Solution :

ASSIGNMENT-4

Date	31October2022
TeamID	PNT2022TMID52232
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 lessthan 100cms send"alert"toibmcloudanddisplayindevicerecentevents.

Code:

```
#define ECHO_PIN 2
#define TRIG_PIN 3

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 * 0.034 / 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/347009576382497362
```
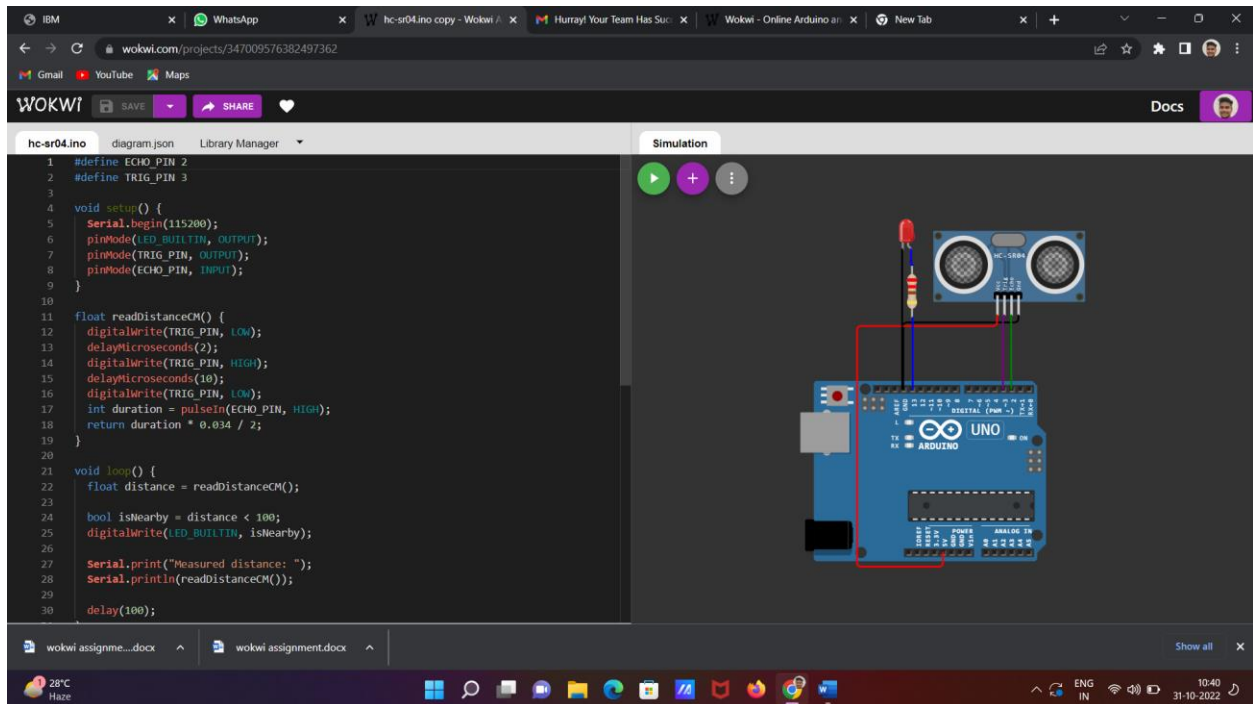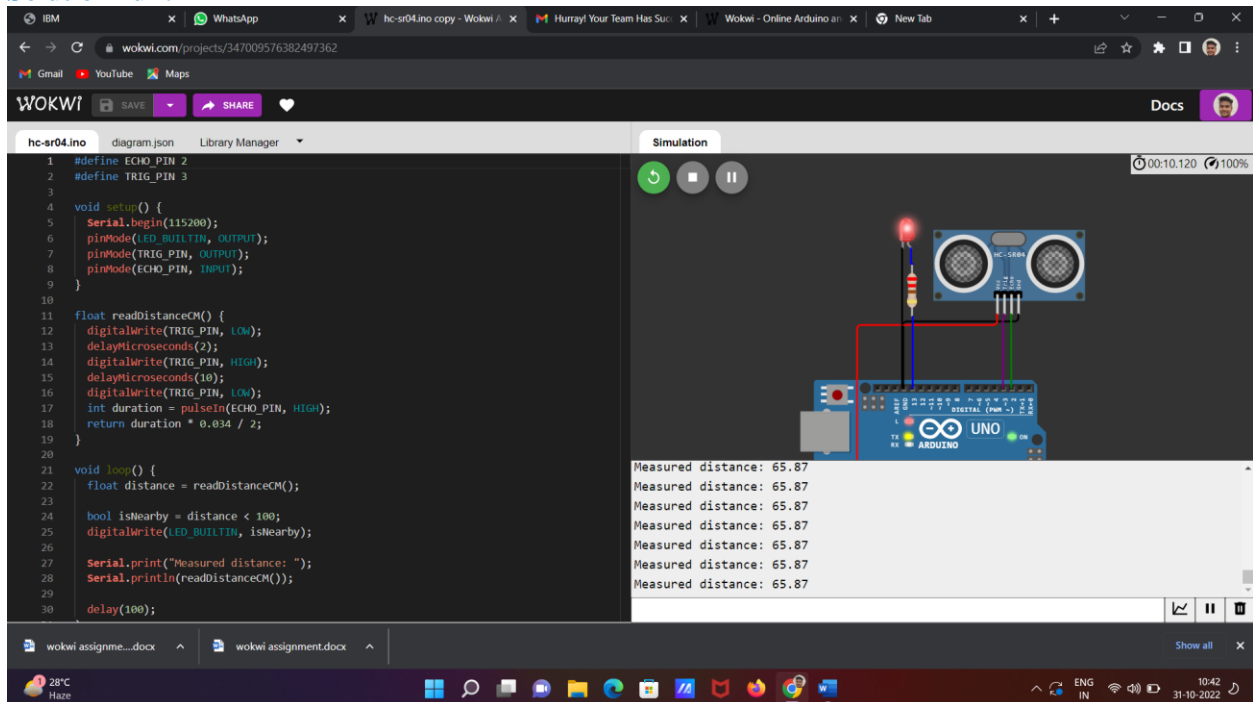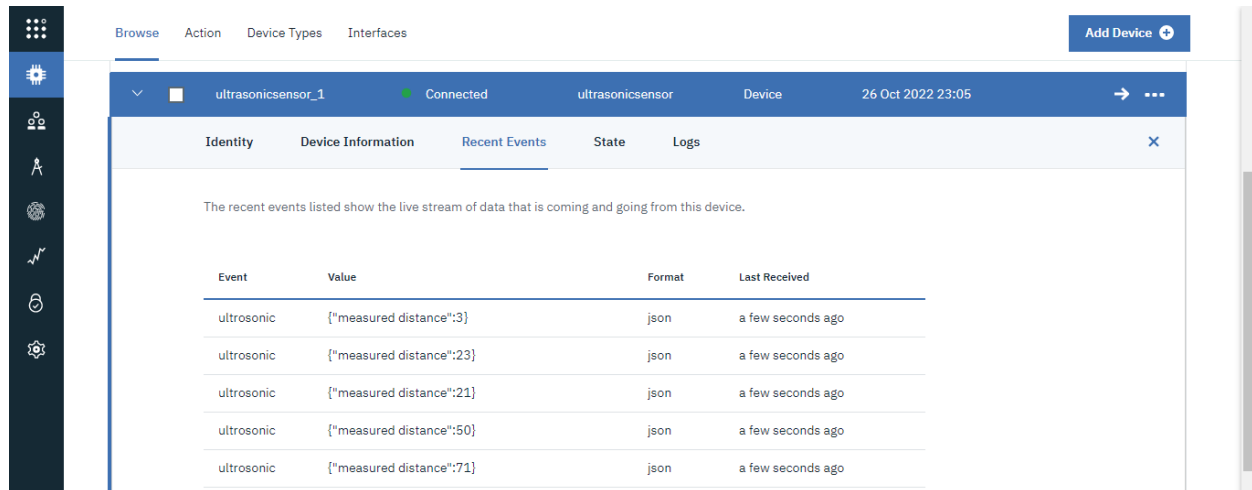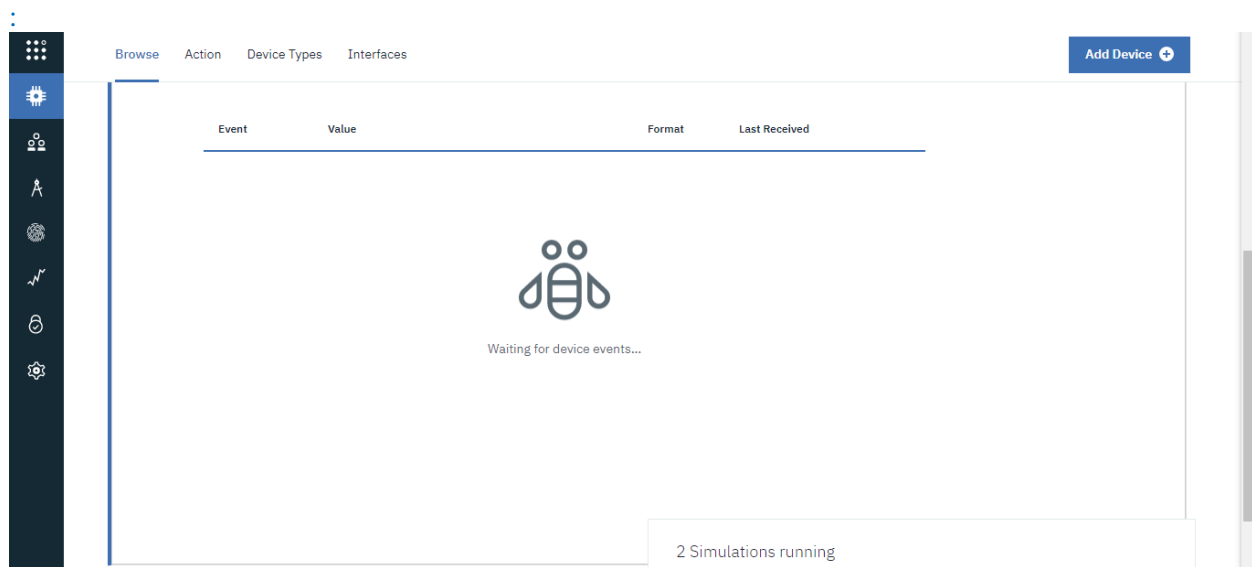
Solution :

Solution run:

OUTPUT:

Solution :

Browse   Action   Device Types   Interfaces   Add Device ⊕

ultrasonicsensor_1   ● Connected   ultrasonicsensor   Device   26 Oct 2022 23:05   → ⋯

Identity   Device Information   **Recent Events**   State   Logs   ✕

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
ultrosonic	{"measured distance":3}	json	a few seconds ago
ultrosonic	{"measured distance":23}	json	a few seconds ago
ultrosonic	{"measured distance":21}	json	a few seconds ago
ultrosonic	{"measured distance":50}	json	a few seconds ago
ultrosonic	{"measured distance":71}	json	a few seconds ago

When no object is detected

:

Browse   Action   Device Types   Interfaces   Add Device ⊕

Event	Value	Format	Last Received

Waiting for device events...

2 Simulations running