Event Table:

' Day Hour Min Tag EventByte Day Hour Min Tag EventByte

1. Execute event 0 at time 0 minutes into day 0
2. Execute event 1 at time 10 minutes before day 1
3. Execute event 2 at time 1 minute into day 1
4. Execute event 3 at time 10 minutes into day 1
5. Execute event 4 at time 11 minutes into day 1
6. Rows 5 to 17 replay event 4 each adding 1 minute

Data Command:

Put the following into data starting at list_iter: 0, 1, Word 3000, 1, Word 6000, 2, Word 0, Word 3000, 2, Word 0, Word 6000, 1, Word 12000, 2, Word 6000, Word 6000, 3, Word 0, Word 3000, Word 3000, 1, Word 18000, 8, Word 1500, Word 1500, Word 1500, Word 1500, Word 1500, Word 1500, Word 1500, Word 1500, 4, Word 6000, Word 3000, Word 6000, Word 3000, 2, Word 0, Word 24000, 4, Word 3000, Word 3000, Word 3000, Word 3000, 3, Word 1500, Word 3000, Word 1500, 3, Word 4500, Word 1500, Word 3000, 3, Word 4500, Word 3000, Word 4500
CoolIter DATA 0
main_iter DATA 5 'insert number of times to loop data list

Brief Explanation of:

This code will implement a data list with the structure of list_iter(address) DATA list_iter, num_switch1 (value x), Word interval_length1, Word interval_length2, ..., Word interval_lengthx, num_switch2 (value y), Word interval_length1, Word interval_length2, ..., Word interval_lengthy, num_switch3 ...
...
...
etc.
Each num_swtich with its following interval_lengths(s) will represent a structure, with num_switch dictating how many times the motor switches direction and the interval_length(s) dictating how long it pumps in each direction. After each structure is printed, 3 photos are taken as fast as possible. list_iter will be used to iterate through this list and will be incremented after every structure to keep track of out position. This will continue until we run out of liquid (liquid_count reaches 0).

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Event0: Print "DN"
      Turns all pins HIGH at the beginning (I2COUT)
      Do absolutely nothing

Event1: Print “TP”                                          //takes photo
        Turns LED on
        Go to slot 6 to take a photo

TakePhotoReturn:
        Turn all pins HIGH
        Read Cooliter into UserVar1
        If UserVar1 is greater than 0 -->
        Decrement UserVar1 by 1
        Write UserVar1 into Cooliter
        Store in Slot 4
Event2: Print "PM"                                  //Pump + Motor On
        Read list_iter into UserVar0
        Read num_switch into UserVar2
        For UserVar5 = 0 TO (UserVar2-1)
        Read 2*UserVar5 + list_iter + 2 into Word TempWord //interval length variable
        If UserVar5 is even -->
                Pump on, motor clockwise (I2COUT)
                PAUSE TempWord
                Turns all pins HIGH (I2COUT)
        Else
                Pump on, motor counterclockwise (I2COUT)
                PAUSE TempWord
                Turns all pins HIGH (I2COUT)
        WRITE 2 into CoolIter
        Execute Event1 subroutine

Event3: Print “LST”                                 //Loop Structure Event
      Store in slot 2
      Read list_iter into UserVar0
      Read num_switch into UserVar2

      If UserVar0 is less than 4 -->
        UserVar0 = 2*UserVar2 + UserVar0 + 1   //increment to advance structure
        Write list_iter into UserVar0
        Store in Slot 0
        Write Day, Hour, Minute (0, 23, 49)
        Store in Slot 2
       Replay rows 1 to 3 of the Event Table
      Else
```

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    WRITE 0 into list_iter

Event4: Print “LE”, CR                                  //Loop Everything Event
    Store in Slot 2
    Read main_iter into UserVar0
    Decrementation of UserVar0:
    If UserVar0 is greater than 0 -->
    UserVar0 = UserVar0 - 1
    Write main_iter into UserVar0
    Store in Slot 0
    Write Day, Hour, Minute (0, 23, 49)
    Store in Slot 2
    For tempReg0 ranges from rows 1 to 17 //loop everything
      Write ETable+tempReg0*5+3, $FF   'Tag Event, increment tag count
    Endif
    Store in Slot 4
```