

Continuous Assessment – 2

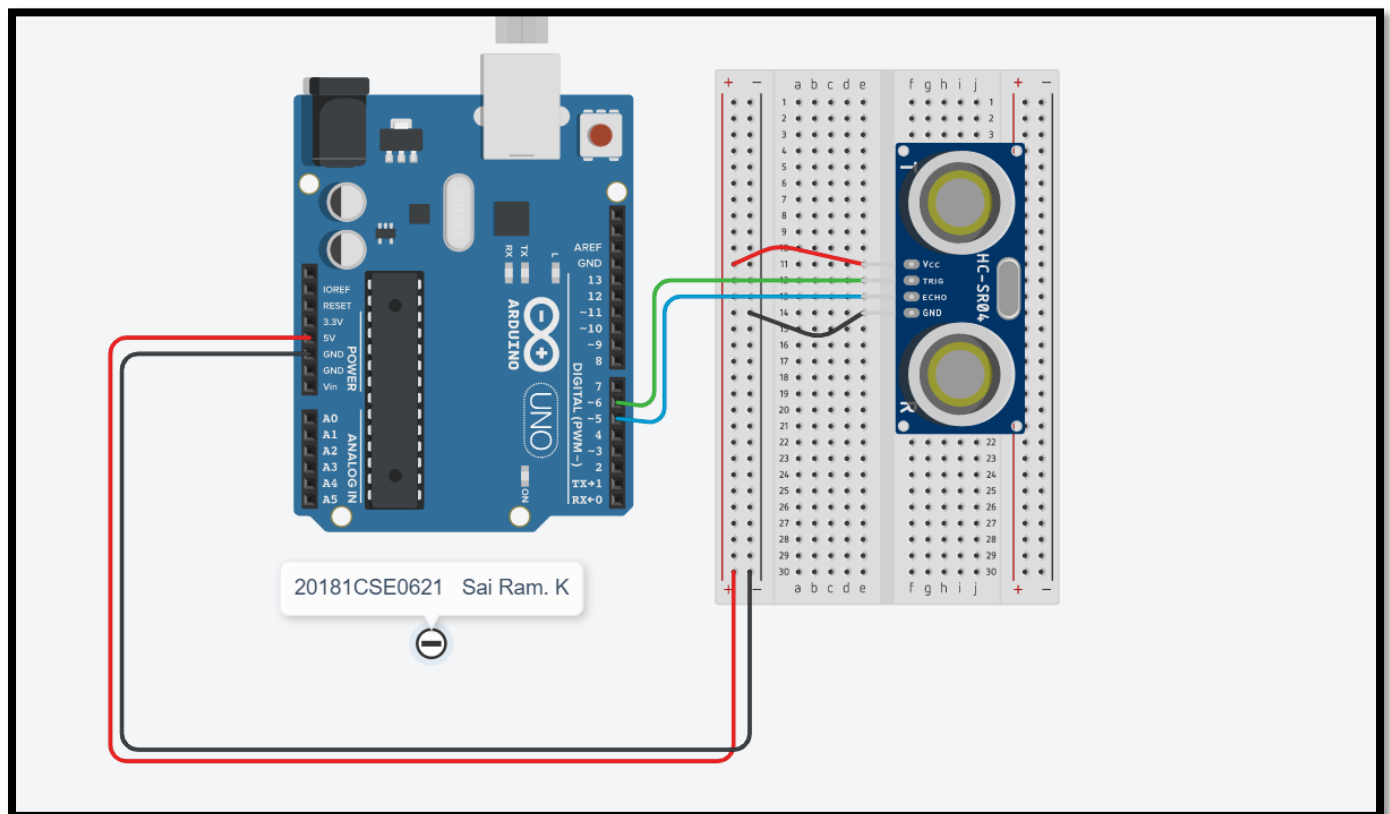
Set – C

Question : Interfacing of Arduino Uno with Ultrasonic Sensor. Write a program to measure the distance in inches and display it on the serial monitor.

Aim : To measure the distance of an object using Ultrasonic Sensor.

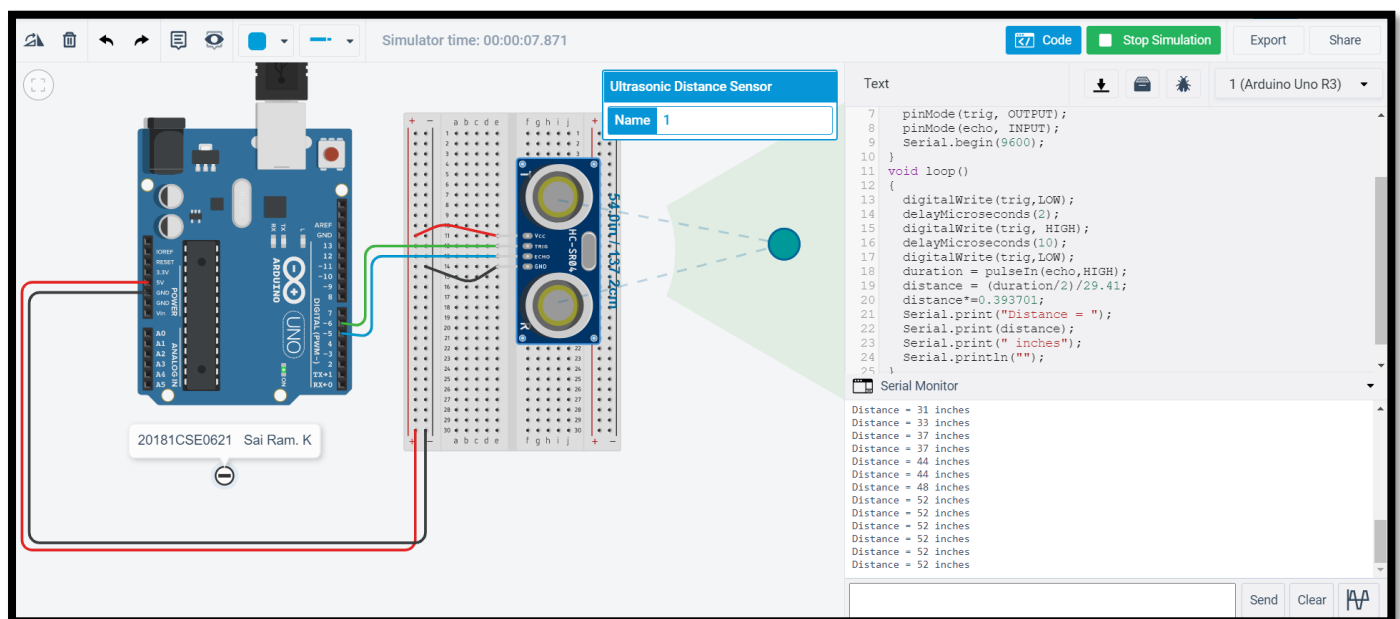
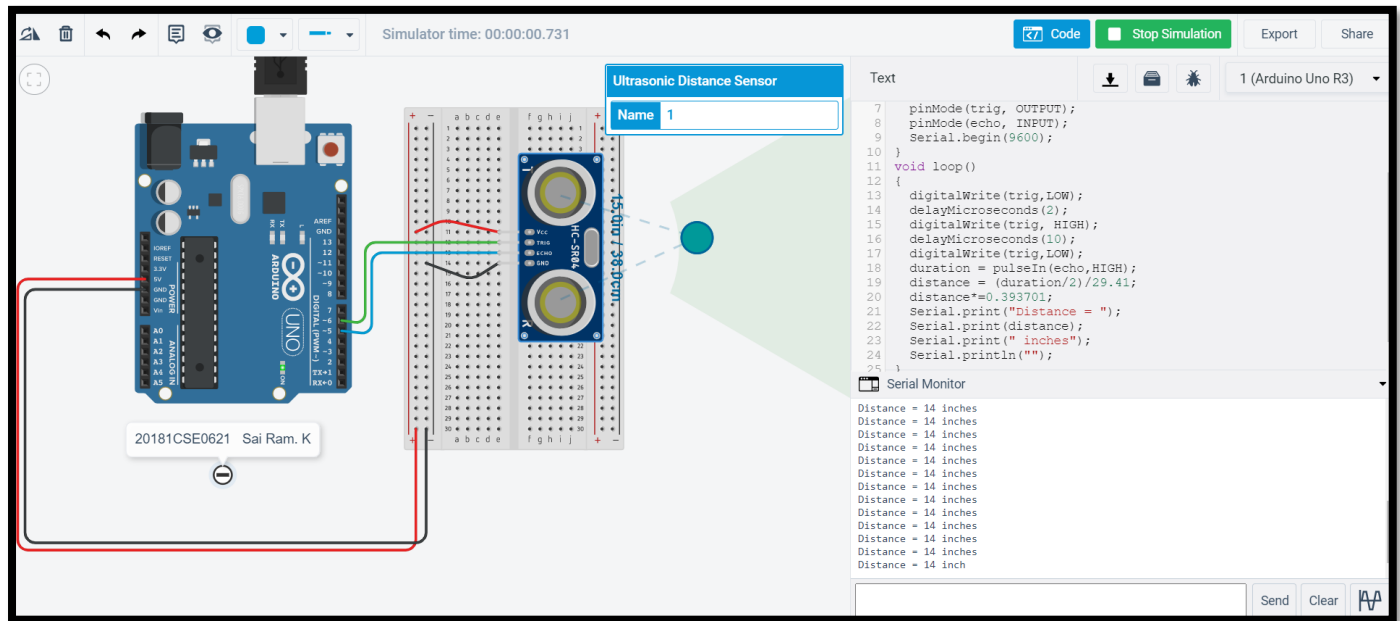
Components Required: Arduino uno, jumper wires, ultrasonic sensor, breadboard.

Initial Circuit Design :



Sketch [Code] :

```
const int trig = 6; //trig pin connecttion
const int echo = 5; // echo pin connection
long duration;
int distance;
void setup()
{
  pinMode(trig, OUTPUT);
  pinMode(echo, INPUT);
  Serial.begin(9600);
}
void loop()
{
  digitalWrite(trig,LOW);
  delayMicroseconds(2);
  digitalWrite(trig, HIGH);
  delayMicroseconds(10);
  digitalWrite(trig,LOW);
  duration = pulseIn(echo,HIGH);
  distance = (duration/2)/29.41; // for distance in cm
  distance*=0.393701; // converting cm to inches as 1cm = 0.33701 inches
  Serial.print("Distance = ");
  Serial.print(distance);
  Serial.print(" inches");
  Serial.println("");
}
```



Serial Monitor :

