Arduino Functions with Descriptions and Examples (1)

pinMode(pin, mode)
Description: Configures the specified pin to behave either as an input or an output.

- Example 1: pinMode(13, OUTPUT); // Set pin 13 as an output pin
- Example 2: pinMode(7, INPUT); // Set pin 7 as an input pin

digitalWrite(pin, value)
Description: Sets the specified digital pin to either HIGH or LOW.

- Example 1: digitalWrite(13, HIGH); // Turn on an LED connected to pin 13
- Example 2: digitalWrite(8, LOW); // Turn off a device connected to pin 8

digitalRead(pin)
Description: Reads the value from a specified digital pin (HIGH or LOW).

- Example 1: int buttonState = digitalRead(7); // Read the state of a button
- Example 2: if (digitalRead(2) == HIGH) { // Check if pin 2 is HIGH
  // do something
  }

analogRead(pin)
Description: Reads the value from the specified analog pin (range 0-1023).

- Example 1: int sensorValue = analogRead(A0); // Read value from analog pin A0
- Example 2: int lightLevel = analogRead(A1); // Read value from light sensor connected to pin A1

analogWrite(pin, value)
Description: Writes an analog value (PWM wave) to a pin.

- Example 1: analogWrite(9, 128); // Set PWM output on pin 9 to 50%
- Example 2: analogWrite(5, 255); // Set pin 5 to maximum PWM duty cycle

delay(ms)
Description: Pauses the program for the specified number of milliseconds.

- Example 1: delay(1000); // Wait for one second
- Example 2: delay(500); // Wait for half a second

Serial.begin(baudrate)
Description: Sets up serial communication at the specified baud rate.

- Example 1: Serial.begin(9600); // Start serial communication at 9600 baud
- Example 2: Serial.begin(115200); // Start serial communication at 115200 baud

Serial.print(data)
Description: Prints data to the serial port as human-readable ASCII text.

- Example 1: Serial.print('Hello, world!'); // Print a string
- Example 2: Serial.print(analogRead(A0)); // Print the value read from pin A0