Button

#define LED 10 //Declared pin 10 as LED

#define btn 4 //Declared pin 4 as btn

int btn\_state = 0; //Declared a variable btn\_state and set it as 0

void setup()

{

pinMode(LED, OUTPUT); //Sets pin 10 (LED) as OUTPUT

pinMode(btn, INPUT); //Sets pin 2 (btn) as INPUT

}

void loop()

{

btn\_state = digitalRead(btn); //Reads the input of pin 4 and save it in btn\_state

if(btn\_state == HIGH) //If the button is pressed

{

digitalWrite(LED, HIGH); //Turn on the LED

}

else

{

digitalWrite(LED, LOW); //Else turn off LED

}

}

Led code

// defines pins numbers

const int trigPin = 9;

const int echoPin = 10;

const int vibrator = 11;

const int ledPin = 13;

// defines variables

long duration;

int distance;

int safetyDistance;

void setup() {

pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output

pinMode(echoPin, INPUT); // Sets echoPin as an Input

pinMode(vibrator, OUTPUT);

pinMode(ledPin, OUTPUT);

Serial.begin(9600); // Starts the serial communication

}

void loop() {

// Clears the trigPin

digitalWrite(trigPin, LOW);

delayMicroseconds(2);

// Sets the trigPin on HIGH state for 10 micro seconds

digitalWrite(trigPin, HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

// Reads the echoPin, return the sound wave travel time in microseconds

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance= duration\*0.034/2;

safetyDistance = distance;

if (safetyDistance <= 80){

digitalWrite(vibrator, HIGH);

digitalWrite(ledPin, HIGH);

}

else{

digitalWrite(vibrator, LOW);

digitalWrite(ledPin, LOW);

}

// Prints the distance on the Serial Monitor

Serial.print("Distance: ");

Serial.println(distance);

}

Vibrator final

#define LED 10

#define btn 4

int btn\_state = 0;

int flag = 0;

int trigPin = 2;

int echoPin = 3;

int led = 6;

int buzzer = 7;

int vibrator = 11;

long lastDebounceTime = 0; // the last time the output pin was toggled

long debounceDelay = 200; // the debounce time

void setup() {

// put your setup code here, to run once:

Serial.begin(9600);

pinMode(buzzer, OUTPUT);

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(led, OUTPUT);

pinMode(LED, OUTPUT);

pinMode(btn, INPUT);

pinMode(vibrator, OUTPUT);

digitalWrite(LED, LOW);

}

void loop() {

// put your main code here, to run repeatedly:

//error byn code starts

btn\_state = digitalRead(btn);

//Filters out the noise by setting a time buffer

if ( (millis() - lastDebounceTime) > debounceDelay)

{

if(btn\_state == HIGH)

{

if(flag == 0)

{

digitalWrite(LED, HIGH);

flag = 1;

lastDebounceTime = millis(); //Sets current time

}

else if(flag == 1)

{

digitalWrite(LED, LOW);

flag = 0;

lastDebounceTime = millis(); //Sets current time

}

}

}

//------------------------------------------------

long duration, distance;

digitalWrite(trigPin,HIGH);

delayMicroseconds(10);

digitalWrite(trigPin, LOW);

duration=pulseIn(echoPin, HIGH);

distance =(duration/1)/29.1;

duration=pulseIn(echoPin, LOW);

Serial.print(distance);

Serial.println("cm");

delay(10);

if((distance<=50))

{

digitalWrite(buzzer, LOW);

digitalWrite(led, HIGH);

digitalWrite(vibrator,HIGH );

}

else if(distance>50)

{

digitalWrite(buzzer, HIGH);

digitalWrite(led, LOW);

digitalWrite(vibrator, LOW);

}

}