Test Author: Rodston Tolbert

	Test Case Name:	Ultrasonic Sensor Functional Test #1	Test ID #:	US-FT-01
	Description:	*Using Arduino board and codes to test our ultrasonic sensor functionality to see if it reads stable output when motion is detected in 10-40 cm distance range.*	**Type:**	☐ white box ■ black box ☐ _____

Tester Information

	Name of Tester:	Rodston Tolbert, Mo Almuraihel, Manasa Jajam, Mohammad Albalam	Date:	12/01/2021
	HW/SW Version:	1.0	**Time:**	7:50PM
	Setup:	*Ultrasonic sensor needs to display reading on the serial monitor and measure an accurate distance when an object is detected.*		

STEP	Action	Expected Result	PASS	FAIL	N/A	Comments
1	Placed card in 10cm range from sensor	Ultrasonic sensor measured an accurate distance(10cm) and displayed reading on the serial monitor.				
2	Placed card in 20cm range from sensor	Ultrasonic sensor measured an accurate distance(20cm) and displayed reading on the serial monitor.				
3	Placed card in 30cm range from sensor	Ultrasonic sensor measured an accurate distance(30cm) and displayed reading on the serial monitor..				
4	Placed card in 40cm range from sensor	Ultrasonic sensor measured an accurate distance(40cm) and displayed reading on the serial monitor..				
5						
	Overall test result:					

Test Author: Rodston Tolbert							
	Test Case Name:	7 Segment display number count from test 1		**Test ID #:**		7SD-NCT-01	
	Description:	The 7 segment display sensor should report the total count of motion detected by the ultrasonic sensor when the ultrasonic sensors report motion. When the ultrasonic sensor reports 15 motion, the 7 segment display should count down.		**Type:**		□ white box ■ black box □ _____	
Tester Information							
	Name of Tester:	Rodston Tolbert, Mo Almuraihel, Manasa Jajam, Mohammad Albalam		**Date:**		12/01/2021	
	HW/SW Version:	1.0		**Time:**		9:30 PM	
	Setup:	Connect ultrasonic sensor, 7 segment display sensor on PCB powered by computer attached to Arduino					

TEST	INPUTS	EXPECTED OUTPUTS	PASS	FAIL	N/A	Comments
1	Ultrasonic sensors detect 1 motion	7 segment to display 1 as number count				
2	Ultrasonic sensors detect 2 motion	7 segment to display 2 as number count				
3	Ultrasonic sensors detect 15 motion	7 segment to display 15 as number count and start to count down.				
4						
	Overall test result:					

Test Author: Rodston Tolbert							

	Test Case Name:	PCB Test 2		Test ID #:	PCB-02		
	Description:	Testing for continuity on PCB board by using a multimeter on the electrical pathway to see if the points are connected or continuous.		Type:	■ white box □ black box □ _____		

Tester Information

	Name of Tester:	Rodston Tolbert, Mo Almuraihel, Manasa Jajam, Mohammad Albalam		Date:	12/01/2021		
	HW/SW Version:	1.0		Time:	10:50PM		
	Setup:	Set the multimeter on the sine wave dial and use the probe to check the points that are connected electrically on the PCB					

TEST	INPUTS	EXPECTED OUTPUTS	PASS	FAIL	N/A	Comments
1	Place probe on two point that are electrically connected on the PCB	Multimeter to beep.				
2	Place probe on two point that are not electrically connected	There should no beep and multimeter should indicate OL				
3						
	Overall test result:					