

## ASSIGNMENT -4

# SMART SOLUTIONS FOR RAILWAYS

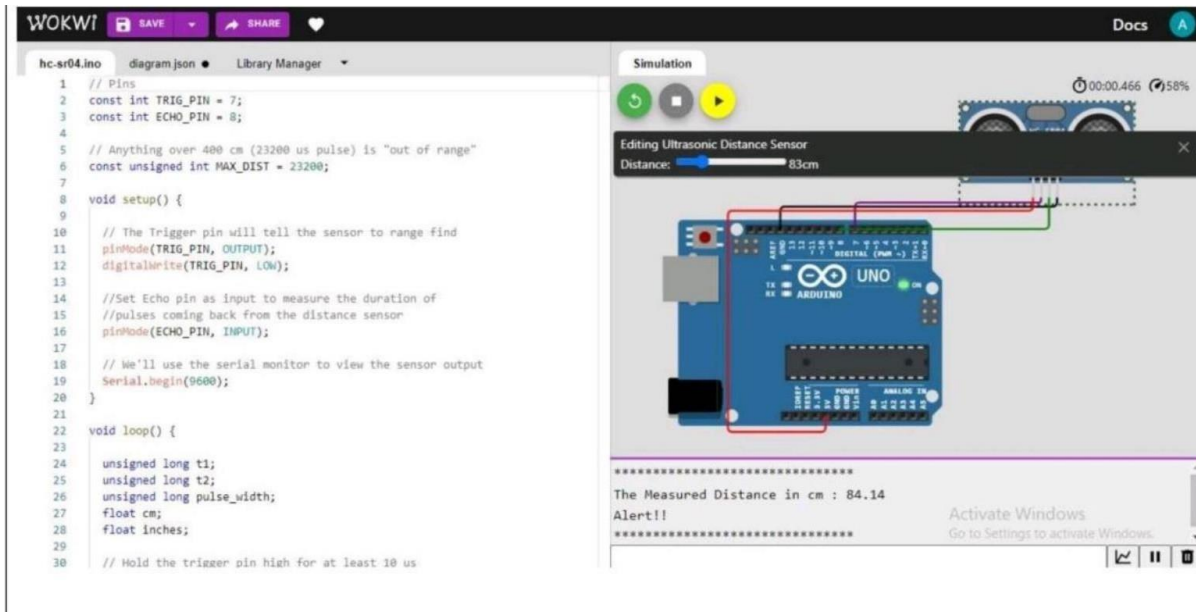
ASSIGNMENT DATE	04 November 2022
PROJECT NAME	SMART SOLUTIONS FOR RAILWAYS
TEAM ID	PNT2022TMID37659
MAXIMUM MARKS	2 Marks

**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.**

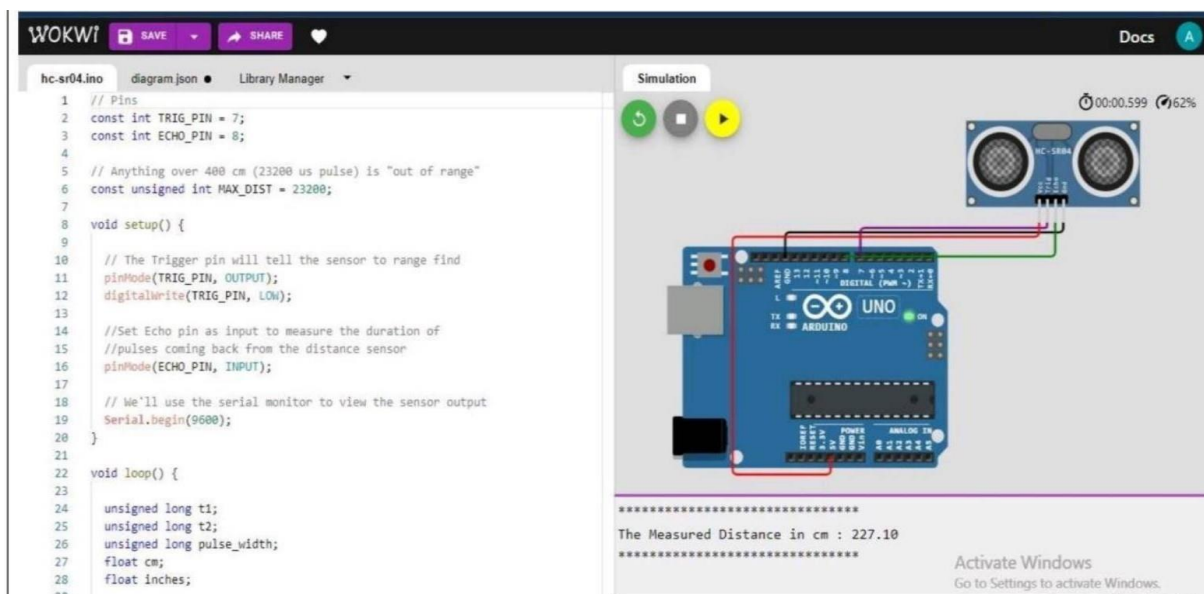
```
const int TRIG_PIN = 7 ; const int ECHO_PIN = 8;
void setup() {
  digitalWrite(TRIG_PIN, LOW);
}
void loop() { unsigned long t1;
  unsigned long t2;
  unsigned long pulse_width; float cm;
  float inches;
  while (digitalRead( ECHO_PIN )==0 );
  while (digitalRead(ECHO_PIN) == 1); t2= micros ();
  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

