ASSIGNMENT-4
PYTHON PROGRAMMING

Date	17 October 2022
Student Name	Nivetha.R
Student Roll Number	211419106188
Maximum Marks	2 Marks

Question:

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.

Solution:

```
import RPi.GPIO as GPIO
import time
GPIO.setmode(GPIO.BCM)

GPIO_ECHO = 13
GPIO_TRIG = 11

GPIO.setup(GPIO_ECHO, GPIO.IN)
GPIO.setup(GPIO_TRIG, GPIO.OUT)

GPIO.output(GPIO_TRIG, GPIO.LOW)
Time.sleep(2)

GPIO.output(GPIO_TRIG, GPIO.HIGH)
time.sleep(0.00001)
GPIO.output(GPIO_TRIG, GPIO.LOW)
while GPIO.input(GPIO_ECHO)==0:
    start_time = time.time()

while GPIO.input(GPIO_ECHO)==1:
    Bounce_back_time = time.time()

pulse_duration = Bounce_back_time - start_time
distance = round(pulse_duration * 17150, 2)
```

```
print (f"Distance: {distance} cm")
#print ("Distance:",distance,"cm")

while True:
    if distance < 100 :
        print('!!!!!!!!!! Alert !!!!!!!!!!')
```

P5.py - C:/Users/HP/P5.py (3.10.7)

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distance = round(pulse_duration * 17150, 2)
print (f"Distance: {distance} cm")
#print ("Distance:",distance,"cm")

while True:
    if distance < 100 :
        print('!!!!!!!!!! Alert !!!!!!!!!!')
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