#Libraries

**import** RPi**.**GPIO **as** GPIO

**import** time

**import** urllib2

#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**)**

**global** dist

**def** distance**():**

**print** **(**"At starting of the function"**)**

# 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 when the ultrasonic wave is sent

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

StartTime **=** time**.**time**()**

# save time of arrival of ultrasonic wave

**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

distance **=** **(**TimeElapsed **\*** 34300**)** **/** 2

**print** **(**"At end of the distance"**)**

**return** distance

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

**try:**

**while** 1**:**

**print** **(**"Inside while loop"**)**

#Call distance function.

dist **=** distance**()**

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

#wait 20 seconds

time**.**sleep**(**20**)**

# Reset by pressing CTRL + C

**except** KeyboardInterrupt**:**

**print(**"Measurement stopped by User"**)**

GPIO**.**cleanup**()**