#Libraries

import RPi.GPIO as GPIO

import time

#GPIO Mode (BOARD / BCM)

GPIO.setmode(GPIO.BCM)

#set GPIO Pins

GPIO\_TRIGGER = 18

GPIO\_ECHO = 24

#set GPIO direction (IN / OUT)

GPIO.setup(GPIO\_TRIGGER, GPIO.OUT)

GPIO.setup(GPIO\_ECHO, GPIO.IN)

def distance():

    # set Trigger to HIGH

    GPIO.output(GPIO\_TRIGGER, True)

    # set Trigger after 0.01ms to LOW

    time.sleep(0.00001)

    GPIO.output(GPIO\_TRIGGER, False)

    StartTime = time.time()

    StopTime = time.time()

    # save StartTime

    while GPIO.input(GPIO\_ECHO) == 0:

        StartTime = time.time()

    # save time of arrival

    while GPIO.input(GPIO\_ECHO) == 1:

        StopTime = time.time()

    # time difference between start and arrival

    TimeElapsed = StopTime - StartTime

    # multiply with the sonic speed (34300 cm/s)

    # and divide by 2, because there and back

    distance = (TimeElapsed \* 34300) / 2

    return distance

if \_\_name\_\_ == '\_\_main\_\_':

    try:

        while True:

            dist = distance()

            print ("Measured Distance = %.1f cm" % dist)

            time.sleep(1)

        # Reset by pressing CTRL + C

    except KeyboardInterrupt:

        print("Measurement stopped by User")

        GPIO.cleanup()