## Step 4: Implement the solution (word coding)

**# define variables:**

currentTime = Datetime ( Real-time clock time )

scheduledTimes = [6:00. 18:00] - Array ( Array of schedule times )

message = “” - String ( A message shows status or issues )

bowlWeight = 500 - Integer ( a weight that this bowl can store )

bowlWeightBefore = 0 - Integer ( a weight that shows food consumption after waiting through bowl weight sensor)

BowlWeightSensorTrigger = 500 - Integer ( a weight that sets up for it to trigger the event when bowlWeight equals with this variable)

timer = 10 minutes - Integer ( the time that needs to wait for checking whether the food has been consumed )

isFoodBinEmpty = false - Boolean ( true = have no food on bin / false = have food enough )

isFoodConsumed = false - Boolean ( true = food has eaten / false = food has not eaten )

isBowlFull = false - Boolean ( true = bowl gets full / false = bowl has not full yet )

**# The process:**

1. Open the loop **(a)**, check **currentTime** is equal to 1 in the **scheduledTimes** list:
   1. If false, wait a second and repeat the loop **(a)**.
   2. If true ( it means that on time ), check **isFoodBinEmpty** next.
      1. If true: ( get Storage empty issue )
         * Stop the feeding process.
         * Set **message** = “Storage empty” and send to staff
         * Store **message** to log diary.
         * End the loop **(a)**.
      2. If false:
         * Rotate servo motor to dispense food.
         * Make a loop **(b)** to check **isBowlFull** variable:
         * If **bowlweight** is equal to or more than **BowWeightSensorTrigger**:

Set **getFoodBowlFull** is true, then close servo motor

End the loop **(b)**.

* + - * + If false, just keep the motor open and repeat the loop **(b)**.
      * Wait a couple of time based-on **timer** variable
      * Set **bowlWeightBefore** = current weight through bow weight sensor
      * Set **isFoodConsumed** = **bowlWeight** > **bowlWeightBefore** ( means food amount has decreased 🡪 true/false)
      * Read **isFoodConsumed** :
        + If **isFoodConsumed** true: ( process successful)

Set **message** = “Feeding successful” and send to staff

Store **message** to log diary.

* + - * + If false (unchanged): ( Pets haven’t eaten issue)

set **message** = “Food hasn’t been consumed” and send to staff

Store **message** to log diary.

* + 1. End the loop **(a)**.

1. Repeat the loop.