

## ASSIGNMENT -4

# SMART SOLUTIONS FOR RAILWAYS

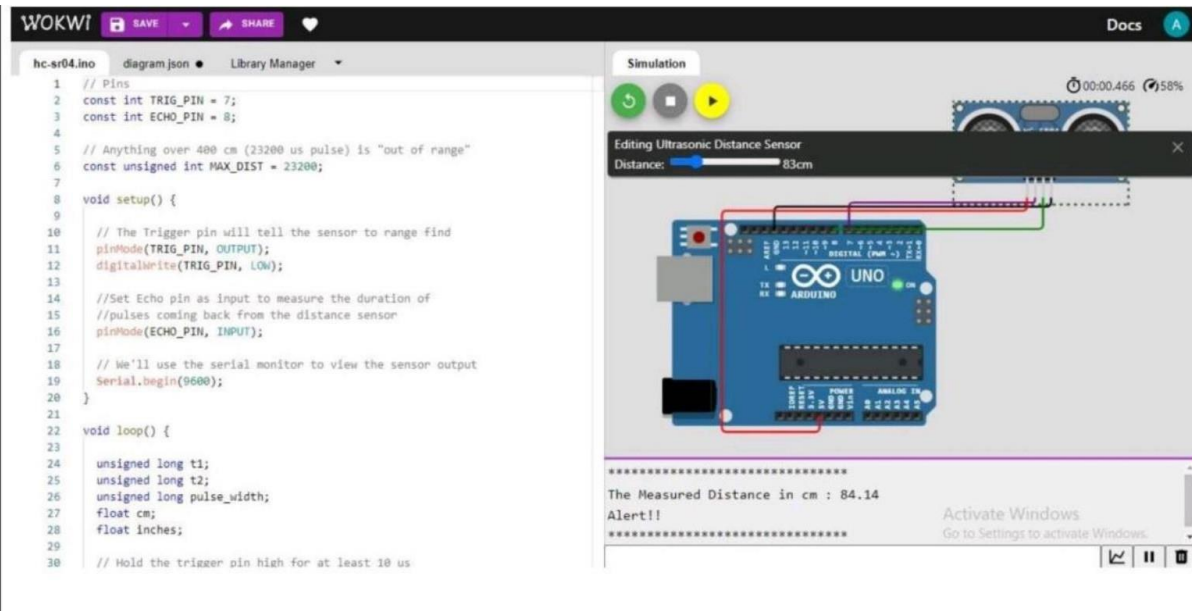
Assignment Date	04 October 2022
Student Name	ABI SHEK KUMAR S
Student Roll Number	113219041003
Maximum Marks	2 Marks

**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.**

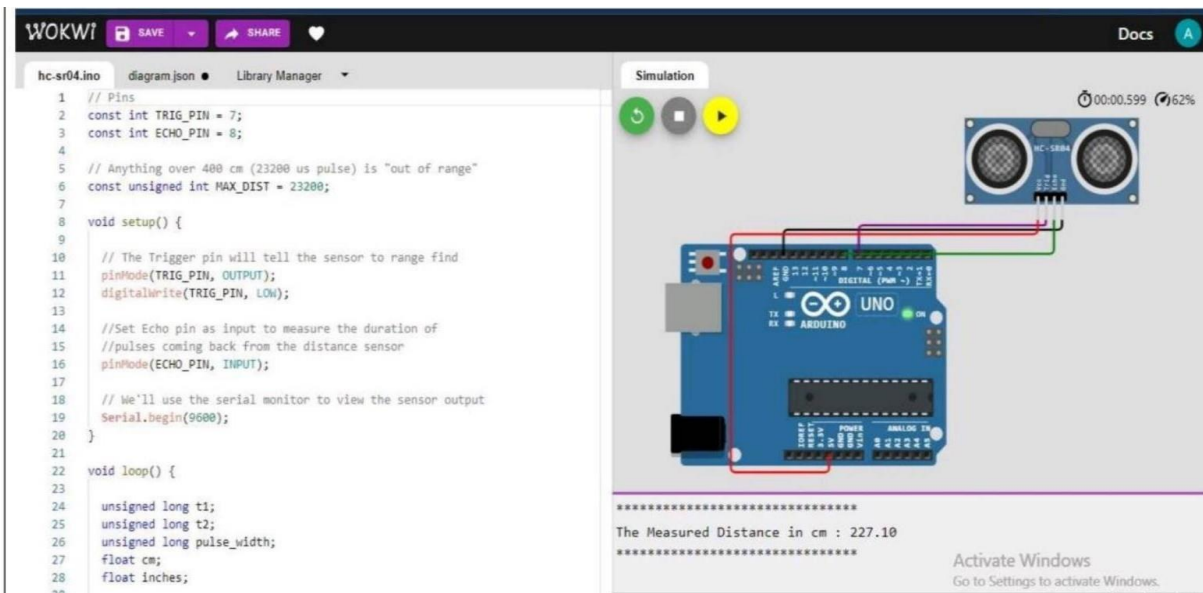
```
const int TRIG_PIN = 7 ; const int ECHO_PIN = 8;
void setup() {
digital Write(TRIG_PIN, LOW);
}
void loop() { unsigned long t1;
unsigned long t2;
unsigned long pulse_width; float cm;
float inches;
while (digitalRead( ECHO_PIN )==0 );
while (digitalRead(ECHO_PIN) == 1); t2= micros ();
pulse_width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

