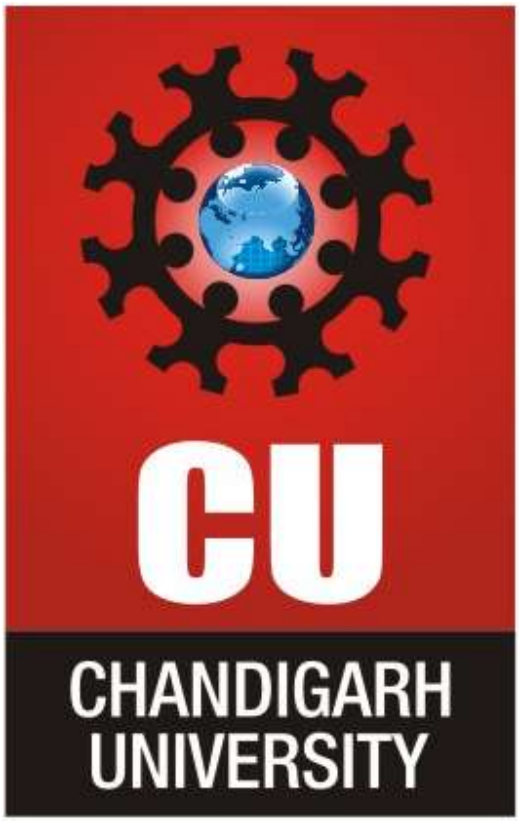


SUBJECT : Basic Electrical and Engineering Lab

SUBJECT CODE : ELP 118

SUBMITTED BY :

NAME : Amod Kumar Singh

UID: 19BCS4509

BRANCH : BE CSE(IOT)

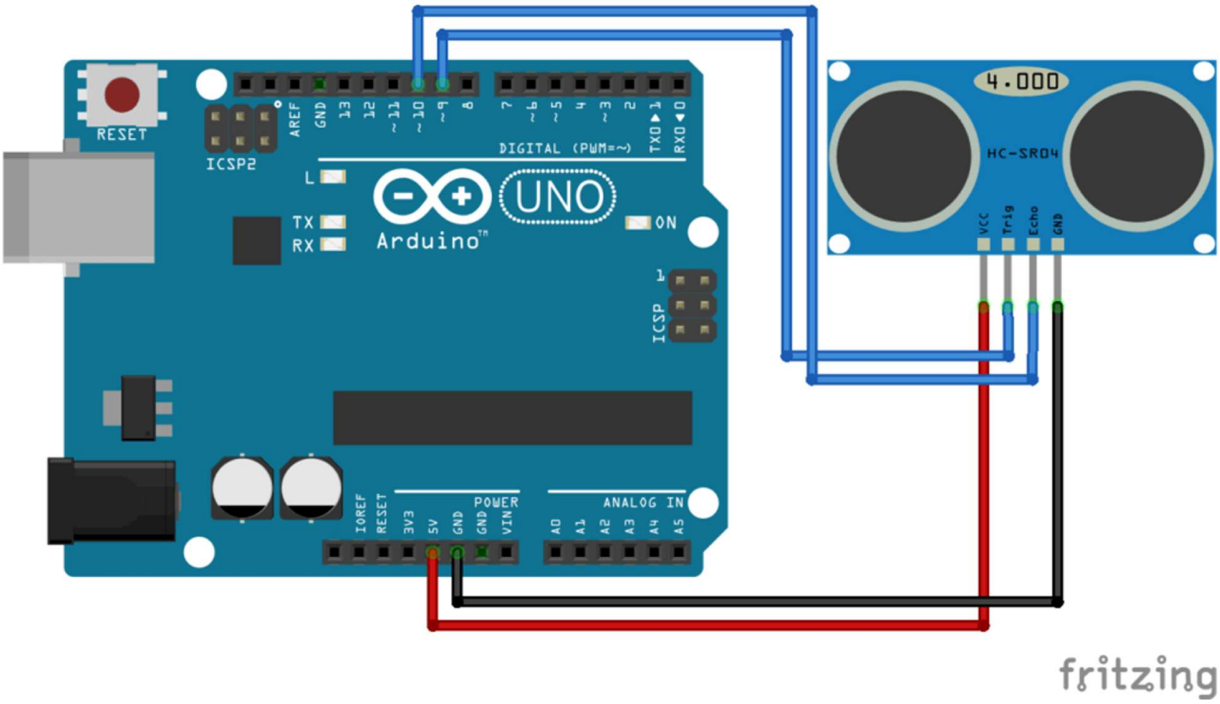
SECTION : IOT 1 ,GROUP A

SUBMITTED TO :

ANSHUL SHARMA

Exp 6 Design an obstacle detector and distance measuring device.

Circuit Diagram :



THEORY

For Designing an obstacle detector and distance measuring device. we require an Arduino Uno, Bread Board and Ultrasonic sensor module.

Concept Used:

For measuring the distance between obstacle and sensor. we use the formula given below:-

speed = distance/time

Therefore, distance = (speed * time)/2

Divided by 2 because sensor get the total time in sending and receiving the signal.

So to get the accurate distance we divide it by 2.

Learning and observations:

We have learned many skill by this experiment

How to send signals from trigger and receive to echo so that it get the time interval between sending and receiving and then by using the relation of speed, time and distance we get twice distance b/w object and sensor and divide it by 2 to get required value.

Problem and Troubleshooting:

Sometime program is compiled successfully but not upload in the Arduino board . It can be over come by checking the selected desird board and the port if not resolved then change the data cable.

Precautions:

1 Make sure that the area where you are performing the experiment must dry .

2 Make sure the board and port both are selected correctly.

Learning Outcomes:

Learned new concept i.e. to measure the unknown distance using ultrasonic sensor module.