```
const int TRIG_PIN = 7 ;
const int ECHO_PIN = 8;

const unsigned int
MAX_DIST = 23200;

void setup() {
Mode(TRIG_PIN, OUTPUT);
digital Write(TRIG_PIN, LOW);

pinMode(ECHO_PIN, INPUT ) ;

Serial.begin(9600);
 }

void loop() {
unsigned long t1;

unsigned long t2;

 unsigned long pulse_width;
 float cm;
 float inches;

digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);

while (digitalRead( ECHO_PIN )==0 );

 t1= micros ();
  while (digitalRead(ECHO_PIN) == 1);
   t2= micros ();
   pulse_width = t2-t1;

 cm=pulse_Width / 58 ;
 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("*******************************");

}

Delay(1000);
}
```
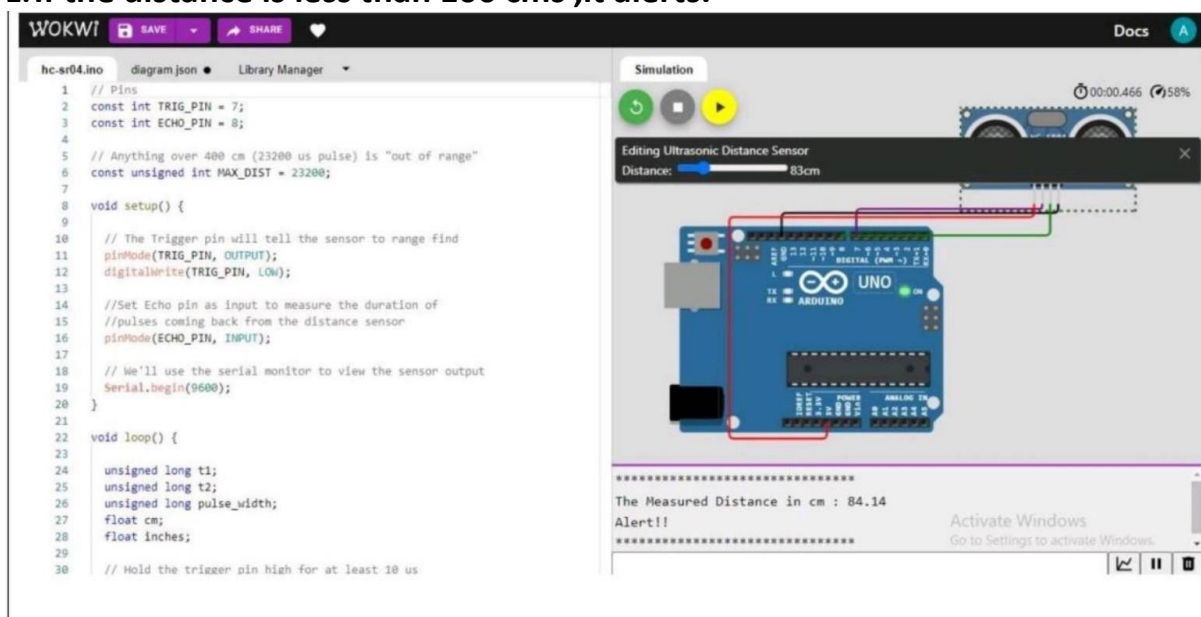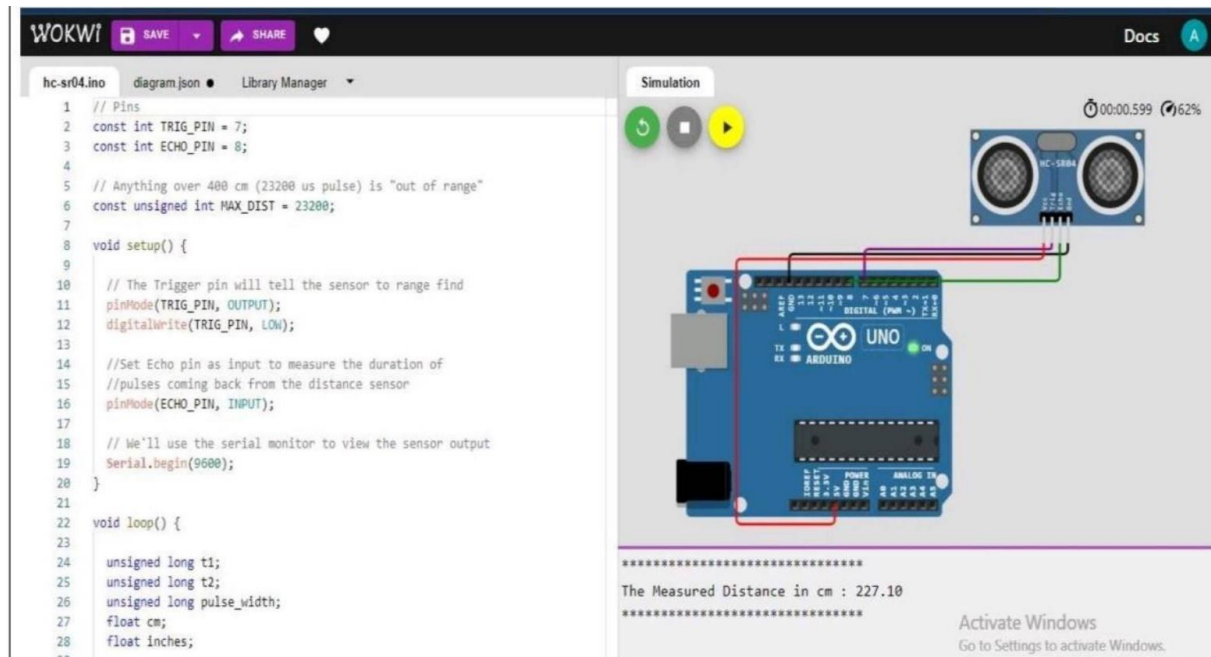
Output:

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

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


```
// Pins
const int TRIG_PIN = 7;
const int ECHO_PIN = 8;

// Anything over 400 cm (23200 us pulse) is "out of range"
const unsigned int MAX_DIST = 23200;

void setup() {

  // The Trigger pin will tell the sensor to range find
  pinMode(TRIG_PIN, OUTPUT);
  digitalWrite(TRIG_PIN, LOW);

  //Set Echo pin as input to measure the duration of
  //pulses coming back from the distance sensor
  pinMode(ECHO_PIN, INPUT);

  // We'll use the serial monitor to view the sensor output
  Serial.begin(9600);
}

void loop() {

  unsigned long t1;
  unsigned long t2;
  unsigned long pulse_width;
  float cm;
  float inches;
```

```
*********************************
The Measured Distance in cm : 227.10
*********************************
```

3. Simulation and code execution


```
*********************************
The Measured Distance in cm : 201.79
*********************************
```

```
*********************************
The Measured Distance in cm : 57.79
Alert it !!
*********************************
```