IoT Exp - 5

Title :- Experiment based on ultrasonic sensor Write an appl^ to detect distance bet^ obstacle.

Requirement :- Raspberry Pi board, Ultrasonic sensor, Resistors, Jumper cables & / or breadboard.

Theory :- Ultrasonic sensor is a very popular used in many applications where measuring distance or sensing objects are required. The module has 2 eyes like projects in the front which forms the Ultrasonic transmitter & Receiver. The Ultrasonic sensor sends out a high-frequency sound pulse & then times how long it takes for the echo of the sound to reflect back. the sensor has 2 openings on it's front.

Distance = Time x Speed of sound divided by 2

Steps to perform Experiment :

1. Perform pin connections with the help of resistors as show in diagram.

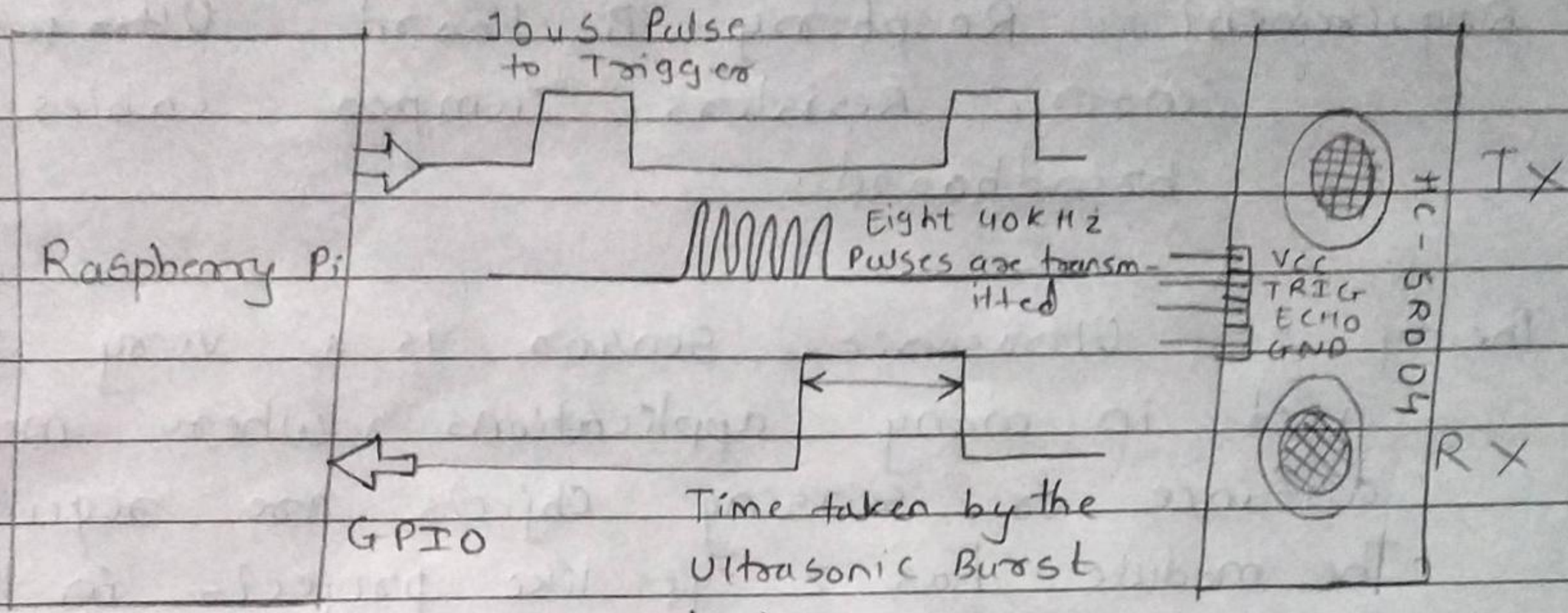
2. Write and run the application program to measure distance bet^ obstacles.

Ultranic sensor pin configuration.

Pin 1 → Vcc → The Vcc pin powers the sensor, typically with +5 V

Pin 2 → Trigger → Trigger pin is an Input pin. This pin has to kept high for 10us

to initialize : measurem by sending
US wave.



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Conclusion :- Thus we have studied the ultra-
sonic sensor & it's connectivity with
the RPi