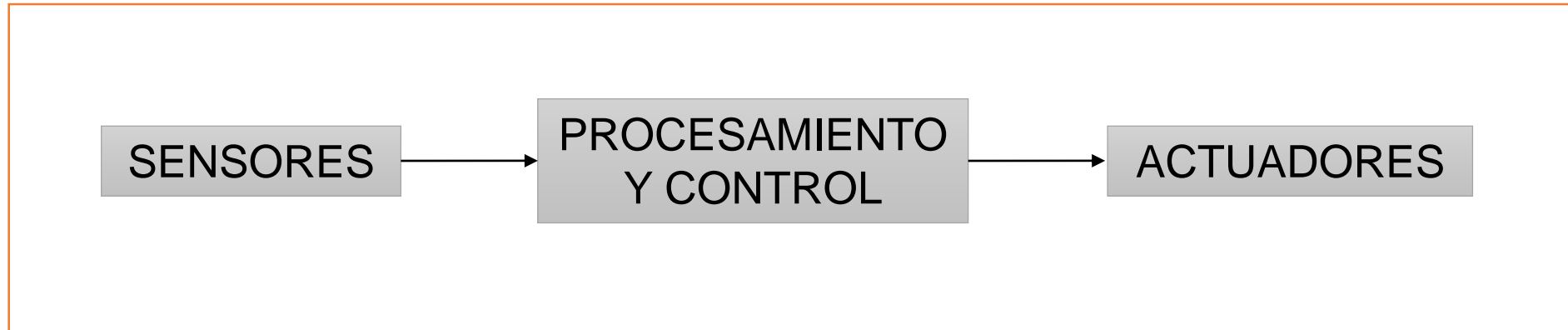


INTRODUCCIÓN A LOS MICROCONTROLADORES

Alvaro Acosta Agón

Magister en Educación
Magister en Educación

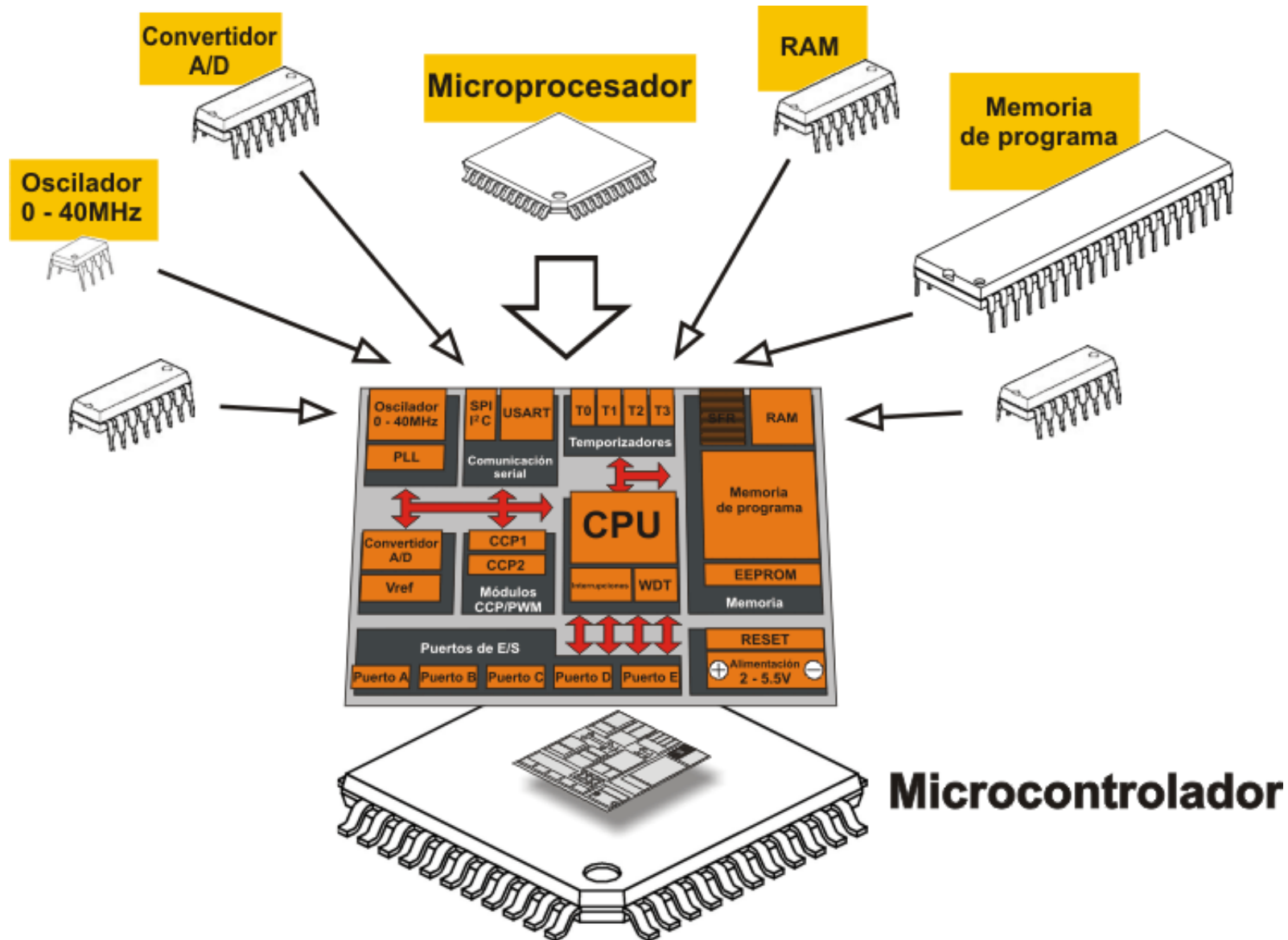
SISTEMA ELECTRÓNICO

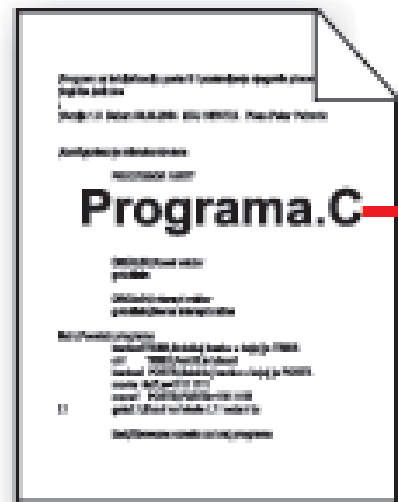


Temperatura
Humedad
Movimiento
Proximidad
Sonido ...

Motores
Bombillos
Altavoz
Alarma

MICROCONTROLADOR





Programa.C

Compilador

Programa.hex

Programador

microcontrolador en entorno real



Portátil



Arduino UNO



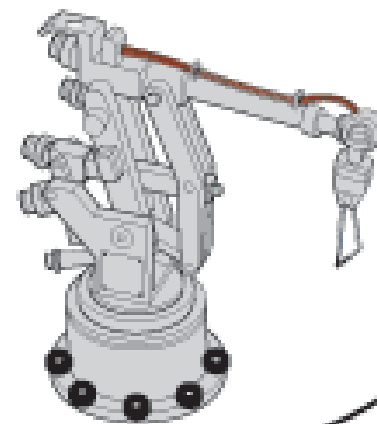
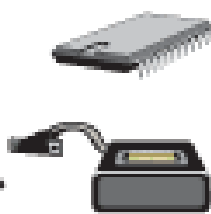
Motor DC



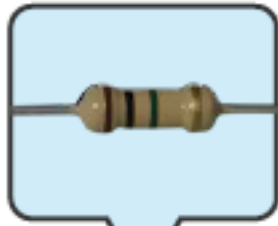
Servo



LEDs



SIMBOLOGÍA ELÉCTRICA



Resistor o resistencia



Fuente de alimentación



Cable o alambre



Voltímetro



Pila o batería



Interruptor o apagador



Foco o lámpara

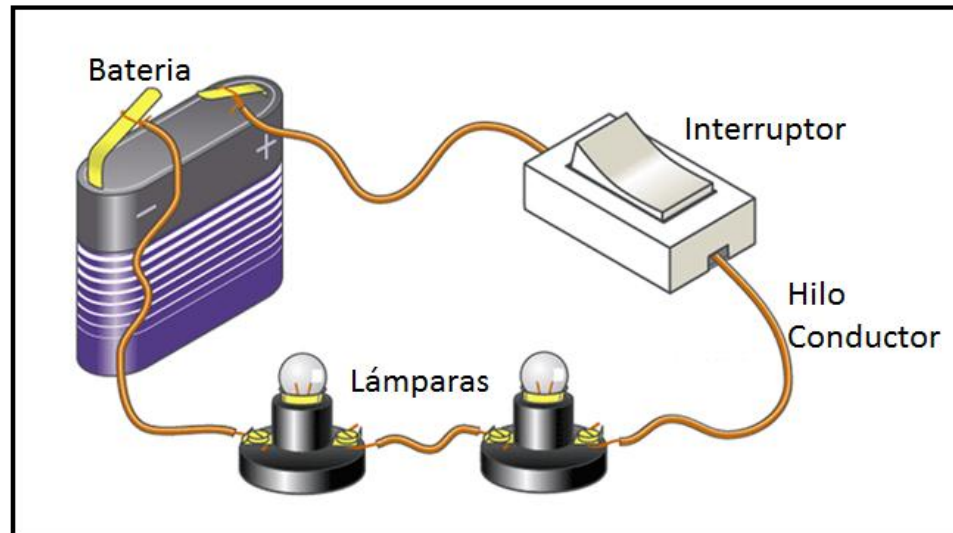


Amperímetro

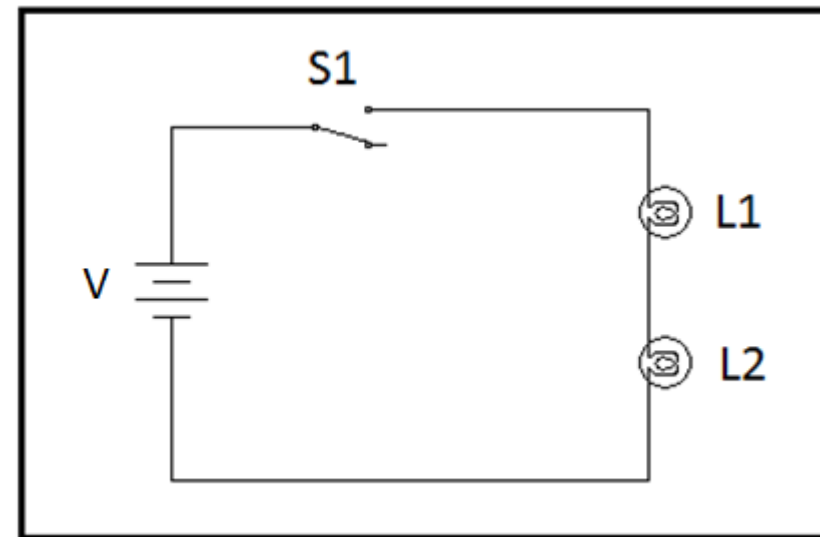
ELEMENTO	SÍMBOLOGÍA
POTENCIÓMETRO	
CONDENSADOR	
DIODO LED	
ZUMBADOR	
TRANSISTOR BIPOLAR	
MOTOR	
CIRCUITO INTEGRADO	

CIRCUITOS ELÉCTRICOS BÁSICOS

DIAGRAMAS DE LOS CIRCUITOS

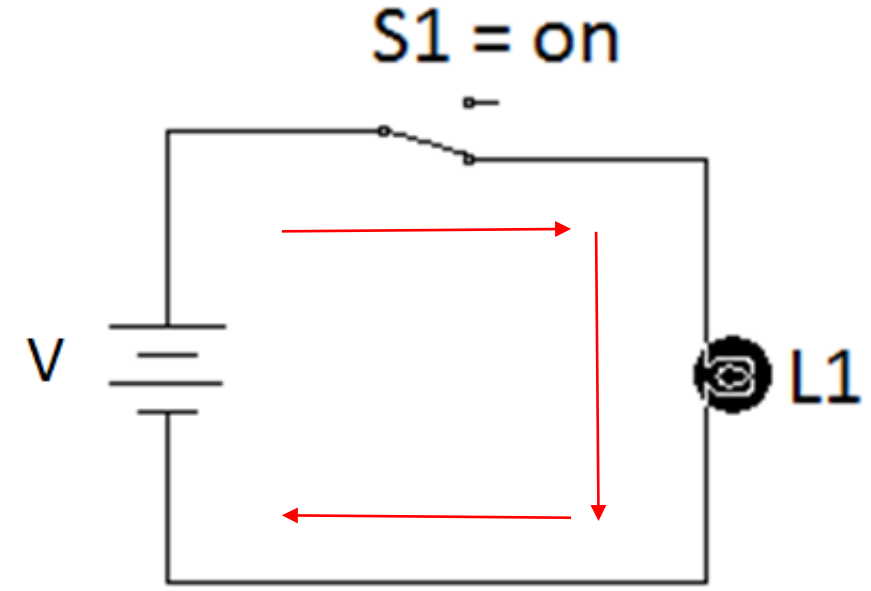
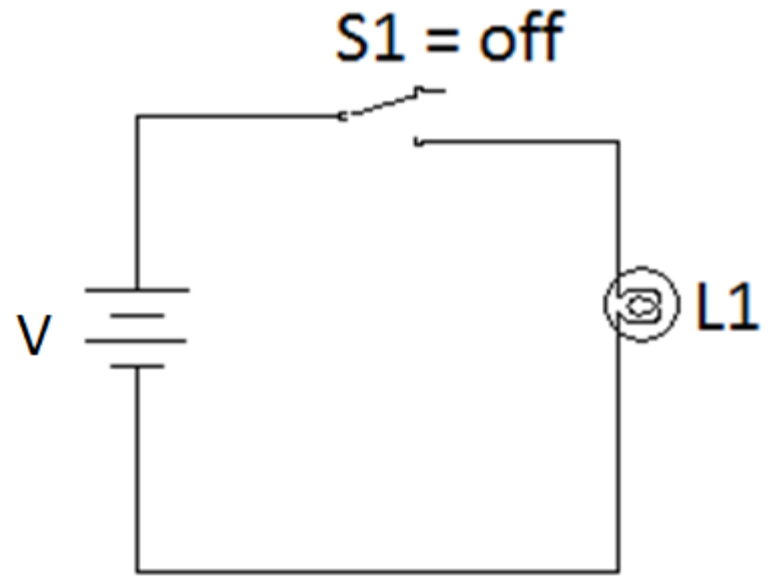


PICTÓRICO



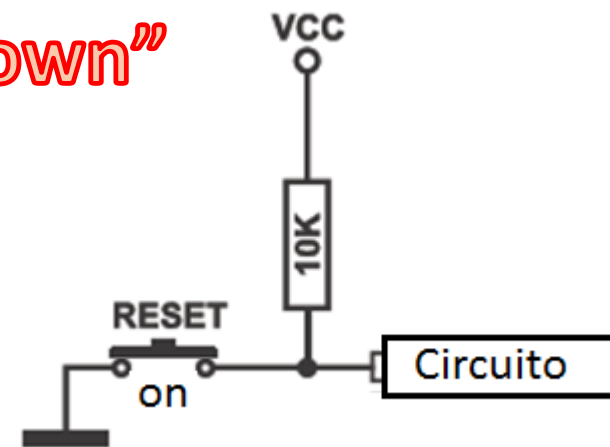
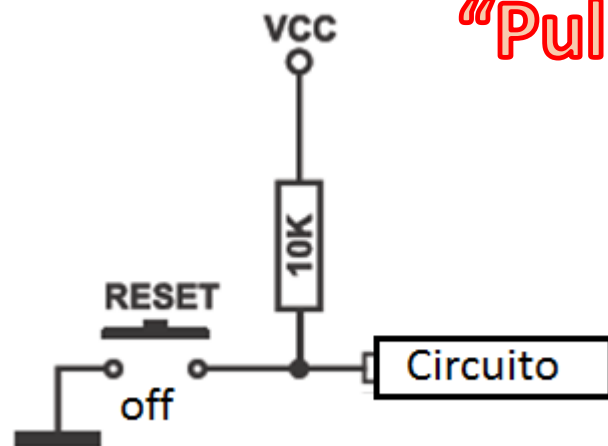
ESQUEMÁTICO

CIRCUITOS : ABIERTO Y CERRADO



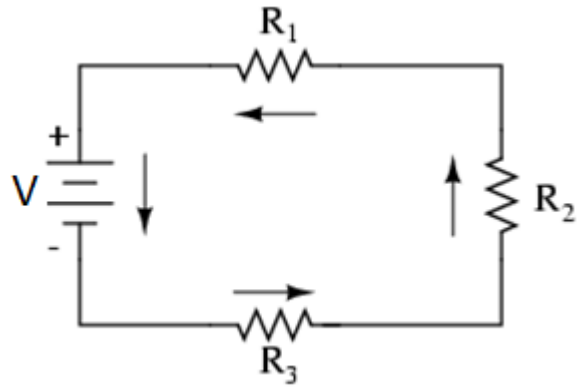
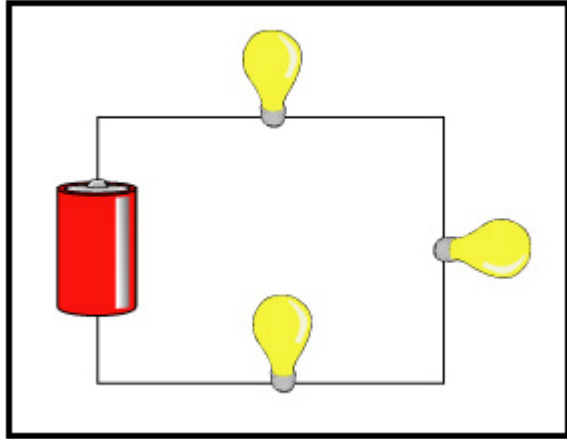
RESISTENCIAS:

“Pull-up” y “pull-down”

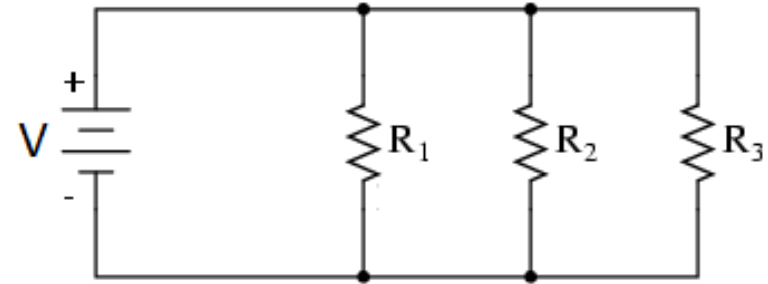
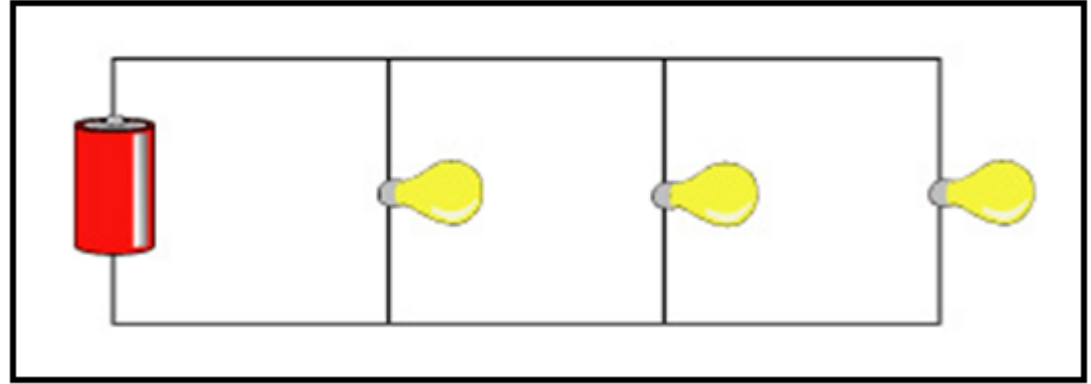


CONEXIONES DE LOS CIRCUITOS

Circuito Serie



Circuito Paralelo



Circuito Mixto

