

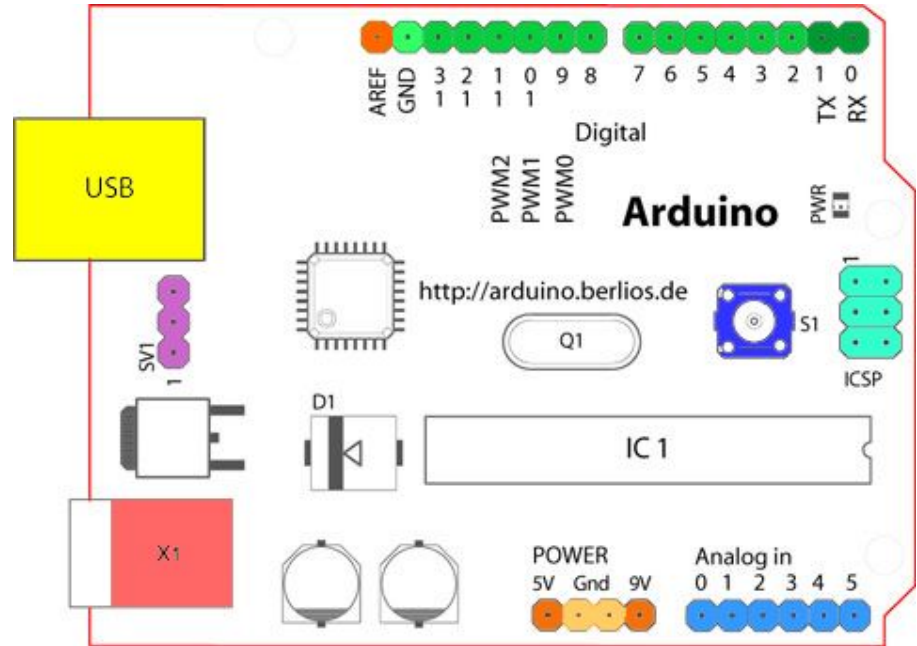
# 02: Builtin Functions & Definitions



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# Arduino

- Digital Pins
- Analog Pins
- Power Pins
  - GND
- ❖ Board



<https://www.arduino.cc/en/Guide/Board?from=Tutorial.ArduinoBoard>

# Definitions

- LED - Light Emitting Diode
  - Anode (+) : Longer leg
  - Cathode (-) : Shorter leg
- MCU - Microcontroller Unit
  - Atmega328P
- Prototyping : Early Concept, built to test a concept.
- Breadboard : Making temporary circuits, for prototyping.
- Resistor : Limits amount of current.

# Programming

- Arduino programming language : Based on C/C++
- Variables
  - LED\_BUILTIN
    - Predefined LED pin number.
  - HIGH
    - Voltage of 5V
  - LOW
    - Voltage of 0V

# Functions

## Built In Functions

- `delay()`
  - Stops code execution. Blocking functions
- `millis()`
  - Internal time. Returns in milliseconds.
- `setup()`
  - Runs once, initializes variables, libraries, pins.
- `loop()`
  - Executes continuously.

# **Thank You**

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# Sources

<https://en.wikipedia.org/wiki/Prototype>

<https://internetofthingsagenda.techtarget.com/definition/microcontroller>

Amariei, Cornel. Arduino Development Cookbook. Packt Publishing, 2015.