

ASSIGNMENT-3
Programming

Assignment Date	02 October 2022
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Maximum Marks	2

Question:

Write code and connections in wokwi for the ultrasonic sensor.

Program:

```
int trigPin = 9; // TRIG pin
int echoPin = 8; // ECHO pin
float duration_us, distance_cm;

void setup() {
  // begin serial port
  Serial.begin (9600);

  // configure the trigger pin to output mode  pinMode(trigPin,
  OUTPUT);
  // configure the echo pin to input mode  pinMode(echoPin,
  INPUT);
}

void loop() {
  // generate 10-microsecond pulse to TRIG  pin
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  // measure duration of pulse from ECHO  pin
  duration_us = pulseIn(echoPin, HIGH);
  // calculate the distance
  distance_cm = 0.017 * duration_us;
```

```

// print the value to Serial Monitor
Serial.print("distance: ");
Serial.print(distance_cm);
Serial.println(" cm")
delay(500);
}

```

Output:

```

distance: 29.4 cm
distance: 27.6 cm
distance: 26.9 cm
distance: 17.4 cm
distance: 16.9 cm
distance: 14.3 cm
distance: 15.6 cm
distance: 13.1 cm

```

BLOCK DIAGRAM:

