Test Author: Group 13						
	Test Case Name:	Motor speed test			**Test ID #:**	AF-Mot-01
	Description:	*Test the speed and strength of the motor*			**Type:**	□ white box ☑ black box □ _____
Tester Information						
	Name of Tester:	Jay Best			**Date:**	30/11/2023
	HW/SW Version:	1.0			**Time:**	3PM
	Setup:	*Attach motor to adjustable DC power supply. Range 10V -24VDC and Current 1A-4A*				

STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Test motor at 1A (12V)	Motor should spin very slowly	x			
2	Test motor at 2A (12V)	Motor should spin more rapidly	x			This is what healthy driver expected to provide to motor
3	Test motor at 70% power (9V)	Motor should spin weakly	X			
4	Test motor at 80% power (10V)	Motor should spin strong	x			This is acceptable for functionality
5	Test motor at 100% power(12V)	Motor should spin strongly	x			This is acceptable for functionality
6						
7						
8	Notes:	Motor is rated for current up to 4 A. Motor speed is current dependent. 2A is nominal running current.				
9						
	Overall test result:		2	3		

	Test Case Name:	RFID tag reader test	**Test ID #:**	RFID-01
	Description:	Evaluate the RFID tag reader abilities. This involves verifying the reader's reading range, and its ability to recognize the correct tag.	**Type:**	□ white box ☑ black box □ _____
Tester Information				
	Name of Tester:	Brian	**Date:**	4 November 2023
	HW/SW Version:	1.0	**Time:**	1:00 PM
	Setup:	Make sure that the RFID reader was set up correctly and it is functionable.		

TEST	**Action**	**EXPECTED Results**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Move the RFID tag slowly toward the RFID reader.	RFID reader should be triggered and make the power relay to be activate	x			When a tag is detected, the motor will spin.
2	Tried different RFID tags	RFID reader only triggered with the correct tag	x			Tags are programmable and readers can be trained per tag.
3						
4			2			

	Overall test result:				

Test Author: Group 13						
	Test Case Name:	Motor Driver Test			**Test ID #:**	C.A.T.-01
	Description:	*Testing the Truth table and logic for driving the motor*			**Type:**	□ white box ☑ black box □ _____
Tester Information						
	Name of Tester:	Jay Best			**Date:**	30/11/2023
	HW/SW Version:	L298N			**Time:**	3PM
	Setup:	*Connect Arduino programmed with multiple states to test driver functionality. Output B is used for Motor*				
STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	EnB:1, IN3:0, IN4:1	Motor should be on and rotating backwards	X			Motor turns backwards
2	EnB:0, N/A, N/A	Motor should not engage with ENB pin set low	X			Motor does not engage
3	EnB:1, IN3:0, IN4:0	Motor should be in off state (brake)	X			Motor is stopped
4	ENB:1, IN3:1, IN4:0	Motor should be on and rotating forwards	X			Motor turns forwards
5	ENB:1, IN3:1, IN4:1	Motor should be in off state (brake)	X			Motor is stopped
6						
7						
8						
9						
	Overall test result:		5			

Test Author: Group 13							
	Test Case Name:	Motor Dispenser Combination test				**Test ID #:**	C.A.T.-01
	Description:	*Test the motors ability to dispense food with a loaded hopper*				**Type:**	□ white box ☑ black box □ _____
Tester Information							
	Name of Tester:	Isaac				**Date:**	4 November 2023
	HW/SW Version:	Alpha 1.3				**Time:**	3PM
	Setup:	*Assembled product with food in the hopper.*					
STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**	
1	Test motor with 0 cups of food	Motor should turn spindle and spin freely without binding	X				
2	Test motor with 1 cups of food	Motor should turn spindle and dispense food onto shute	X				
3	Test motor with 2 cups of food	Motor should turn spindle and dispense food onto shute	X				
4	Test motor with 3 cups of food	Motor should turn spindle and dispense food onto shute	X				
5	Test motor with 4 cups of food	Motor should turn spindle and dispense food onto shute	X				
6	Test motor with 5 cups of food	Motor should turn spindle and dispense food onto shute	X				
7							
8							
9							
	Overall test result:		6				

Unit Test

Module	Digital Compass – Geosensor version 2.3
Inputs	- Earth's magnetic field: An orientated field of magnetic force beginning and ending at the earth's magnetic poles. - SClk – Clock signal to clock data through the module. Maximum Frequency is 10Mhz. - SDIn – Serial data input to send data into the compass module. Date is valid on positive SClk edges.
Outputs	- SDOut – Serial data output from the compass module. Data is valid on negative clock edges.
Functionality	Senses the earth's magnetic field and determines the orientation of the compass with respect to the field. This orientation is stored in an internal register and can be retrieved through the SPI interface.
Test	Comp-UT-01