**Step 5 Test and Refine the Solution – Deliverable**

**Scenario 1 – Pet eats as expected**

Expected outcome:

1. At 10 am, the servo motor rotates to dispense 100g food.
2. Weight of food the in-food tray goes up by 100g.
3. After 15 minutes, weight of the food decreases, showcasing that the food was consumed.
4. Green LED display turns on.
5. Food consumption entry is logged.

Actual Output

1. At 10 am, the servo motor rotates to dispense 100g food.
2. Weight of food the in-food tray goes up by 100g.
3. After 12 minutes, the food weight goes down to 0g .
4. Green LED display turns on
5. Food consumption entry is logged.

Test Output – Expected outcome matches the actual outcome, showcasing that the system is working efficiently.

Suggested Improvement – An optional module for camera can be included for more detailed visual confirmations.

**Scenario 2 – Pet does not eat**

Expected outcome:

1. At 10 am, the servo motor rotates to dispense 100g food.
2. Weight of food the in-food tray goes up by 100g.
3. After 15 minutes, weight of the food remains same.
4. Red LED display turns on.
5. Alert notifications is triggered via buzzer.

Actual Output

1. At 10 am, the servo motor rotates to dispense 100g food.
2. Weight of food the in-food tray goes up by 100g.
3. After 12 minutes, the food weight remains the same
4. Red LED display turns on
5. Alert triggered

Test Output – Expected outcome matches the actual outcome, showcasing that the consumption monitoring of the system is working efficiently

Suggested Improvement – It would be nice to include a sensor that detects if the food was consumed by the pet and ensure that there was no human intervention.

**Scenario 3 – Food bin is empty**

Expected outcome:

1. At 10 am, the system notices empty food level
2. Servo motor does not rotate to dispense food.
3. Red LED display turns on.
4. Alert notifications is triggered via buzzer for refill

Actual Output

1. At 10 am, the servo motor does not rotate to dispense food due to empty food level
2. Red LED display turns on
3. Alert triggered

Test Output – Expected outcome matches the actual outcome, showcasing that the consumption monitoring of the system is working efficiently

Suggested Improvement – It would be nice to include a sensor that can pre dtect or detect low levels of food in the bin to ensure that the alerts are raised in advance to refill. This will ensure that the animals are fed on time.