ASSIGNMRNT 4

Date	31October2022
TeamID	PNT2022TMID40997
MaximumMarks	2Marks

Question1:

*Write code and connections in wokwi for the ultrasonic sensor.

*Write code and connections in work for ultrasonic sensor.Whenever distance is less than 100cms send"alert"to ibm cloud and display in device recent events.

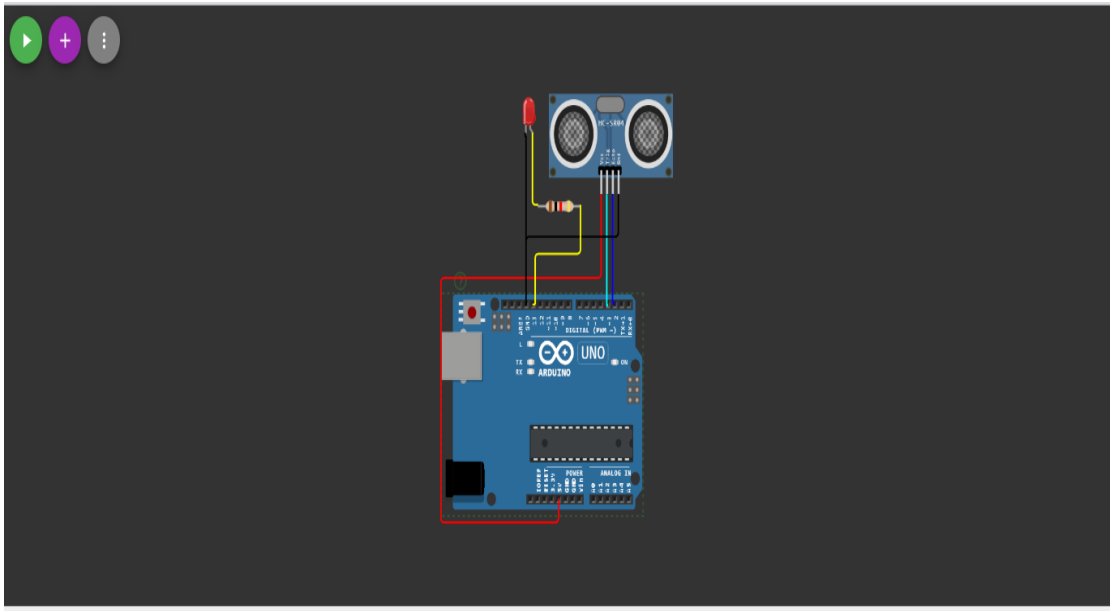
Code:

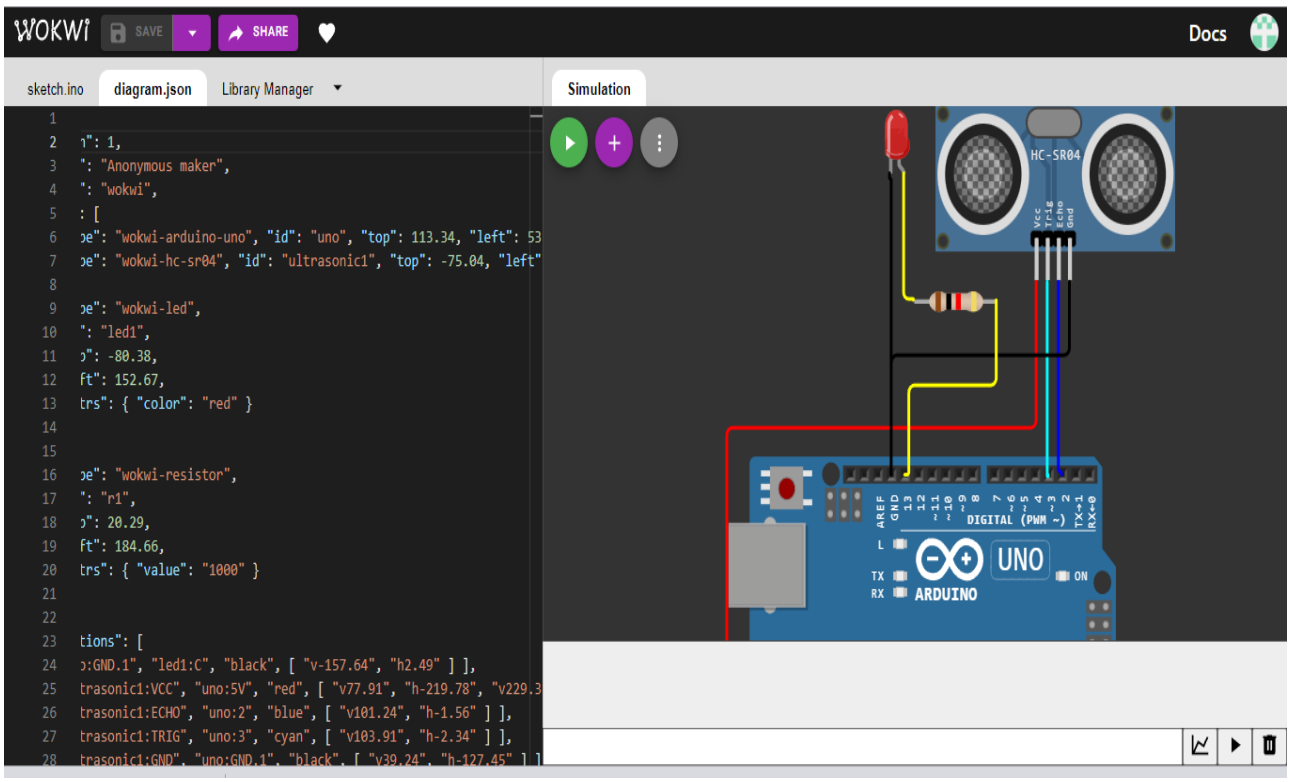
```
#define ECHO_PIN 1
#define TRIG_PIN 9


void setup() {
Serial.begin(115200);
pinMode(LED_BUILTIN, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM() {
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);
int duration = pulseIn(ECHO_PIN, HIGH);
return duration * 5.044/2;
}
void loop() {
float distance = readDistanceCM();
bool isNearby = distance < 100;
digitalWrite(LED_BUILTIN, isNearby);
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
 delay(100);
}
```

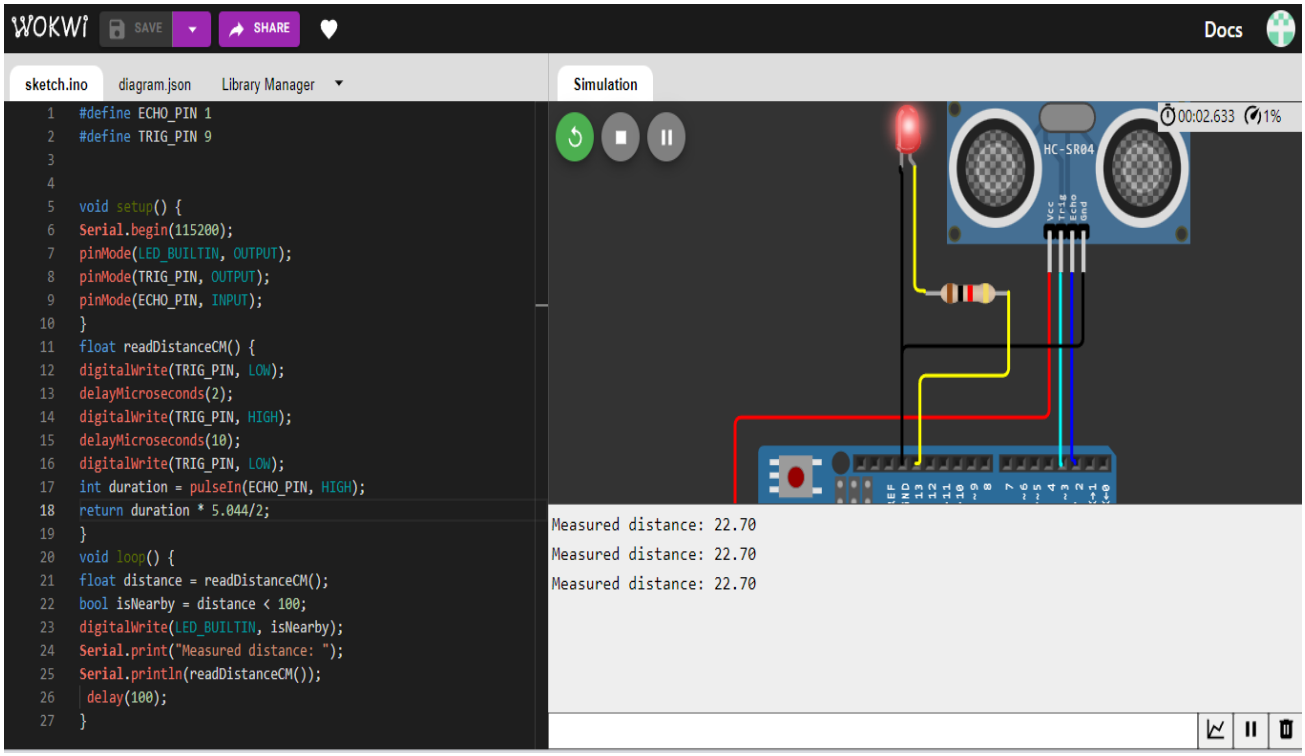
WOKWI LINK : https://wokwi.com/projects/347102827413242450

Solution :


UNO
ARDUINO


WOKWi
SAVE
SHARE
Docs
sketch.ino
diagram.json
Library Manager
Simulation
HC-SR04
UNO
ARDUINO
DIGITAL (PWM ~)

Solution run:

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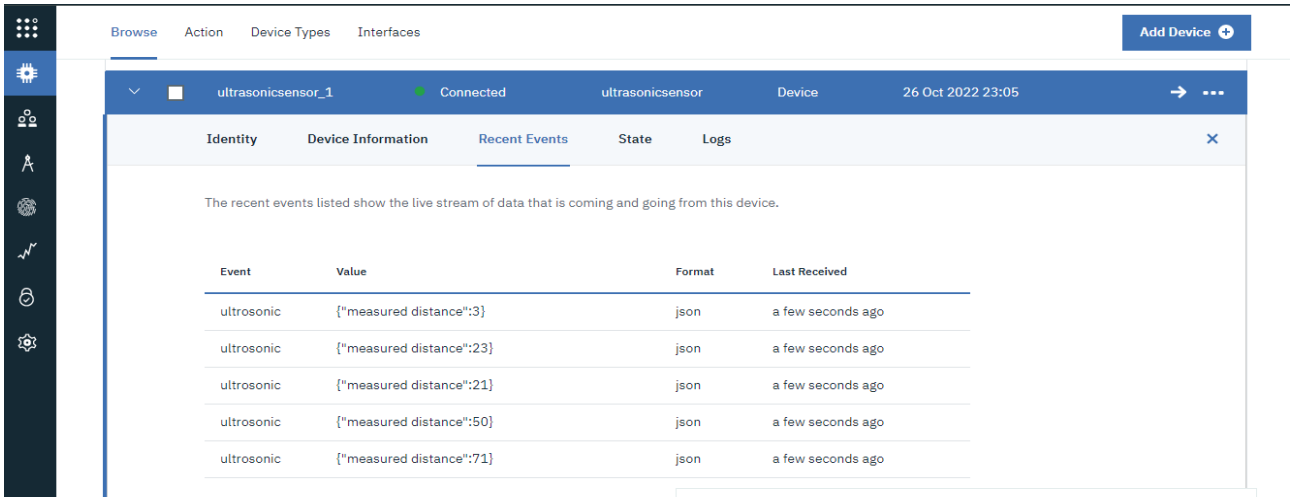
digitalWrite(LED_BUILTIN, isNearby);
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
 delay(100);
}
```

OUTPUT:
DATA IS SENT TO IBM CLOUD WHEN NO OBJECT IS DETECTED



When no object is detected :