CIE Workshop Documentation

Motor

Library

Workshop.h

Class

Motor(first_pin, second_pin)

Class name Motor with set up the first and the second pin connected via wire.

Functions

counter_clockwise(void)

Make a motor rotate counter clockwise.

clockwise(void)

Make a motor rotate clockwise.

Example

```
#include <Workshop.h>
Motor motor(6,7); //(firstPin,secondPin)
void setup() {
  Serial.begin(9600);
}

void loop() {

  motor.clockwise();
  Serial.println("Motor clocwise");
  delay(2000);
  motor.stop();
  Serial.println("Motor STOP");
  delay(2000);
  motor.counter_clockwise();
  Serial.println("Motor conter_clockwise");
  delay(2000);


}
```

Servo

Library

Servo.h

Class

Servo(void)

Class name servo.

Functions

attach(pin)

Declare with data pin attached to.

write(degree)

Make a servo rotate to that particular degree.

Example

```
#include <Servo.h>
Servo myservo; //declare the variable
void setup()
{
myservo.attach(9); //attach to pin no.9
}
void loop()
{
myservo.write(-90); //rotate to -90 degree
delay(1000); // delay for 1000ms
myservo.write(90); //rotate to 90 degree
delay(1000); // delay for 1000ms
myservo.write(180); //rotate to 180 degree
delay(1000); // delay for 1000ms
}
```

DHT

Library

Workshop.h

Class

DHT(data_pin)

Class name DHT with the initialize on data pin.

Functions

getData(void)

Get the data from sensor and store data on temp and humid variables.

Variables

temp

Variable stores the temp data(Celsius).

humid

Variable stores the humidity(Percent).

Example

```
#include "DHT.h"

DHT dht(9);

void setup()
{
Serial.begin(9600);
}

void loop()
{
delay(2000);
dht.getData();
Serial.print("Humid ");
Serial.println(dht.humid);
Serial.print("Temp ");
Serial.println(dht.temp);
}
```

Display

Library

Adafruit_SSD1306.h

Class

Adafruit_SSD1306(int reset)

Class name with the OLED_RESET declaration.

Functions

begin(void)

Initialize the screen

clearDisplay(void)

Reset the screen.

println(text)

Print a text as a line.

print(text)

Print a text.

display(void)

Display what you print on the screen.

Example

```
#include <Adafruit_SSD1306.h>
Adafruit_SSD1306 display(1);
void setup() {
display.begin();
display.clearDisplay();

display.setCursor(0,0);
display.println("Hi All to");
display.println("heyAll");
display.println("www.ArduinoAll.com");
display.display();
}

void loop() {
  for(int i =0;i < 20;i++){
  display.setCursor(0,50);
  display.print(i);
  display.display();
  }
  display.clearDisplay();
}
```

MPU6050

Library

Workshop.h

Class

MPU6050(void)

Class name MPU6050

Functions

setupMPU(void)

Initialize the MPU

getData(void)

Get the data from the sensor and store to the variables.

Variables

gForceX,gForceY,gForceZ

Acceleration on X, Y, Z axes.

rotX, rotY, rotZ

Gyro on X,Y,Z axes.

Example

```
#include <workshop.h>
MPU6050 mpu;
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  mpu.setupMPU();
}

void loop() {
  delay(1000);
  mpu.getData();
  Serial.print("gx=");
  Serial.println(mpu.gForceX);
  Serial.print("rx=");
  Serial.println(mpu.rotX);

}
```

Ultrasonic

Library

Workshop.h

Class

Ultrasonic(triger_pin, echo_pin)

Class name Ultrasonic with the declaration on triger pin and echo pin.

Functions

getData(void)

Get data from the sensor and store to the variables.

Variables

distance

Variables stored the distance.

Example

```
#include <Workshop.h>
Ultrasonic ultra_sonic(9,10); //trig,echo
void setup() {
  Serial.begin(9600);

}

void loop() {
  ultra_sonic.getData();
  Serial.println(ultra_sonic.distance);
}
```