

Program no 10

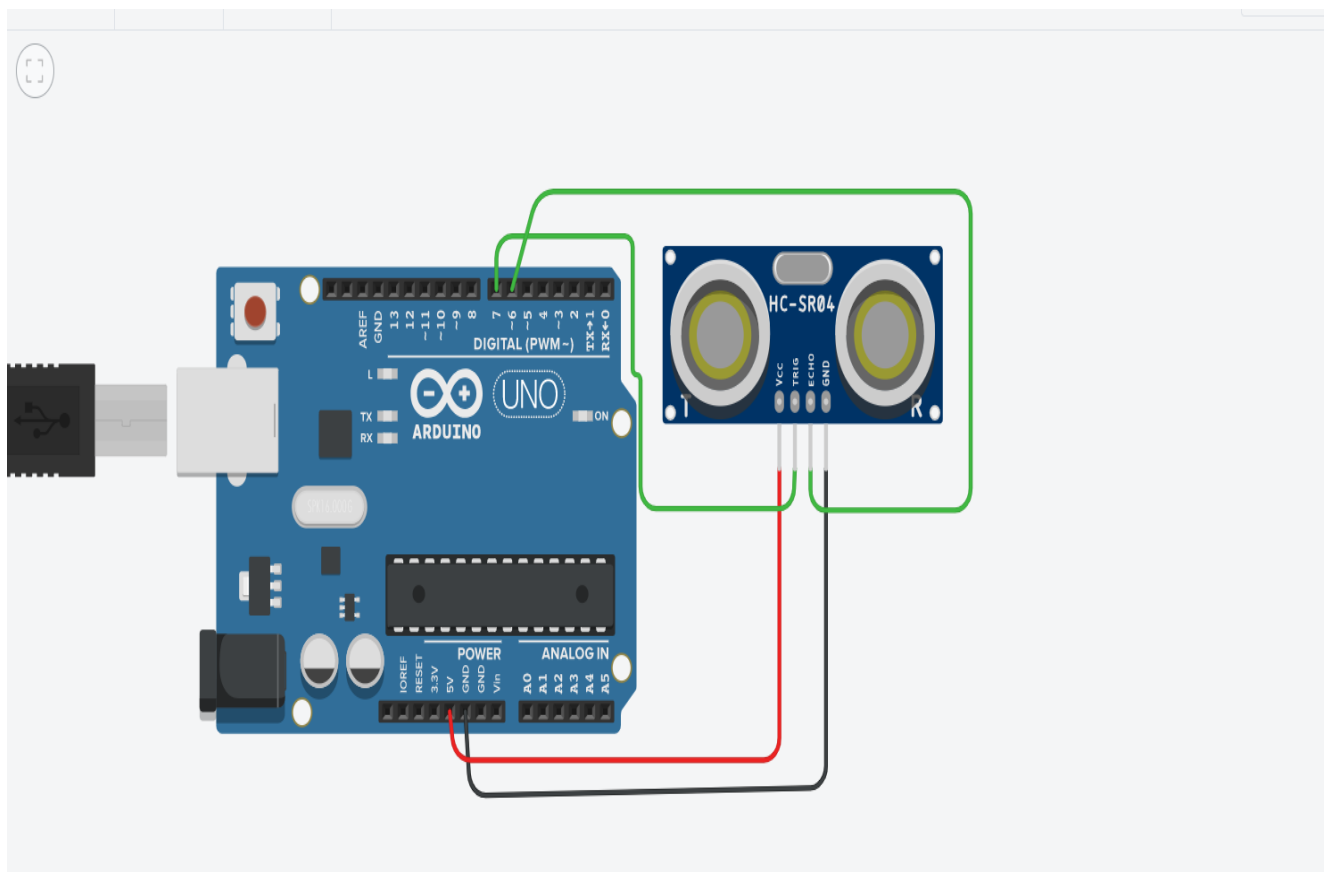
Program Title Distance Report

Aim : To Design the system for measuring distance between object

Hardware Required

- Arduino Board
- Wires
- Ultra sonic distance sensor

Circuit Diagram



Code:

Program - 10 Ultra sonic distance Sensor

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```
int triggerpin = 7;
int echoPin = 6;
void setup()
{
    pinMode(triggerpin, OUTPUT);
    pinMode(echoPin, INPUT);
    Serial.begin(9600);
}
void loop()
{
    long Distance, Duration;
    digitalWrite(triggerpin, HIGH LOW);
    delay(2);
    digitalWrite(triggerpin, HIGH);
    delay(10);
    digitalWrite(triggerpin, LOW);
    Duration = pulseIn(echoPin, HIGH);
    Distance = Duration * 0.034 / 2;
```

Serial.println(Distance);
delay(1000);
3

Observation /Output

The screenshot displays the Arduino IDE interface for a project titled "distance mesure". The main workspace shows a wiring diagram of an Arduino Uno connected to an HC-SR04 ultrasonic sensor. The sensor's VCC pin is connected to the 5V pin on the Arduino, and its GND pin is connected to a GND pin. The trigger pin is connected to digital pin 7, and the echo pin is connected to digital pin 6. A green box highlights the sensor and its connections.

The code editor on the right contains the following C++ code:

```
1 int triggerpin=7;
2 int echopin=6;
3 void setup()
4 {
5   pinMode(triggerpin, OUTPUT);
6   pinMode(echopin, INPUT);
7   Serial.begin(9600);
8 }
9
10 void loop()
11 {
12   long distance,duration;
13   digitalWrite(triggerpin,LOW);
14   delay(2);
15   digitalWrite(triggerpin,HIGH);
16   delay(10);
17   digitalWrite(triggerpin,LOW);
18   duration=pulseIn(echopin,HIGH);
19   distance=duration*0.034/2;
20   Serial.println(distance);
21   delay(1000);
22 }
```

Below the code editor is the Serial Monitor window, which shows a scale from 0 to 120. The current reading is approximately 60, indicating the measured distance in centimeters.