Step 4: Word Coding:

1. Read current time from the real-time clock (current\_time).

2. Check feeding schedule — If current\_time matches a scheduled feed and it has not been served yet today, continue; otherwise, loop back and keep checking.

3. Read food container level using the food container sensor:

If not enough for feeding this time, send alert "Food bin empty ", log the event, and skip to the next loop.

4. Read bowl weight (before) using the weight sensor (bowl\_before).

5. Activate servo motor for the set time/duration to release one portion (portion\_target\_grams).

6. Pause briefly (Like 2 seconds) to allow food to settle in the bowl.

7. Read bowl weight (after dispensing) (bowl\_after) and record increase:

If the increase is below the minimum threshold (dispense\_min\_increase\_grams), send alert "No food dispensed", log the event, and return to the loop.

8. Wait feeding period (10 minutes) to allow the pet to eat.

9. Read bowl weight (after eating) (bowl\_final) and calculate decrease:

If the decrease is below the minimum threshold (eat\_min\_decrease\_grams), send alert "Pet did not eat", log the event, and return to the loop.

10. Log successful feeding if the pet ate, including the time and amount consumed.

11. Reset for next feeding time, Mark this time slot as completed and loop back to monitor until the next scheduled feed.