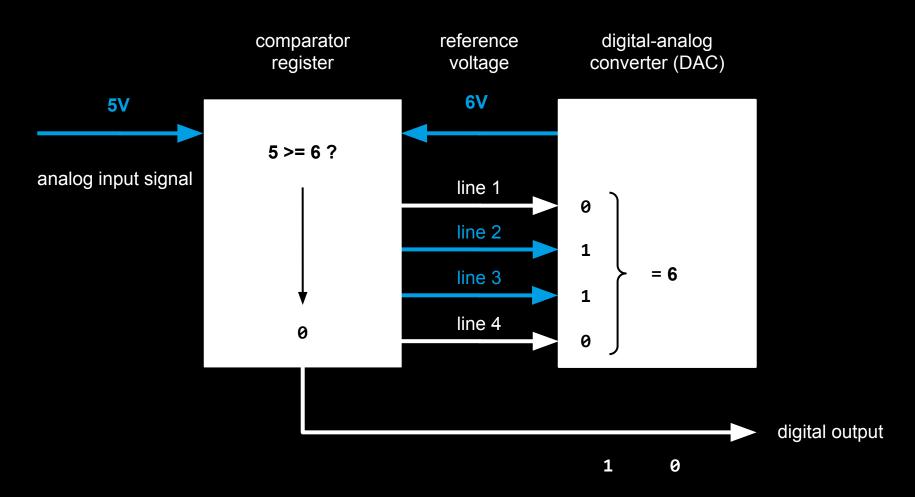


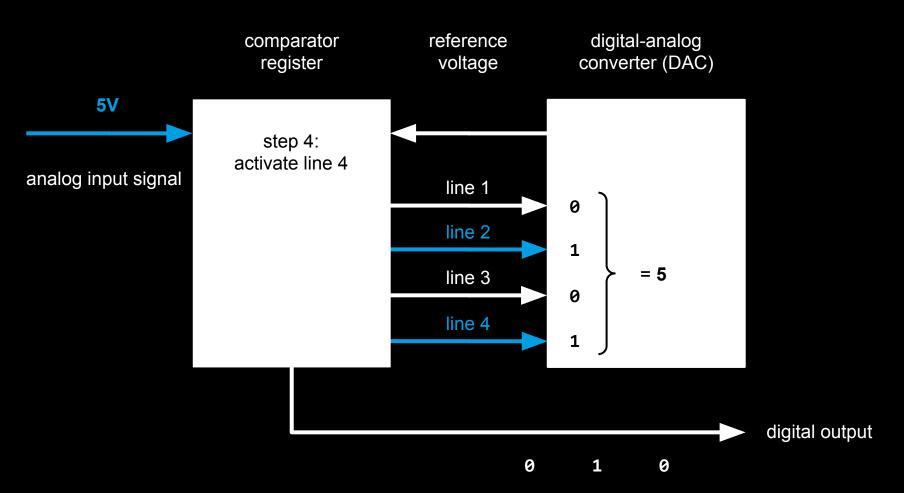


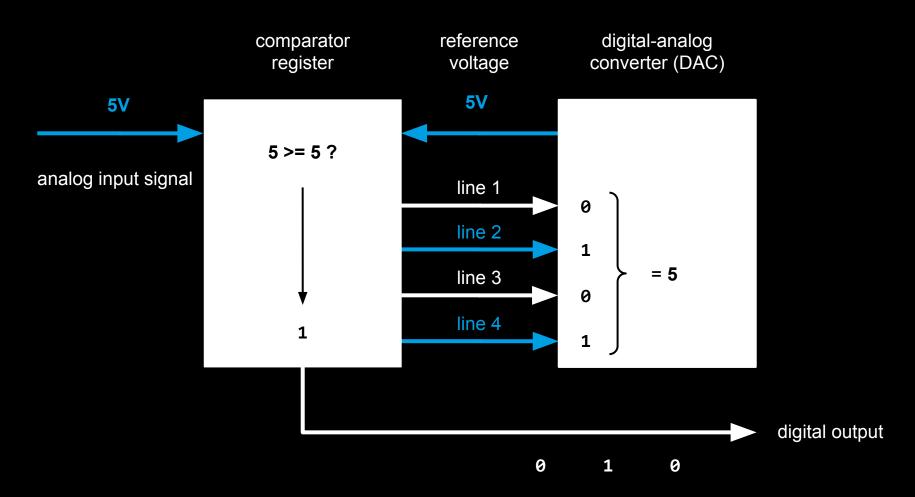


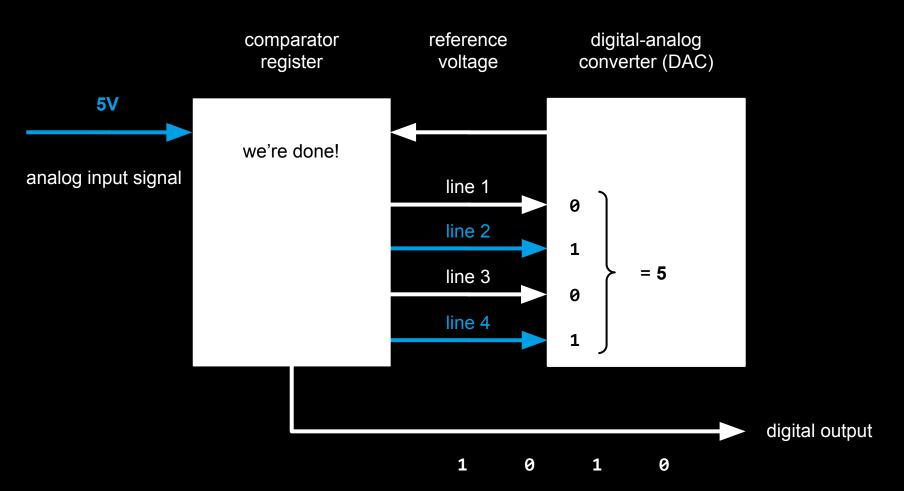












### so, what analog signal is measured?





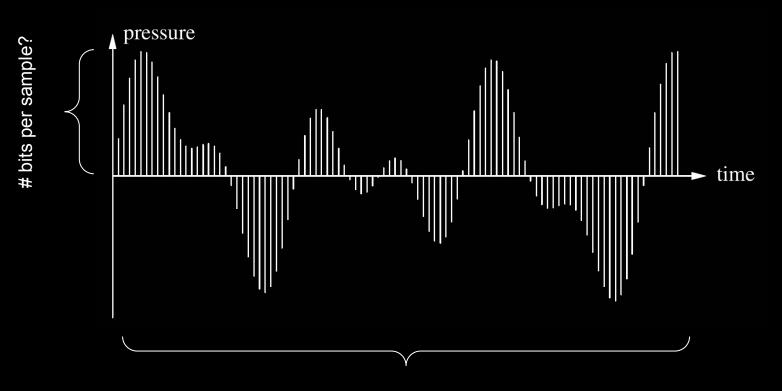






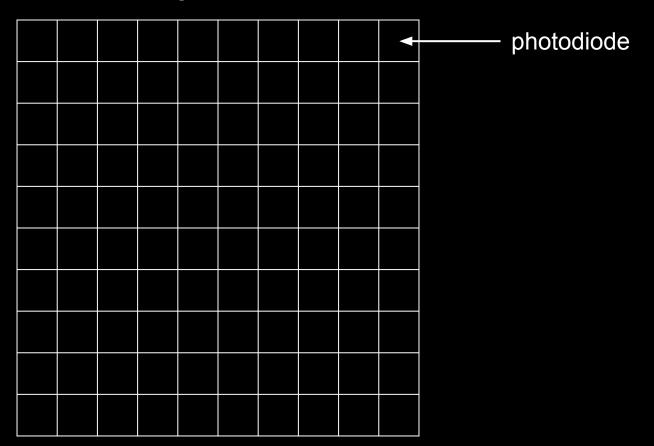


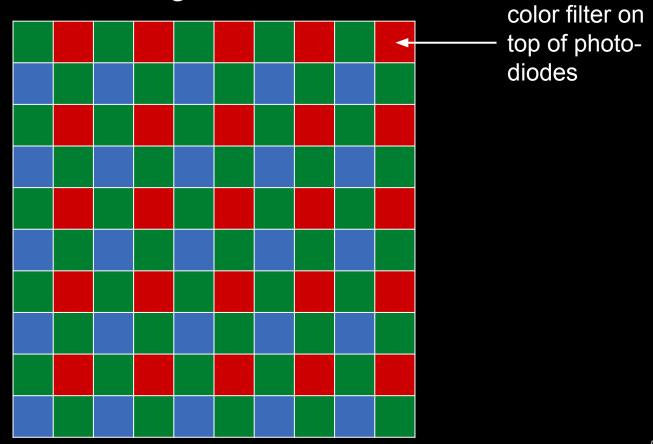
# A **continuous** wave is transformed into an array of **discrete numbers** representing pressure.

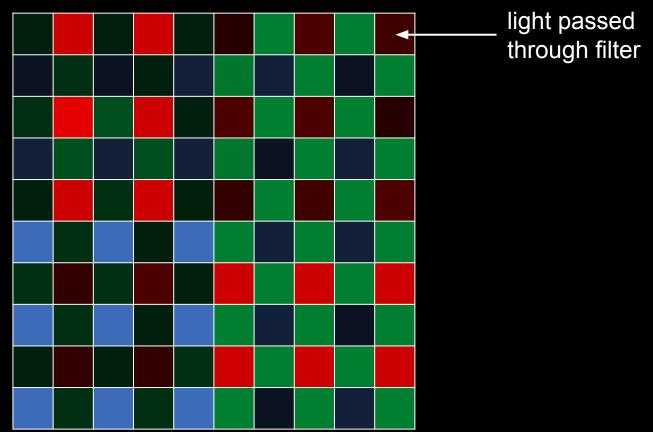


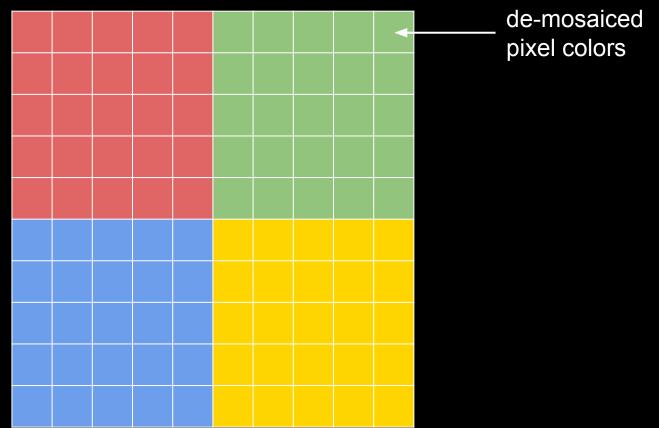
# samples per time unit?

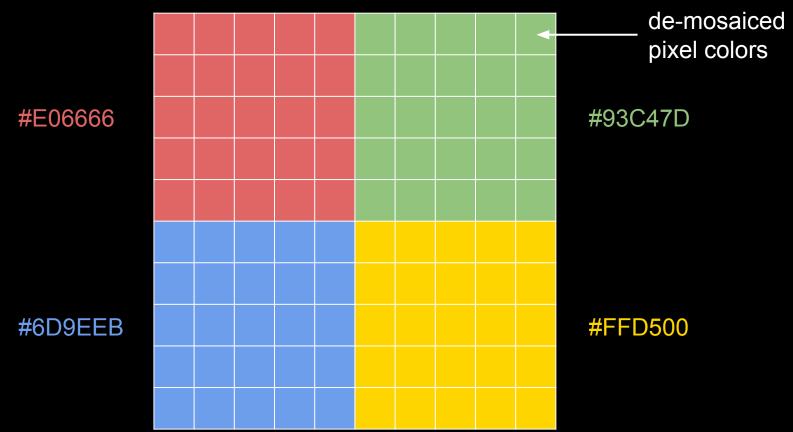


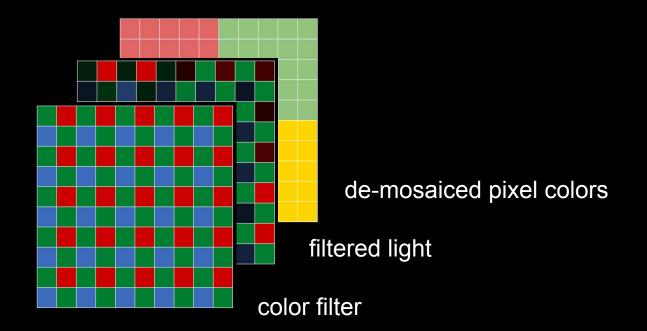


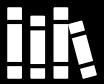




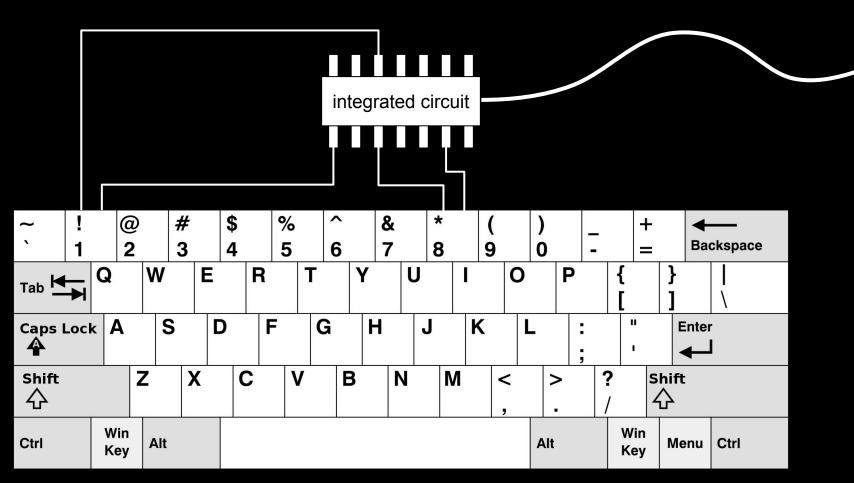


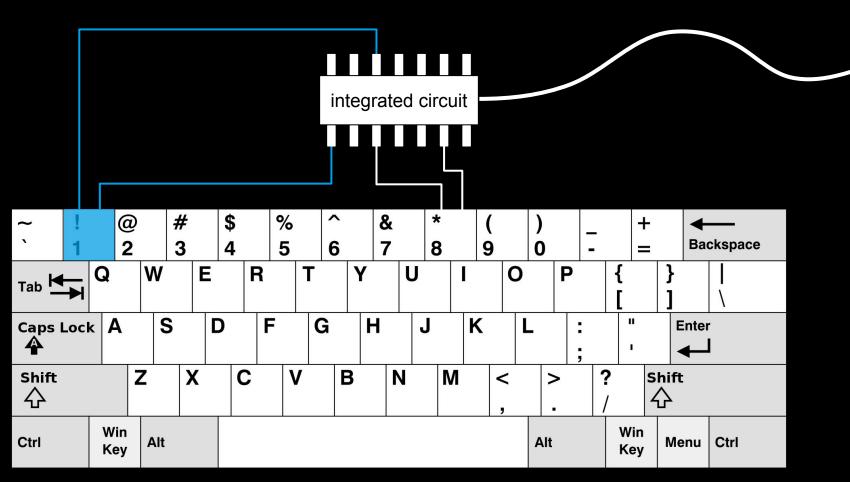


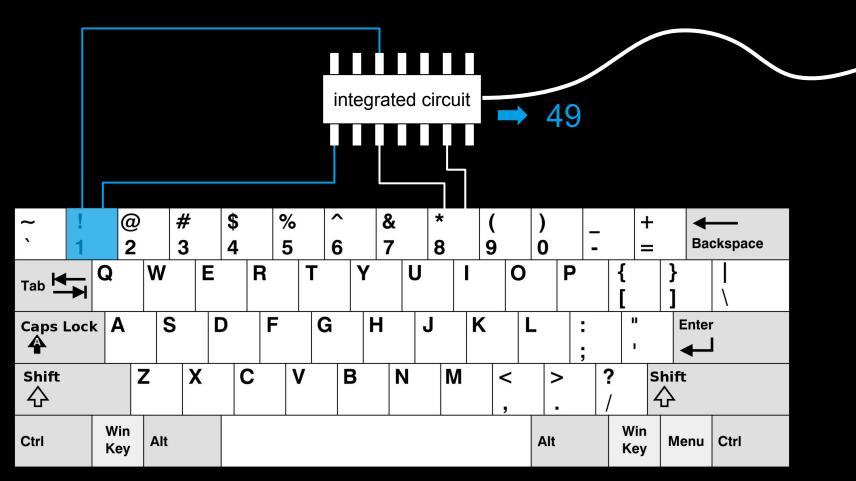


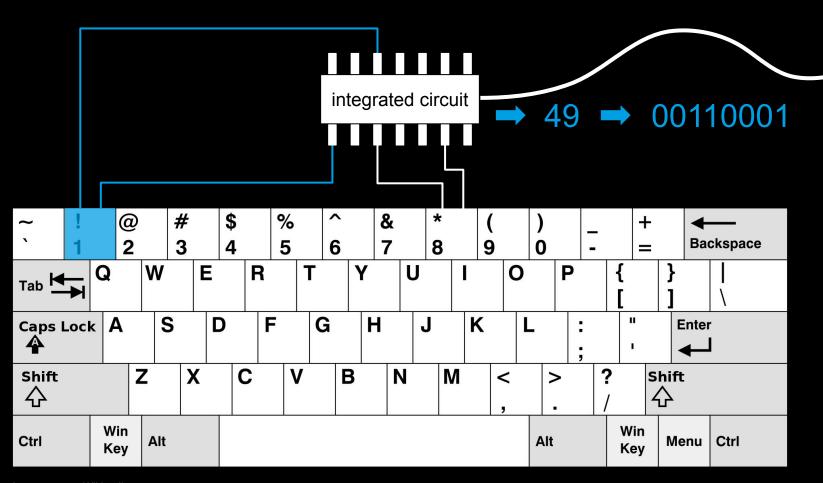


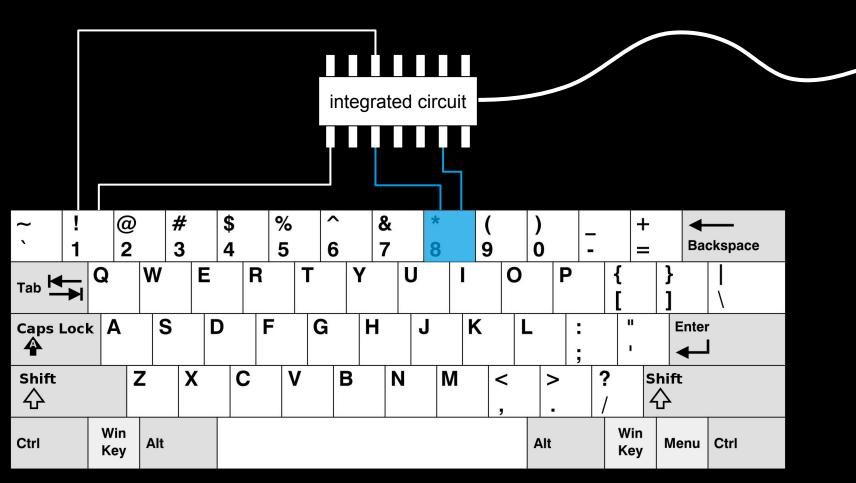
## typing text

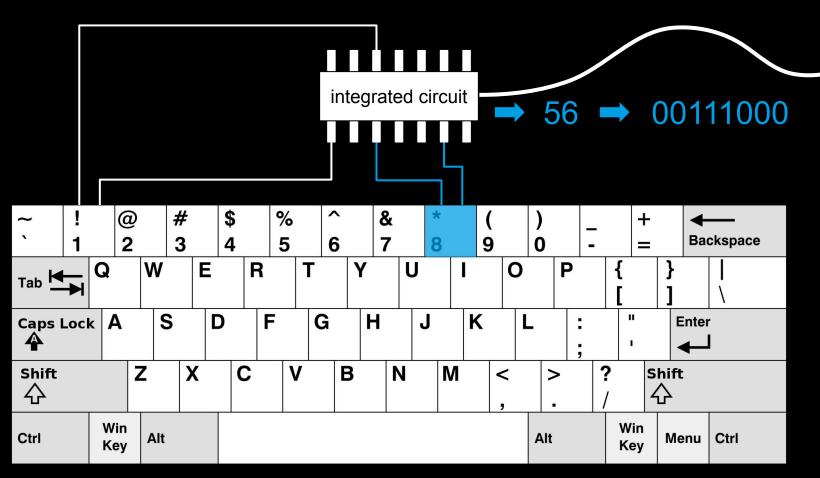












## scanning text



optical character recognition (OCR)



## temperature sensor

A thermometer measures the temperature using a proxy, such as electrical resistance. The result is a change in voltage, which can be converted into a temperature.

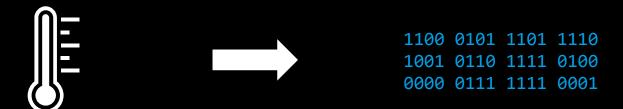






Image source: Wikipedia



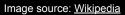




Image source: Wikipedia



Image source: Wikipedia

## digital goods



Image source: Wikipedia



computer processable

perfect reproduction

non-rival

near-zero costs of reproduction