Step 5 – Test and Refine the Solution

Testing the Automated Pet Feeder

After creating the feeder system, we need to check if it works correctly. We do this by testing different situations and making improvements if needed.

1. Test Cases

- **Pet eats normally:** Food is available, pet eats, system logs the feeding.
- **Pet does not eat:** Food is dispensed, but pet does not eat. System should alert the staff.
- **Food bin is empty:** No food is in the hopper. System should alert staff and stop dispensing.
- **Portion larger than available food:** System should only dispense the food available and send a message if full portion is not possible.

3. Compare Results

Situation	What Should Happen	What Actually Happens	Pass/Fail
Pet eats	Food eaten, log updated	Food eaten, log updated	Pass
Pet does not eat	Alert sent, log shows "not eaten"	Alert sent, log shows "not eaten"	Pass
Food empty	Alert sent, no food dispensed	Alert sent, no food dispensed	Pass
Portion too large	Dispense only available food, alert sent	Dispense only available food, alert sent	Pass

4. Possible Improvements

- Make alerts more noticeable if food is not eaten or hopper is empty.
- Ensure portion size never exceeds available food.
- Add extra details in the feeding log, like time and amount eaten.

Conclusion:
Testing ensures the feeder works as expected in all situations. Any problems found during testing can be fixed to make the system more reliable and safe for pets.