## Step 4: Implement the Solution (Word Coding)

System Logic:

1. **START SYSTEM**
2. Check Tray\_Weight.
   1. If Tray\_Weight is greater than LEFTOVERS\_BUFFER, check Current\_Time.
      * If Current\_Time is less than 20 minutes after a FEEDING\_TIMES, then proceed to step 3).
      * Otherwise, send Alert\_Food\_Unconsumed then **STOP SYSTEM**.
   2. Otherwise, proceed to step 3).
3. Check if Current\_Time and compare it to all FEEDING\_TIMES.
   * + If Current\_Time does not match any entries in FEEDING\_TIMES, wait for 1 minute and return to step 2).
     + Otherwise, proceed to step 4).
4. Check Stored\_Food and compare it to MEAL\_AMOUNT and Tray\_Weight.
   1. If Stored\_Food is less than MEAL\_AMOUNT - Tray\_Weight, then begin Alert\_Insufficient\_Food and **STOP SYSTEM.**
   2. Otherwise, proceed to step 4).
5. Begin Dispense\_Food until Tray\_Weight equals MEAL\_AMOUNT, then stop Dispense\_Food.
6. Check if Current\_Time is after WORK\_END\_TIME.
   1. If it is, **STOP SYSTEM.**
   2. Otherwise, wait 1 minute and return to step 2).