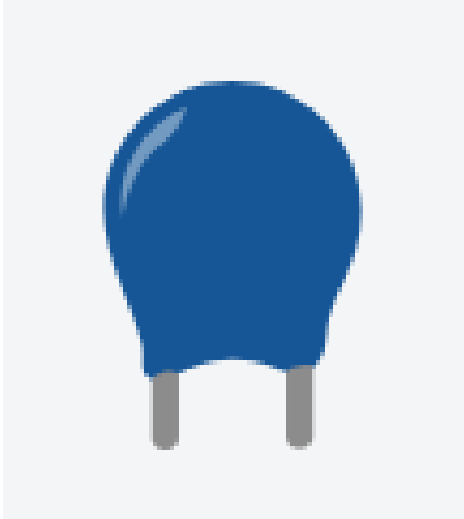


# Arduino Components

## List of Component

- Capacitor
- Resistor
- Diode
- Polarized Capacitor
- Inductor
- 9V Battery
- 1.5V Battery
- Coin Cell 3V Battery
- Breadboard
- Arduino Uno R#

## Capacitor



### Functions

A capacitor in Arduino projects stores and releases electrical energy, helping smooth out power supply fluctuations and filter unwanted noise to ensure stable operation of electronic circuits.

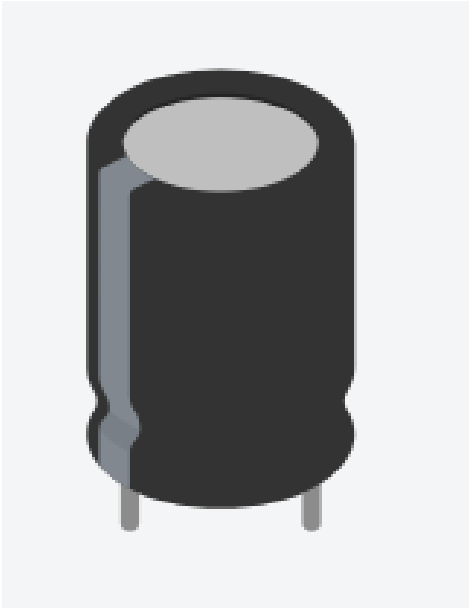
## Resistor



### Functions

A resistor in Arduino limits the flow of electrical current, preventing damage to components. It's crucial for controlling voltage levels, ensuring proper operation of LEDs, sensors, and other electronic parts.

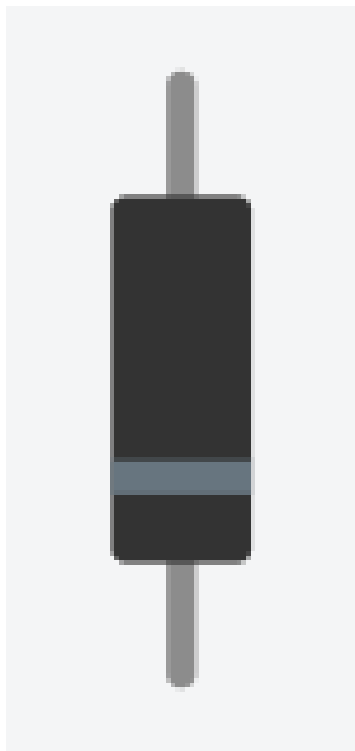
## Polarized Capacitor



### Functions

A polarized capacitor in Arduino filters and stabilizes electrical signals. It stores and releases electrical charge, helping smooth out voltage fluctuations to ensure consistent operation of Arduino circuits.

## Diode



### Functions

A diode in Arduino circuits acts like a one-way valve, allowing current to flow in only one direction. It protects components from damage by controlling the direction of electrical flow.

## Inductor



### Functions

Inductors in Arduino smooth out voltage spikes, store energy temporarily, and filter signals. They're crucial for stabilizing power and preventing electrical noise, ensuring reliable operation of electronic circuits.

## 9V Battery



### Functions

A 9V battery powers Arduino projects by supplying consistent voltage for circuits. It's compact, easy to connect, and ideal for portable applications like sensors, small motors, and basic electronic experiments.

## 1.5V Battery



### Functions

A 1.5V battery powers Arduino components like sensors or small modules. It provides stable voltage for reliable operation, ensuring devices function correctly without needing a direct connection to a power outlet.

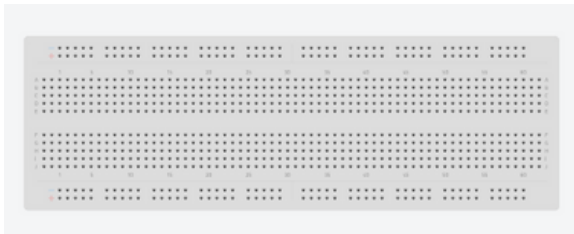
## Coin Cell 3V battery



### Functions

Coin cell 3V batteries power Arduino projects by supplying consistent voltage to circuits. They are compact, suitable for low-power applications, and provide energy for microcontrollers, sensors, and small electronic components.

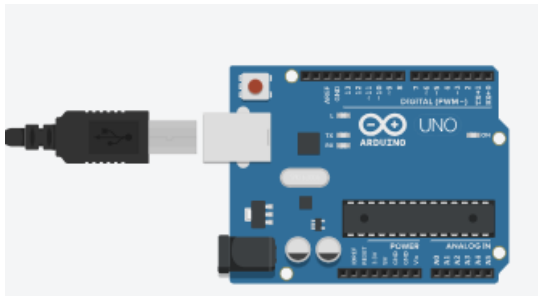
## Breadboard



### Functions

A breadboard in Arduino projects is a reusable platform for building and testing electronic circuits without soldering. It allows easy connection of components using jumper wires to prototype circuits quickly and safely.

## Arduino Uno R3



### Functions

Arduino UNO R3 is a microcontroller board used for programming and controlling electronic projects. It interfaces sensors, motors, and other components to execute tasks based on programmed instructions.