

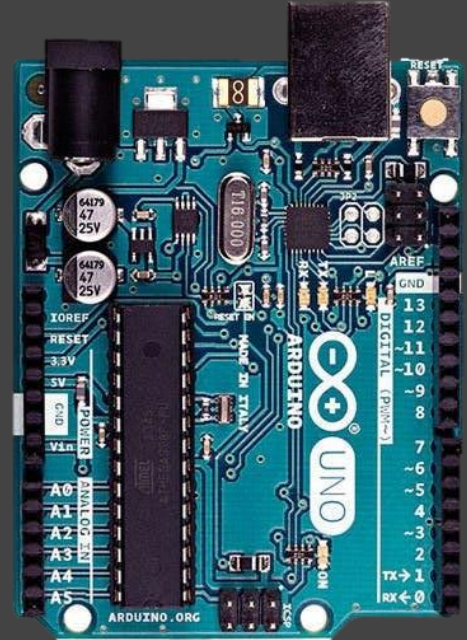


# Arduino + Basic Implementation

Microcontroller? Sensor? Actuator? 🤖

<https://www.arduino.cc/>

[d( )] **DASKOM 1337**



# Our Topics Today



## 01

### Arduino

```
Serial.print("Hello!");
```

## 02

### Sensor

```
mlx.readObjectTempC();
```

## 03

### Actuator

```
pinMode(13, HIGH);
```

## 04

### Implementation

```
if distance<5  
then Servo Open Door
```



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# 01 Arduino

What is Arduino?

<https://www.arduino.cc/>

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# Arduino?

an open-source platform used for  
building electronics projects.

often referred to as a  
**microcontroller**



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# And Then what is Microcontroller?

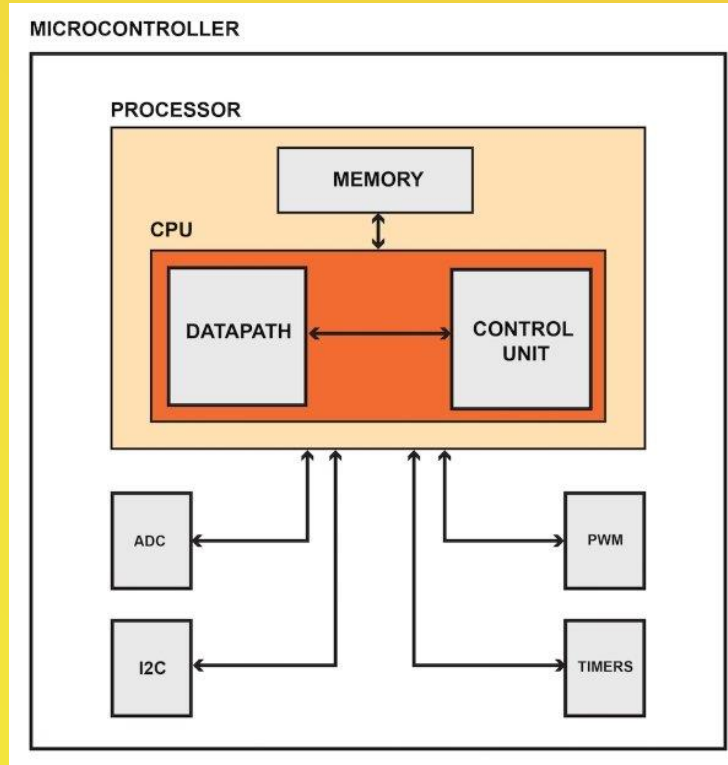
A microcontroller is an integrated circuit (IC) device used for controlling other portions of an electronic system, usually via a microprocessor unit (MPU), memory, and some peripherals.

#include -> CPU, Memory, Peripherals, & support Circuits 😊



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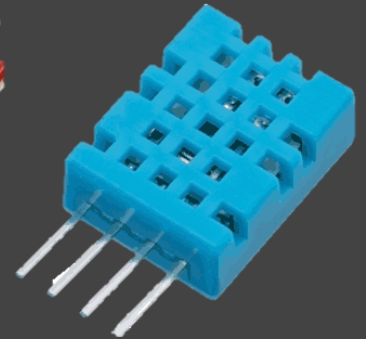
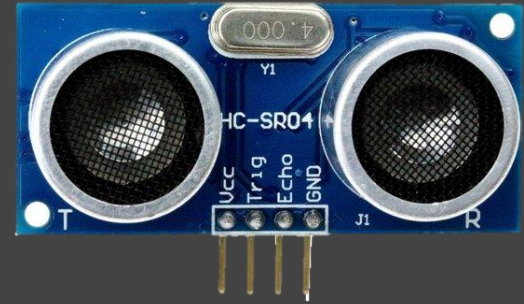
# And Then what is Microcontroller?





# 02 Sensor

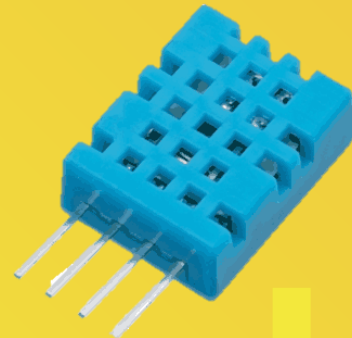
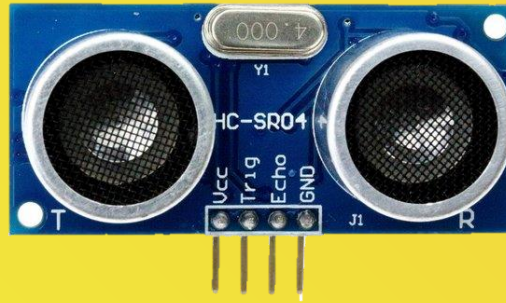
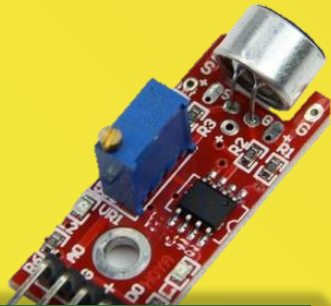
And then, what is Sensor? 🤖





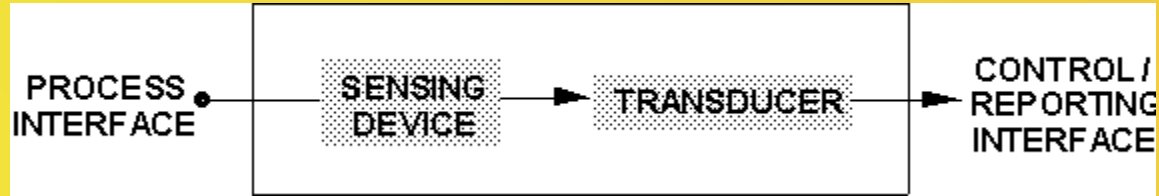
# Sensor

Sensing something 🤖

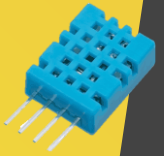


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# Sensor + Transducer? What is that?



**Transducer -> converting physical quantities into a proportional electrical quantity such as voltage or electric current.**



03

# Actuator

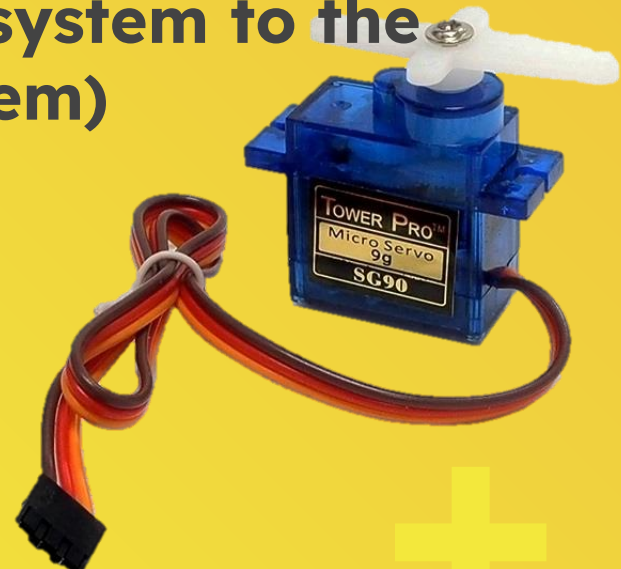
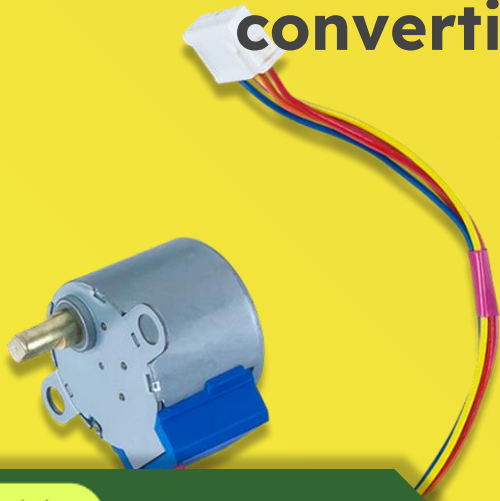
Okey last before implementation.

What is Actuator? 🤖



# Actuator

The device that produces motion by converting energy and system to the actuator (system)



# 04

## Basic Implementation


If u've the hardware, u can try this with your hardware.

but if u don't have the components, u can use WOKWI.COM as Arduino emulator 😊




# Thanks!

## References:



<https://learn.sparkfun.com/tutorials/what-is-an-arduino/all>  
<https://www.allaboutcircuits.com/technical-articles/what-is-a-microcontroller-introduction-component-characteristics-component/>  
<https://www.electrical4u.com/characteristics-of-sensors/>  
<https://www.electrical4u.com/transducer-types-of-transducer/>  
[https://www.reac-group.com/en\\_en/facts/actuators/what-is-an-actuator/](https://www.reac-group.com/en_en/facts/actuators/what-is-an-actuator/)



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