

ASSIGNMENT -4

SMART SOLUTIONS FOR RAILWAYS

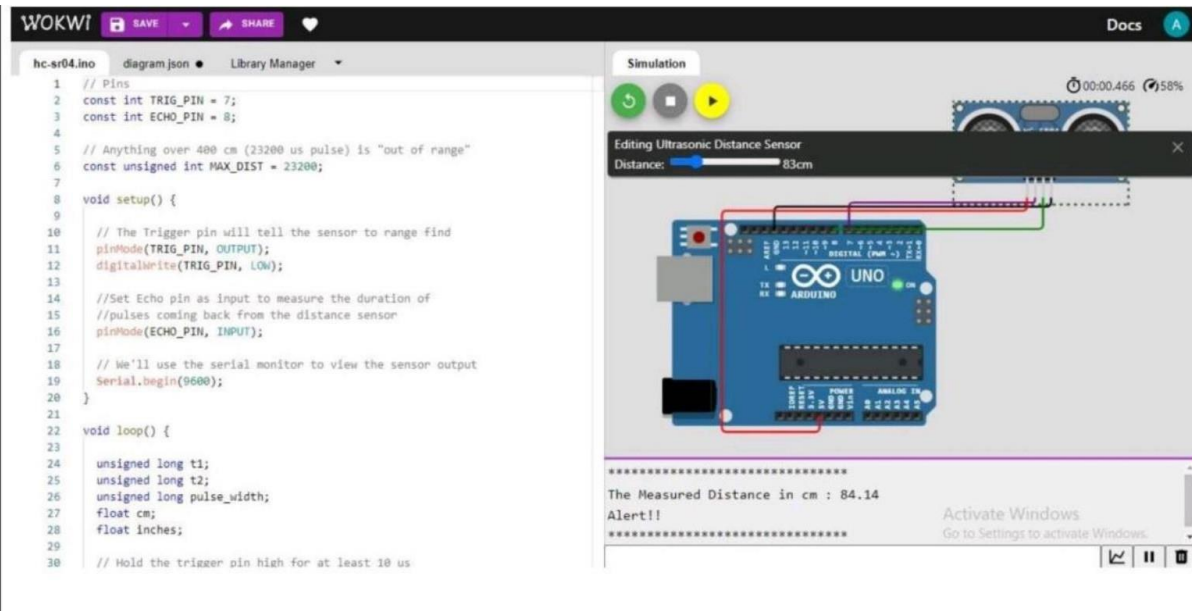
Assignment Date	04 October 2022
Student Name	VARSHINI BALA B
Student Roll Number	113219071046
Maximum Marks	2 Marks

1. Write Code and connections in wokwi for ultrasonic sensor. whatever distance is less than 100 cms send “Alert” to ibm cloud aand display in device recent events.

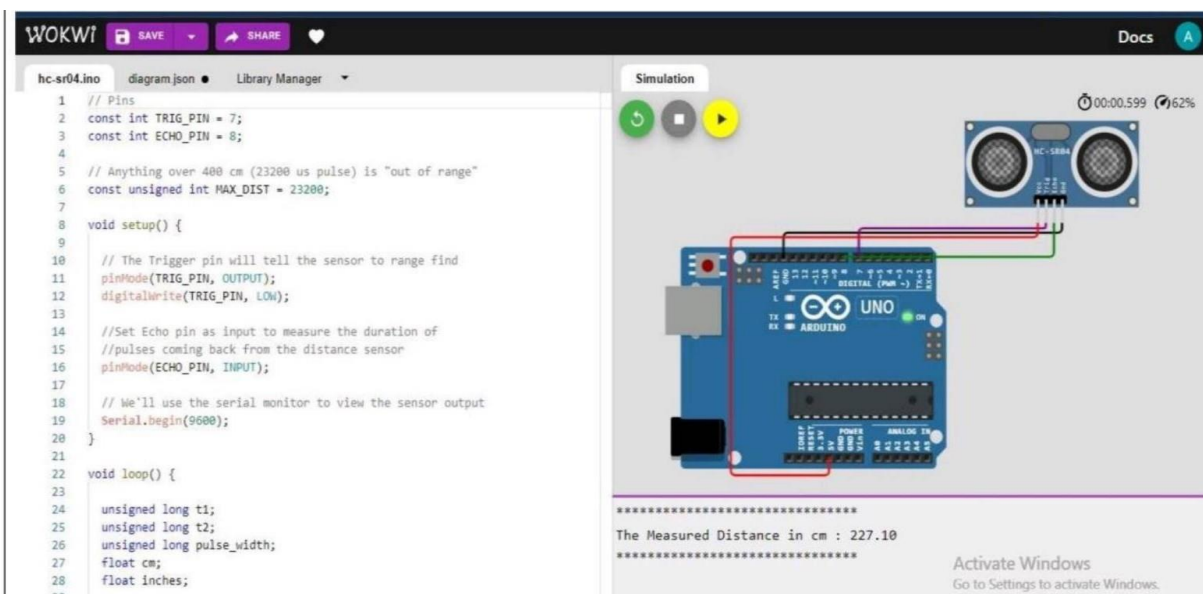
```
const int TRIG_PIN = 7 ; const int ECHO_PIN = 8;
void setup() {
  digitalWrite(TRIG_PIN, LOW);
}
void loop() { unsigned long t1;
  unsigned long t2;
  unsigned long pulse_width; float cm;
  float inches;
  while (digitalRead( ECHO_PIN )==0 );
  while (digitalRead(ECHO_PIN) == 1); t2= micros ();
  pulse_width = t2-t1;
  inches = pulse_width/148.0;
  if (pulse_width >MAX _ DIST ){ Serial.println("Out of range");
  }
  else {
    Serial.println("*****");
    Serial.print("The Measured Distance in cm: ");
    Serial.println(cm);
    if( cm < 100 ){
      //while(true){
        Serial.println("Alert!!");
      //}
    }
    Serial.print("*****");
  }
}
```

Output:

1.If the distance is less than 100 cms ,it alerts.



2.If the distance is more than 100 cms,it won't alert



3.Simulation and code execution

