UNIVERSITY OF CANBERRA
INTRODUCTION TO INFORMATION TECHNOLOGY (4478/8936)

Assignment 1: The Solving Problem Process

PART 1: On the solving problem process

Step 4: Implement the Solution (Word coding)

Start

1. Turn ON system?
    a. If NO → Show current time after waiting until the system is ON.
    b. Go toward Step 2 if YES.

2. Initialize system
    a. The feeding schedule is a load from the memory.
    b. Prepare motor and sensors toward operation.

3. Read current time

4. Manual feed triggered?
    a. If YES →
        i. Workers must adjust the hand control for food.
        ii. Display “FEEDING” status via a Yellow LED update.
        iii. Allow the pet to eat after waiting 10 minutes.
        iv. Check bowl weight.
            1. Green LED displays “NORMAL” → Feeding is complete, if there is a decrease in bowl weight.
            2. Alert “Pet hasn’t eaten” will display “CHECK PET” in the event that bowl weight does not happen to decrease (Red LED).

    Return to Step 3.

5. Does the scheduled feeding time equal the current time?
    a. Return to Step 3 in the event of NO.
    b. If YES → Proceed to Step 6.

6. Check food level
    a. in the event the food level measures 10% or less
        i. Sending “Food Container Empty” alert is needed.
        ii. Shows “LOW FOOD” (Red LED).
        iii. Skip the feeding and then go back to Step 3.

Continue on to Step 7 in the event that food level exceeds 10%.

7. Dispense food
    a. The motor turns itself ON in order to dispense a scheduled portion.
    b. Show status update to “FEEDING” (Yellow LED).

8. Allow the pet to eat after waiting 10 minutes.

9. Check bowl weight
    a. Feeding complete if weight decreased, “NORMAL” (Green LED) is displayed, reset after the next cycle.
    b. Send the alert “Pet hasn’t eaten” if the weight did not decrease then display “CHECK PET” with a Red LED.
10. System shut down?
    a. Return step 3, if NO
    b. If YES, manual turn off by staffs → **END**