

Assignment -4

Assignment Date	10 NOV 2022
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Student Roll Number	731619106032
Maximum Marks	2 Marks

Question-1:

Write code and connections in wokwi for the ultrasonic sensor. Whenever the distance is less than 100 cms send an "alert" to the IBM cloud and display in the device recent events. Upload document with wokwi share link and images of IBM cloud

Program:

```
#define ECHO_PIN 2
```

```
#define TRIG_PIN 3
```

```
void setup() {
```

```
  Serial.begin(115200);
```

```
  pinMode(LED_BUILTIN, OUTPUT);
```

```
  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();
```

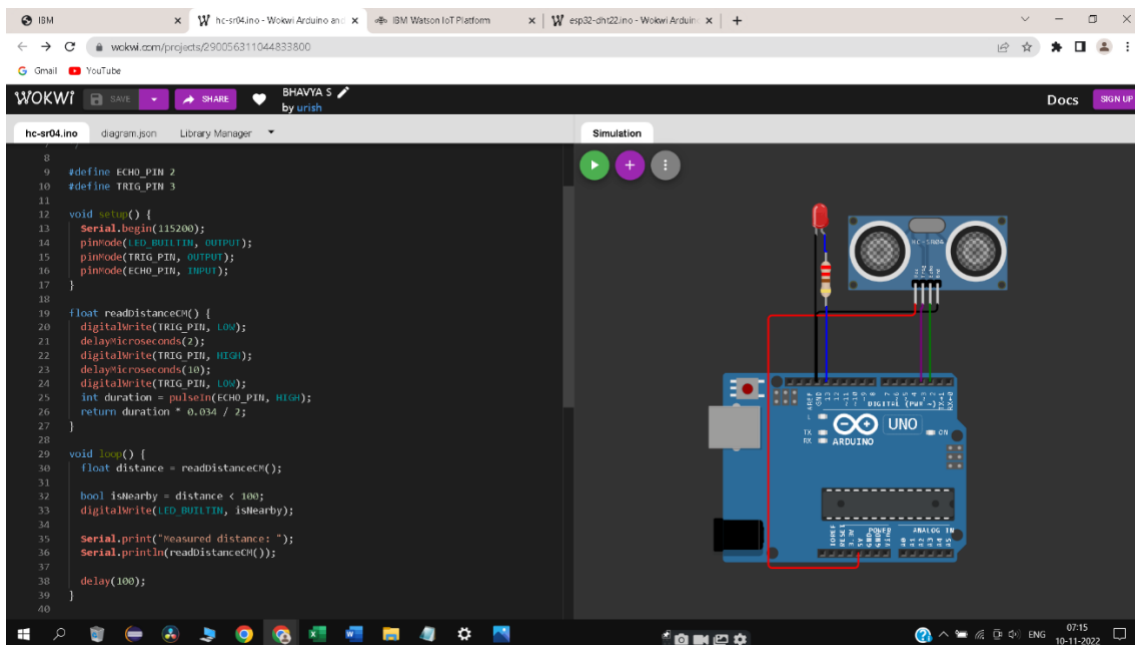
```
bool isNearby = distance < 100;  
  
digitalWrite(LED_BUILTIN, isNearby);
```

```
Serial.print("Measured distance: ");  
  
Serial.println(readDistanceCM());
```

```
delay(100);
```

```
}
```

Output:



Add Device

Browse	Action	Device Types	Interfaces				
>	[icon]	sbhavya78	Disconnected	simulator_sensor	Device	Nov 9, 2022 11:12 PM	
▼	[icon]	simulator_sensor_1	Connected	simulator_sensor	Device	Nov 10, 2022 6:23 AM	→ ...

Identity **Device Information** **Recent Events** **State** **Logs** ✕

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	{"distance<90":78}	json	a few seconds ago
event_1	{"distance<90":89}	json	a minute ago
event_1	{"distance<90":71}	json	a minute ago
event_1	{"distance<90":60}	json	a minute ago
event_1	{"distance<90":79}	json	2 minutes ago

3 Simulations running