Automatic Fish Feeder Test Plan 1:

Items Tested:

- Board circuitry
- Clock Coding
- Motor
- OLED Display

Test Objectives:

- Functionality
- Acceptance

Necessary Testing Resources:

- 1x assembled version 1.0 Team 6 Fish Feeder
- 1x Person to perform tests
- 1x SER0006 4.8V RC Servomotor
- 1x SSD1306 uctronics 0.96” OLED display
- 1x food storage container/hopper
- 1x 5V AC Adaptor
- 1x USB-A to USB-A mini cable
- 7x female to male jumper wires
- 1x Voltmeter

Test Cases:

- Power Test
- OLED Functionality Test
- Button Functionality Test
- Timer Countdown Test
- Motor Functionality Test
- Clock Functionality Test
- Food Dispenser Test
- Timed Food Dispenser Test

Automatic Fish Feeder Test Plan 2:

Items Tested:

- Board circuitry
- Clock Coding
- Motor
- OLED Display

Test Objectives:

- Functionality
- Exhaustive

Necessary Testing Resources:

- 1x assembled version 1.0 Team 6 Fish Feeder
- 1x Person to perform tests
- 1x SER0006 4.8V RC Servomotor
- 1x SSD1306 uctronics 0.96” OLED display
- 1x food storage container/hopper
- 1x 5V AC Adaptor
- 1x USB-A to USB-A mini cable
- 7x female to male jumper wires
- 1x Voltmeter

Test Cases:

- Power Test
- OLED Functionality Test
- Button Functionality Test
- Button Time-Set Exhaustive Test
- Food Size Capacity Test
- Motor Functionality Test
- Clock Functionality Test
- Motor Range Exhaustive Test
- Food Container Capacity Test

Automatic Fish Feeder Test Plan 3:

Items Tested:

- Board circuitry
- Clock Coding
- Motor
- OLED Display

Test Objectives:

- Functionality
- Use
- Error

Necessary Testing Resources:

- 1x assembled version 1.0 Team 6 Fish Feeder
- 1x Person to perform tests
- 1x SER0006 4.8V RC Servomotor
- 1x SSD1306 uctronics 0.96” OLED display
- 1x food storage container/hopper
- 1x 5V AC Adaptor
- 1x USB-A to USB-A mini cable
- 7x female to male jumper wires
- 1x Voltmeter

Test Cases:

- Power Test
- OLED Functionality Test
- Button Functionality Test
- Ease of Refilling Test
- Durability Test (kinetic)
- Durability Test (affixment stability)
- Interchangeability Test
- Motor Interference Error Test {blocking object)
- Motor Functionality Test
- Clock Functionality Test
- Ease of Installation Test
- Ease of Replacement Test
- Durability Test (Water hazard)
- Reusability Test
- Food Container Clog Error Test
- Clock Error Test

Test Author: Team 6						
	Test Case Name:	Power Test			**Test ID #:**	#001
	Description:	Supply power to the circuit and check that it flows properly throughout.			**Type:**	□ white box □ black box □ _____
Tester Information						
	Name of Tester:				**Date:**	
	HW/SW Version:	Version 1.0			**Time:**	
	Setup:	Assemble the circuit and connect all pins properly. Ready the 5V USB AC Adapter.				
STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Ensure the device is securely assembled and soldered.	The circuit will have all connected pins soldered or have the wires firmly connected to their pins				
2	Connect 5V power to circuit's Micro USB female slot	Power LED turns and OLED turns on				
3	Use Voltmeter to check power on D1 pins (LED)	LED will be visibly ON and have voltage running through it.				
4	Use Voltmeter to check power on Display pins	OLED Display will be visible ON and have voltage running through it's pins.				
5	Use Voltmeter to check power on switch pins	Switch pins will have voltage running through it's pins.				
6	Use Voltmeter to check power on servo pins	Servo pins will have voltage running through it's pins.				
7	Check if any steps have failed.	None of the Steps have failed.				
	Overall test result:					

Test Author: Team 6						
	Test Case Name:	Food Dispenser Test			**Test ID #:**	#006
	Description:	This test is to ensure the fish food dispensing is acceptable given our project requirements.			**Type:**	□ white box □ black box □ _____
Tester Information						
	Name of Tester:				**Date:**	
	HW/SW Version:	Version 1.0			**Time:**	
	Setup:	Assemble the circuit and connect all pins properly. Ready the 5V USB AC Adapter and the food hopper.				

STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Ensure the device is securely assembled and soldered.	The circuit will have all connected pins soldered or have the wires firmly connected to their pins				
2	Attach the device to the food container/hopper	The hopper will be securely attached to the motor and allow the motor to rotate				
3	Insert Fish Food into food container/hopper	The hopper will hold will not release the fish food during this step				
4	Activate the motor	The motor will rotate, dispensing the fish food.				
	Overall test result:					

Test Author: Team 6						
	Test Case Name:	Durability Test (affixment stability)			**Test ID #:**	#018
	Description:	This test is to ensure the standard affixing of the product will not disconnect or fall off it's tank easily through accident.			**Type:**	□ white box □ black box □ _____
Tester Information						
	Name of Tester:				**Date:**	
	HW/SW Version:	Version 1.0			**Time:**	
	Setup:	Fully assemble the product and affix it to a fish tank as if in normal use. (Advised to use 'dummy' tank)				

STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Observe the device with zero force extruded on it. (no food)	The Fish Feeder does not budge from it's affixed location.				
2	Observe the device with max capacity food inside.	The Fish Feeder does not budge from it's affixed location.				
3	Lightly nudge the device with no food inside it.	The Fish Feeder does not budge from it's affixed location.				
4	Lightly nudge the device with max capacity food inside.	The Fish Feeder does not budge from it's affixed location.				
5	Slap the device with no food inside it.	The Fish Feeder may wobble, but does not stray from it's affixed location.				
6	Slap the device with max capacity food inside.	The Fish Feeder may wobble, but food is not dispersed and it does not stray far from it's affixed location.				
7	Heavily impact the device with no food inside it.	The impacted Fish Feeder may move from the affixed location, but does not disconnect from the tank.				
8	Heavily impact the device with max capacity food inside.	The Fish Feeder may move from the affixed location, but food is not dispersed, and it does not disconnect from the tank.				
9	Pull the power cord.	The cord unplugs from the device and the Fish Feeder does not disconnect from the tank, nor move from its location.				
	Overall test result:					