# Flowchart & Logic (Step 3)

**The logic for the Automated Pet Feeder is:**

**Start:** System initializes.

1. **Check Feeding Time:**

   - If the current time matches a scheduled feeding (e.g., 8:00 AM or 6:00 PM), proceed.

   - Otherwise, check for a manual feed request.

2. **Manual Feed Request:**

   - If a manual request is made, proceed to check food availability.

   - If not, return to the waiting state.

3. **Check Food Availability:**

   - If food is present in the storage, proceed to operate the servo motor.

   - If storage is empty, send a "Refill Food" alert and return to waiting.

4. **Dispense Food:**

   - Rotate the servo motor for 3 seconds to release food.

   - Record the bowl weight before feeding.

5. **Wait and Monitor Bowl:**

   - Wait for 10 minutes, then compare the bowl weight before and after feeding.

6. **Check Bowl Weight Change:**

   - If the weight decreases by 5 g or more, feeding is successful.

   - If the weight decreases by less than 5 g, send an "Uneaten Food" alert.

7. **Return to Waiting State:**

   - Repeat the cycle for the next scheduled feeding or manual request.

**FlowChart of the system**