IR Distance:

#include <Arduino.h>

/\*SHARP GP2Y0A21YK0F IR sensor with Arduino and SharpIR library example code. More info: https://www.makerguides.com \*/

// Include the library:

//#include <SharpIR.h>

// Define model and input pin:

#define IRPin A1

int count = 0;

void setup() {

pinMode(IRPin, INPUT);

// Turn on the serial monitor

Serial.begin(9600);

}

void loop() {

while (count < 500) {

int raw\_value = analogRead(IRPin);

Serial.println(raw\_value);

double y = 30302\*pow(raw\_value, -1.371);

Serial.println(y);

count = count + 1;

delay(500);

}

}

Ultrasonic:

#include <Arduino.h>

int trigPin = 7; // Trigger

int echoPin = 8; // Echo

double duration, cm, inches;

void setup() {

//Serial Port begin

Serial.begin (9600);

//Define inputs and outputs

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

}

void loop() {

// The sensor is triggered by a HIGH pulse of 10 or more microseconds.

// Give a short LOW pulse beforehand to ensure a clean HIGH pulse:

digitalWrite(trigPin, LOW);

delayMicroseconds(5);

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

// Read the signal from the sensor: a HIGH pulse whose

// duration is the time (in microseconds) from the sending

// of the ping to the reception of its echo off of an object.

pinMode(echoPin, INPUT);

duration = pulseIn(echoPin, HIGH);

// Convert the time into a distance

inches = 0.0066\*duration+0.1338;

Serial.println(duration);

Serial.println(inches);

delay(250);

}

LIDAR:

/\*

Pin connection

VL53L0X Pin Arduino Pin

VCC 5V

GND GND

SDA A4 or SDA if available

SCL A5 or SCL if available

GPIO1 leave it unconnected

XSHUT D12 (digital 12 or pin 12)

\*/

#include <Wire.h>

#include <VL53L0X.h>

#define LED\_Pin 13

VL53L0X sensor;

void setup()

{

pinMode(LED\_Pin, OUTPUT);

pinMode(12,INPUT\_PULLUP);

digitalWrite(12,HIGH);

Serial.begin(9600);

Wire.begin();

sensor.init();

sensor.setTimeout(500);

sensor.startContinuous();

}

void loop()

{

int distance =sensor.readRangeContinuousMillimeters();

//int distance =sensor.startContinuous(100);

//distance = distance;

digitalWrite(LED\_Pin, HIGH);

delay(distance);

digitalWrite(LED\_Pin, LOW);

delay(distance);

Serial.print("Distance: ");

Serial.print(distance);

Serial.print("mm");

if (sensor.timeoutOccurred()) { Serial.print(" TIMEOUT"); }

Serial.println();

delay(100);

}

Barcode:

/\*

Pin connection

VL53L0X Pin Arduino Pin

VCC 5V

GND GND

SDA A4 or SDA if available

SCL A5 or SCL if available

GPIO1 leave it unconnected

XSHUT D12 (digital 12 or pin 12)

\*/

//#include <Wire.h>

//#include <VL53L0X.h>

#include <Arduino.h>

//#define LED\_Pin 13

#define IRReflPin 14 //reflectance

//VL53L0X sensor;

//String array[10];

//int count = 0;

void setup()

{

//pinMode(LED\_Pin, OUTPUT);

pinMode(IRReflPin, INPUT);

//pinMode(12, INPUT\_PULLUP);

//digitalWrite(12, HIGH);

Serial.begin(9600);

//Wire.begin();

//sensor.init();

//sensor.setTimeout(500);

//sensor.startContinuous();

}

void loop()

{

//int distance = sensor.readRangeContinuousMillimeters();

int raw\_value\_0 = analogRead(IRReflPin); //reflectance

//Serial.println(distance);

//Serial.println('Test');

//Serial.println(raw\_value\_0);

if (raw\_value\_0 > 980) {

Serial.println( "black");

}

else {

//Serial.println("white");

Serial.println("white");

}

delay(1000);

}