IBM ASSIGNMENT – 4

sketch.ino

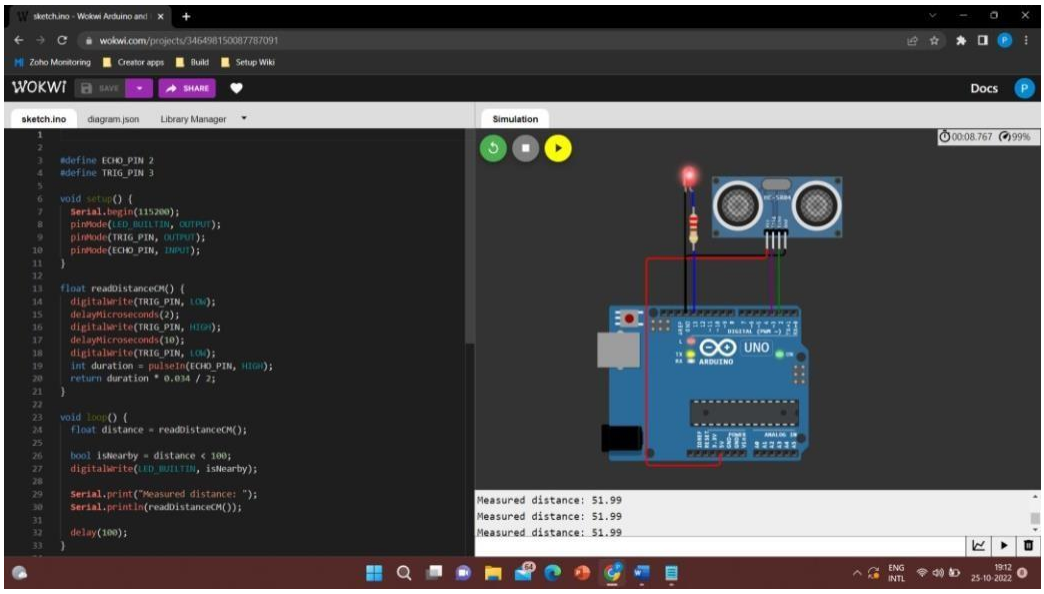
```
#define ECHO_PIN2 #define
TRIG_PIN3 void setup()
{
 Serial.begin(115200); pinMode(LED_BUILTIN, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);  pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM()
 {
 digitalWrite(TRIG_PIN,  LOW);  delayMicroseconds(2);
digitalWrite(TRIG_PIN,  HIGH);  delayMicroseconds(10);
digitalWrite(TRIG_PIN, 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);}
```

diagram.json

```
{
 "version": 1,
 "author": "Nihila",
 "editor": "wokwi",
 "parts": [
  {
```

```
    "type": "wokwi-arduino-uno",
    "id": "uno",
    "top": 275.99,
    "left": 47.73,      "rotate": 0,
    "hide": false,
    "attrs": {}
  },
  {
    "type": "wokwi-resistor",
    "id": "r1",
    "top": 165.87,
    "left": 142.81,
    "rotate": 90,
    "hide": false,
    "attrs": { "value": "220" }
  },
  {
    "type": "wokwi-led",
    "id": "led",
    "top": 87.29,
    "left": 147.05,
    "rotate": 0,
    "hide": false,
    "attrs": { "color": "red" } },    {
    "type": "wokwi-hc-sr04",
    "id": "ultrasonic",
    "top": 108.43,
    "left": 196.5,
    "rotate": 0,
    "hide": false,
    "attrs": { "distance": "180" }
  }
 ],
```

```
 "connections": [
   [ "uno:GND.1", "ultrasonic:GND", "black", [ "v-8", "*", "v8" ] ],
   [ "uno:2", "ultrasonic:ECHO", "green", [] ],
   [ "uno:3", "ultrasonic:TRIG", "purple", [ "*", "v4" ] ],
   [ "uno:5V", "ultrasonic:VCC", "red", [ "v16", "h-96", "*", "v12" ] ],
   [ "uno:GND.1", "led:C", "black", [] ],
   [ "r1:1", "led:A", "blue", [] ],    [ "uno:13", "r1:2",
"blue", []]
}
```



https://wokwi.com/projects/346498150087787091