Assignment -4

Assignment Date	25 october 2022
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Maximum Marks	2 Marks

Question:

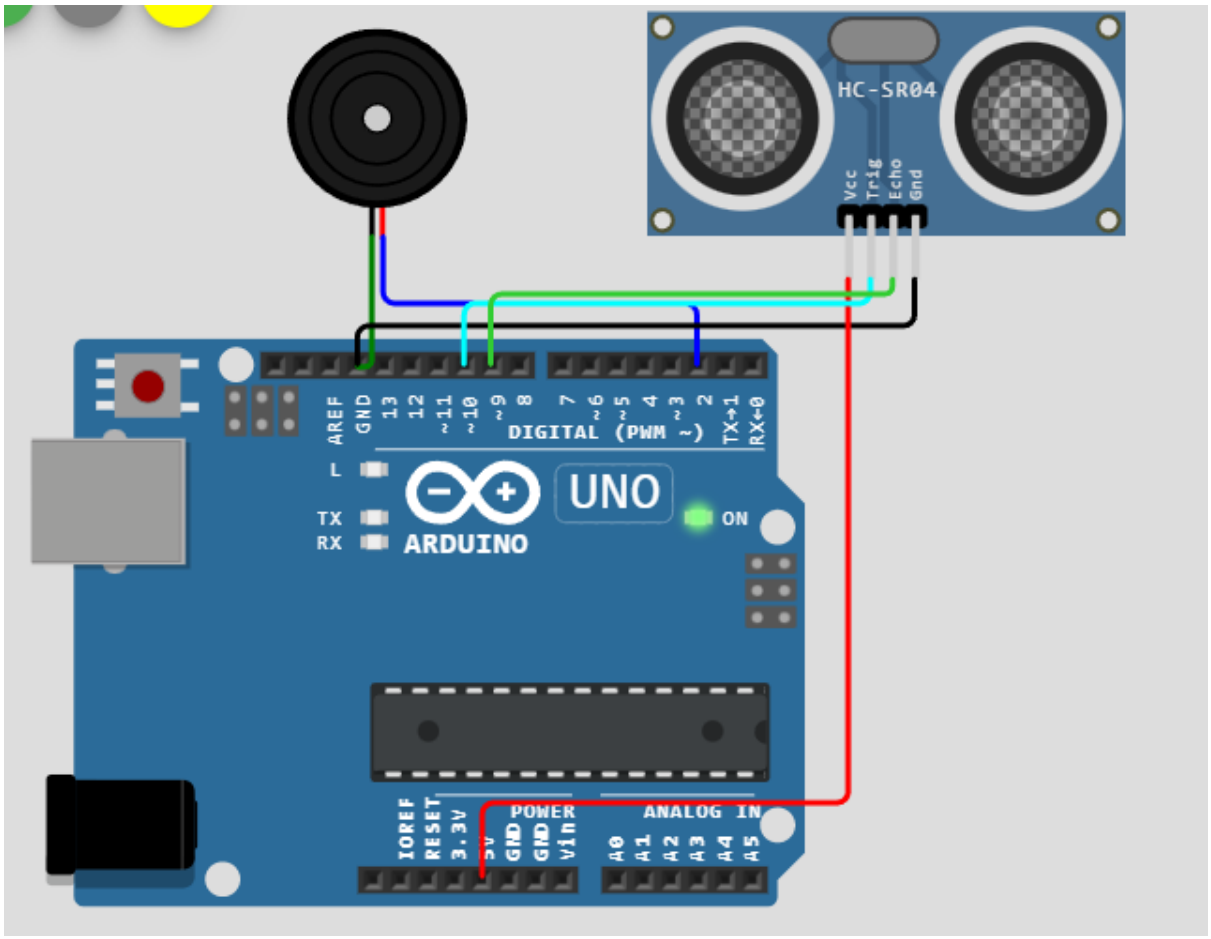
Write code and connections in wokwi for ultrasonic sensor.whenever distance is less than 100cms send “alert”.

PROGRAM:

```
/*
  This code should work to get warning cross the buzzer when something be closer than 1 meter
  Circuit is ultrasonic sensor and buzzer +5v and Arduino uno is used

*/
// Define pins for ultrasonic and buzzer
int const trigPin = 10;
int const echoPin = 9;
int const buzzPin = 2;

void setup()
{
  pinMode(trigPin, OUTPUT); // trig pin will have pulses output
  pinMode(echoPin, INPUT); // echo pin should be input to get pulse width
  pinMode(buzzPin, OUTPUT); // buzz pin is output to control buzzering
}

void loop()
{
  // Duration will be the input pulse width and distance will be the distance to the obstacle in
centimeters
  int duration, distance;
  // Output pulse with 1ms width on trigPin
  digitalWrite(trigPin, HIGH);
  delay(1);
  digitalWrite(trigPin, LOW);
  // Measure the pulse input in echo pin
  duration = pulseIn(echoPin, HIGH);
  // Distance is half the duration devided by 29.1 (from datasheet)
  distance = (duration/2) / 29.1;
  // if distance less than 1 meter and more than 0 (0 or less means over range)
   if (distance <= 100 && distance >= 0) {
     // Buzz
     digitalWrite(buzzPin, HIGH);
   } else {
```

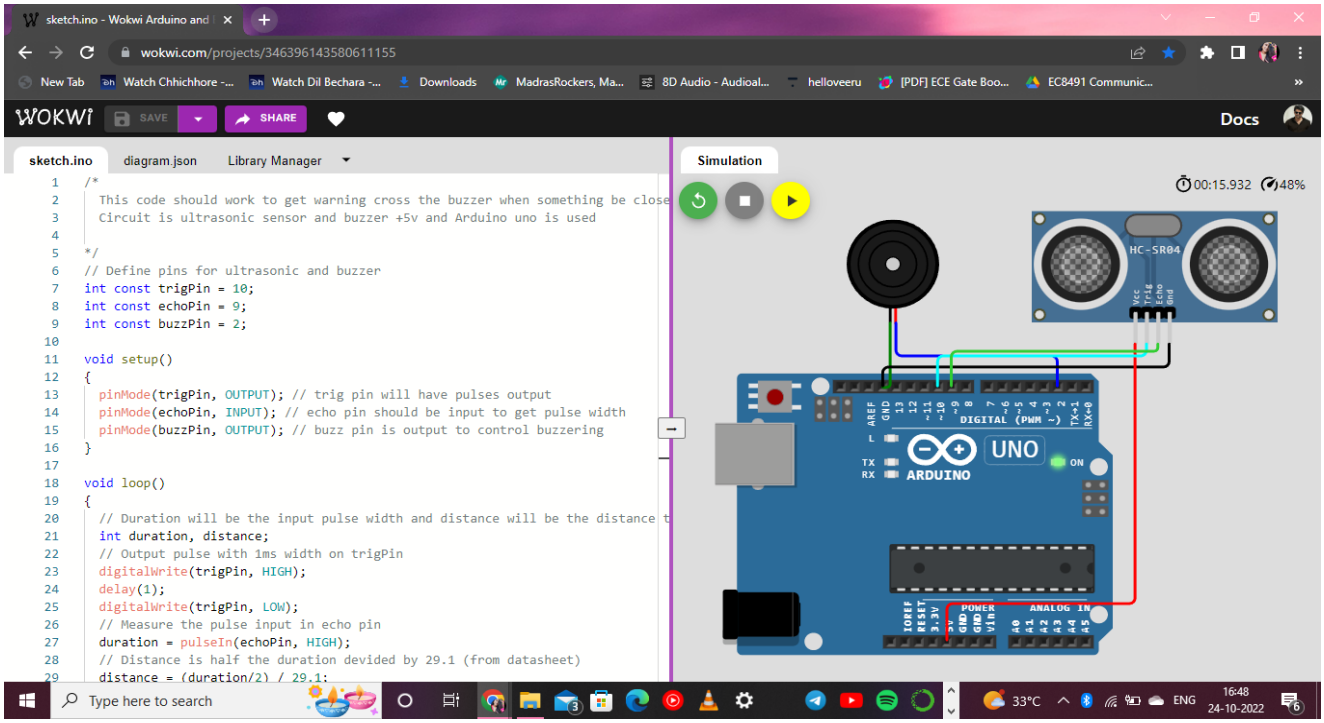
```
    // Don't buzz
    digitalWrite(buzzPin, LOW);
  }
  // Waiting 100cms won't hurt any one
  delay(1000);
}
```

CIRCUIT DIAGRAM:



LINK -- https://wokwi.com/projects/346396143580611155

SIMULATION DIAGRAM:



I created an account on ibm cloud still I am not getting a feature code to access the cloud .so that's why I am able to connect my code to ibm cloud and display it.I tried so many times to access the feature code but didn't work .so I am attaching my program link above.