

Assignment -4

Assignment Date	26 October 2022
Student Name	ISHWARYA B
Team ID	PNT2022TMID25294
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

Question-1:

Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.

Solution:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organisation = “a09qmv”

#define deviceType = “device1”

#define deviceId =”1234”

#define authMethod =”use-token-auth”

#define authToken =”12345678”

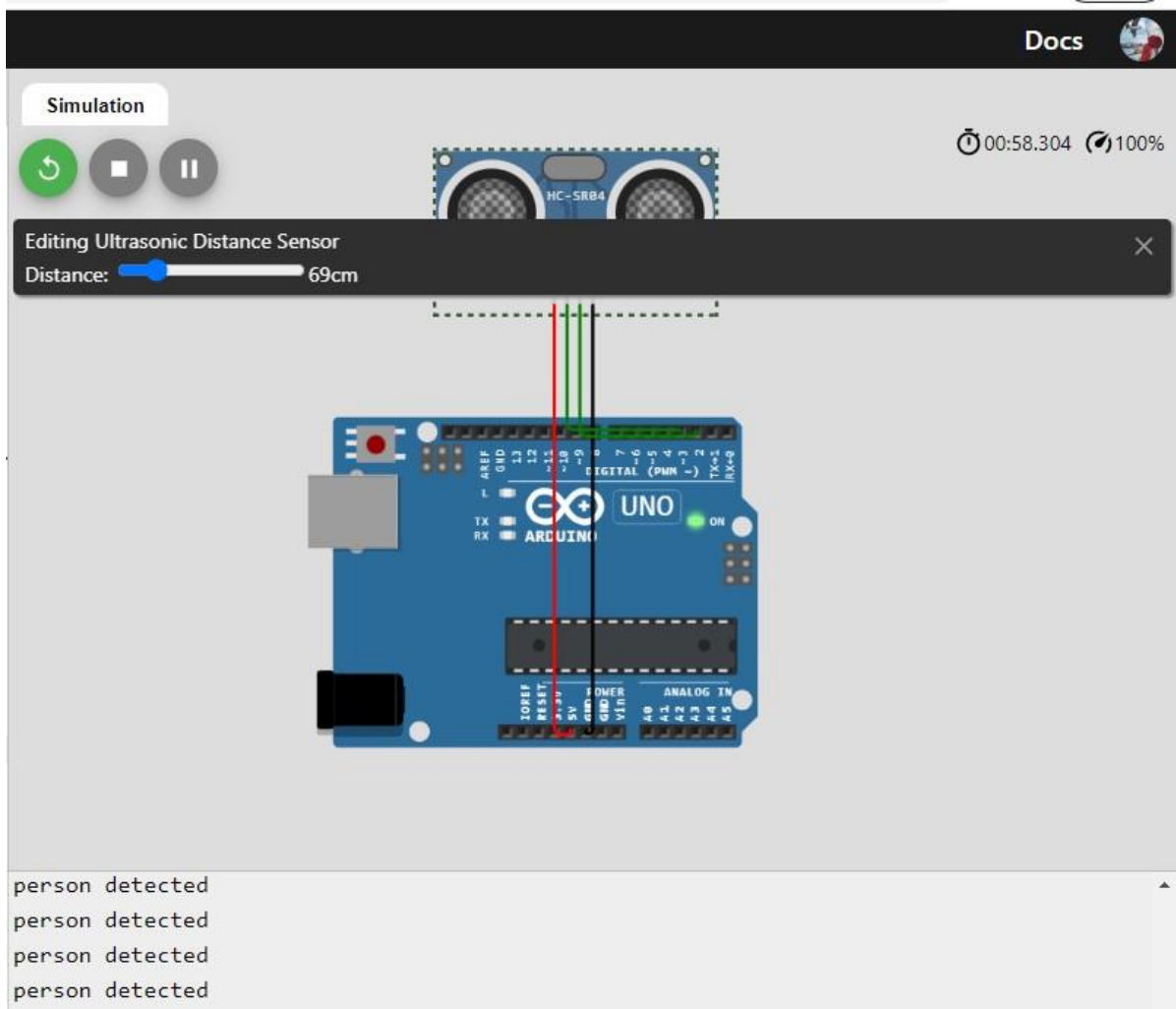
void setup() { Serial.begin(9600);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}

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();
```

```
if(distance <= 100)  
{  
Serial.println("person detected ");  
}  
else{  
Serial.print("Measured distance: ");  
Serial.println(readDistanceCM());  
}  
delay(1000); }
```



Wokwi Link: <https://wokwi.com/projects/346567584774095442>

IBM Cloud

Device Recent Events



Device Simulator ☐

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1234	Disconnected	device1	Device	Oct 26, 2022 1:15 PM		820419205063@smartinternz.com
Identity	Device Information	Recent Events	State	Logs		
Device ID	1234					
Device Type	device1					
Date Added	Oct 26, 2022 1:15 PM					
Added By	820419205063@smartinternz.com					
Connection Status	Disconnected					

SmartThings IDE interface showing a device simulation. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains icons for various functions. The main area displays a table of devices, with one device selected and its details shown below. The device details include tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a list of events with columns for 'Event', 'Value', 'Format', and 'Last Received'. The events listed are 'event_1' with the value 'person detected' in json format, received a few seconds ago. A status bar at the bottom right indicates '2 Simulations running'.