***Step 5: Test and Refine the Solution (Debug and Verify)***

Scenario 1: Pet does not eat:

Input: There has been no change in reading from the load cell after food has been dispensed

Output: if there is no change after 10 minutes then an alert notification is sent to staff.

Improvement: lengthen wait time as pet may take a bit longer to eat.

Scenario 2: Pet eats as expected:

Input: Mass reading from loading cell falls to specific threshold showing food has been consumed.

Output: No alert is sent to staff as food has been consumed.

Improvement: Have an app that sends notifications to the owner of the pet that the pet has been consuming food as expected.

Scenario 3: Food bin is empty:

Input: Hopper level falls below specified threshold thus not allowing to dispense.

Output: Sends alert to staff that it is now empty and needs a refill.

Improvement: Having a backup system that refills the main when it runs out.