Assignment 1

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| Maximum Mark | 2 |

const int trigPin = 7;

const int echoPin = 4;

int buzz = 10;

long duration;

int distance; // the setup function runs once when you press reset or power the board

void setup() { // initialize digital pin 13 as an output.

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);

pinMode(13, OUTPUT);

pinMode(2, OUTPUT);

Serial.begin(9600);

}

// the loop function runs over and over again forever

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, returns the sound wave travel time in microseconds

duration = pulseIn(echoPin, HIGH);

// Calculating the distance

distance= duration\*0.034/2;

// Prints the distance on the Serial Monitor

if(distance <= 50 && distance >= 20)

{

digitalWrite(13, HIGH);

// digitalWrite(13, LOW);

// turn the LED on (HIGH is the voltage level)

}

else

{

digitalWrite(13, LOW);

// turn the LED off by making the voltage LOW

// wait for a second

}

if(distance <= 20)

{

digitalWrite(2, HIGH);

tone(buzz, 2000);

delay(100);

noTone(buzz);

delay(100);

tone(buzz, 2000);

delay(100);

noTone(buzz);

delay(100);

tone(buzz, 2000);

delay(100);

noTone(buzz);

tone(buzz, 2000);

delay(100);

noTone(buzz);

delay(100);

}

else

{

digitalWrite(2, LOW);

// turn the LED off by making the voltage LOW

// wait for a second

}

}