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
}
}
```