Name – Parag Gattani

Program No. – 07

Program Title – Distance Measurement using ultrasonic sensor

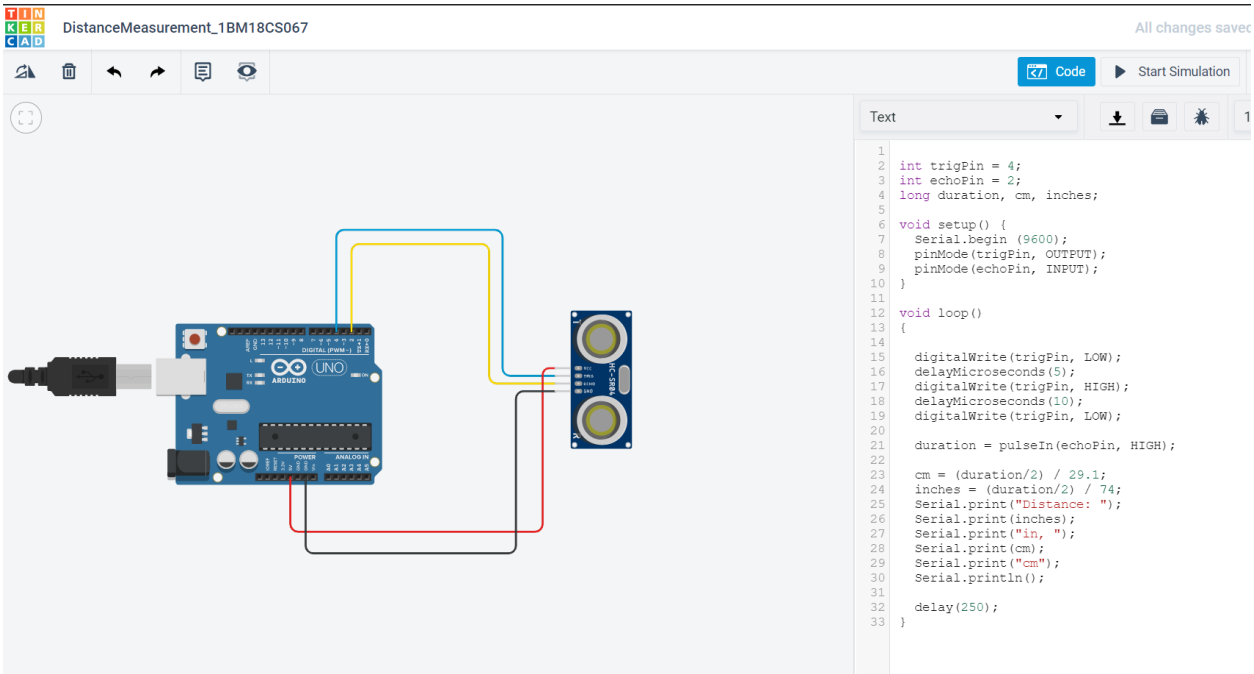
AIM

Design a system to measure the distance between objects.

HARDWARES REQUIRED

- Arduino Board
- Ultrasonic sensor HC-SR04

CIRCUIT DIAGRAM



WRITE-UP

Name - Parag Gattani
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07/10/2020

Exp.

DISTANCE MEASUREMENT

Aim
Design a system to measure the distance between objects.

Hardwares Required
Arduino Board
Ultrasonic distance measure. HC-SR04

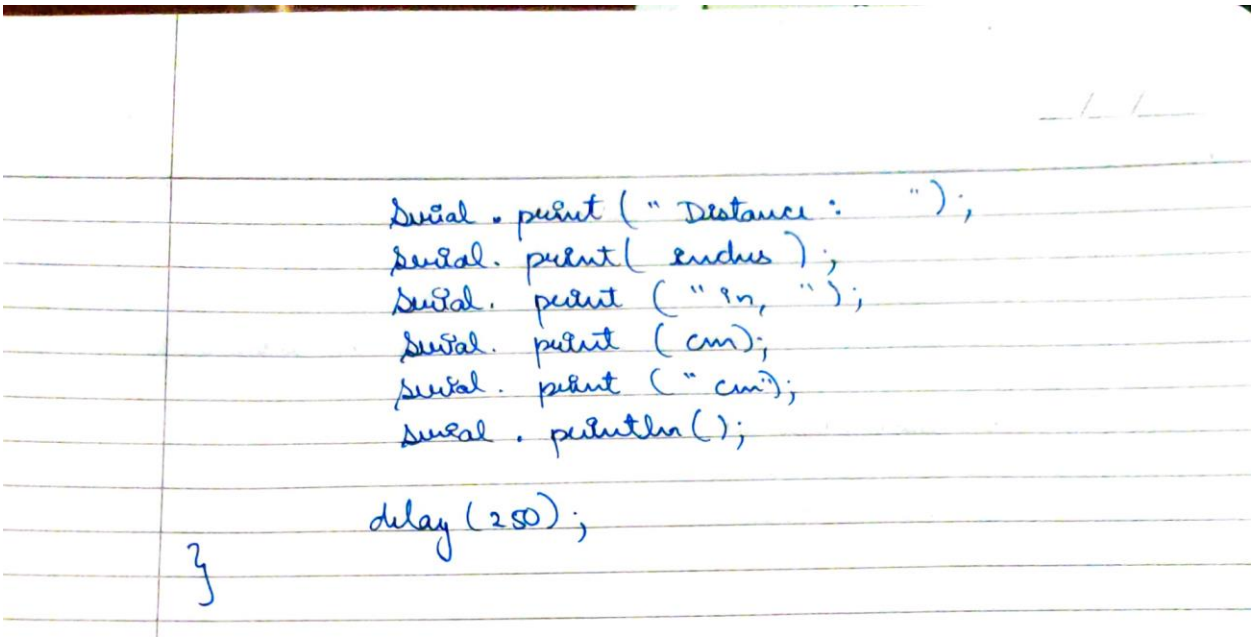
Code:

```
int trigPin = 4;
int echoPin = 2;
long duration, cm, inches;

void setup(){
        Serial.begin(9600);
        pinMode(trigPin, OUTPUT);
        pinMode(echoPin, INPUT);
}
void loop()
{
    digitalWrite(trigPin, LOW);
    delayMicroseconds(5);
    digitalWrite(trigPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(trigPin, LOW);

    duration = pulseIn(echoPin, HIGH);

    cm = (duration/2)/29.1;
    inches = (duration/2)/74;
```



CODE

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long duration, cm, inches;

void setup() {
  Serial.begin (9600);
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
}
```

```
void loop()
{

  digitalWrite(trigPin, LOW);
  delayMicroseconds(5);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);

  duration = pulseIn(echoPin, HIGH);

  cm = (duration/2) / 29.1;
  inches = (duration/2) / 74;
  Serial.print("Distance: ");
  Serial.print(inches);
  Serial.print("inch, ");
  Serial.print(cm);
  Serial.print("cm");
  Serial.println();

  delay(250);
```

```
}
```

OUTPUT

Design a system to measure the distance between objects using ultrasonic device.