
Article

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Belated - Advent of Code 2018 Day 1

I know it's late, but I really love the advent of code theme each year to find some project ideas to go out and code something and push myself.

I had the intentions of completing the AOC 2018 before the new year, but I've got 2 young kids (1yo and 4yo), so most nights I just want to sleep.

I've been looking at this on my half hourly commute each day before and after work.

So whilst doing this, I found not many people had posted what they had done and in previous years.

I'd found this helpful when I've got stuck for ideas, so I thought I would post what I've done (that works) and see how others might have implemented a solution.

A full explanation of Day1 part 1 can be found at: <https://adventofcode.com/2018/day/1> and the input can be found at: <https://adventofcode.com/2018/day/1/input>

A brief description of this exercise is that you receive a sequence of frequency changes.

Starting with a frequency of 0 you need to loop through the sequence/list adding the value to the frequency and return the last frequency.

Here is the code I tried below:

```
ClassMethod FreqPart1(Input As %String, ListPlace As %String)
{
// ***** CLEAR existing global *****

// Delete Globals. No update GP list but upload all from file.
KILL ^AOC2018.Day1D, ^AOC2018.Day1I
// Add info to the log.
write "Deleted TEMP globals '^AOC2018.Day1D' & '^AOC2018.Day1I'."
set Input =
"+13,-16,+18,+11,+15,+10,-4,-19,+14,-19,-17,-19,-2,+6,+2,+21,+5,+12,-10,-10,+18,-11,+
2,+17,-5,+14,+14,-3,-12,+10,+7,-3,+6,-2,+8,-17,-18,-19,-14,+9,-16,-1,-1,+11,-3,+8,-12

-19,-4,+12,+15,-17,+1,-16,-5,+15,+26,+9,+9,-3,-5,+3,+3,-11,-8,-11,-16,+14,+14,+14,+17
,+14,+11,-9,+18,-10,-4,-11,-10,-9,+8,+12,-6,-1,-2,+12,-17,-1,+17,-10,+9,+11,+6,+3,+18

1,+17,+18,-8,-11,-18,+12,-3,-14,+6,-12,+1,-11,-9,+13,-3,-15,-19,-16,-3,+7,+7,-17,-18,
+3,-2,-12,-1,+16,+15,+10,+7,-13,+7,+13,+14,+5,+18,-14,-8,-4,+15,-20,-17,-17,+11,-15,-
```

3,-6,+24,+8,+4,-19,+11,+15,+3,-17,+30,+9,+10,+6,-2,+3,+14,+8,-3,-12,+1,+5,-8,+11,+10,
+16,+6,+16,+1,+21,+19,+18,+18,+15,+15,+8,+2,-6,-16,+5,-10,+18,-12,+16,+6,+18,-6,-2,+5

5,+8,+4,-7,-9,-1,+11,-22,-4,-14,-4,-18,+6,+2,+8,-4,-1,+16,-17,-1,-2,-10,-10,-10,+16,+
3,-12,+2,-1,+4,-15,+18,-2,-9,-6,-22,+7,+16,-5,+17,+13,+2,-1,+3,-11,+10,-25,-14,+17,-1

0,-7,+12,+9,+16,-2,-2,+9,+23,+15,-8,-38,-37,-8,-20,+11,-24,-2,+14,-24,-18,+2,-7,+14,+
1,+19,-5,-23,-11,-15,+23,+8,-14,+16,-25,-19,+8,-3,-20,+11,-15,-11,-14,+16,-31,+18,+25

-14,-41,+25,-72,-46,+1,-46,-61361,+12,-18,-7,-9,+6,+14,-13,-8,+19,+19,+11,+9,+2,+9,-1
8,-3,+20,-4,-11,+4,+14,+3,-11,+2,+2,-13,-17,+3,+19,-13,-16,+11,+14,-5,+12,+16,+17,+15

-9,+2,+12,-15,+20,+1,+1,+10,+5,+17,+7,-2,-14,+1,+10,-1,+12,+12,-37,-13,-3,+5,+3,+18,-
14,-26,+11,-14,-3,-14,-6,-21,+2,-8,-3,+18,-3,+18,-10,-15,-6,+10,+5,+17,+14,-16,-10,+6

13,+18,-9,-11,+12,+11,-1,-24,-7,-14,-13,-18,+9,-16,+19,+18,+16,+2,-13,-19,+7,-19,-1,-
8,-16,+2,+15,-16,+18,+13,-19,-3,-2,-4,-14,+9,+10,-14,-15,+6,+8,-12,-11,-3,-12,-4,-18,

,+16,+19,+4,-5,-4,-11,+13,+15,+7,-11,+16,+4,-1,+18,-15,+20,-11,+8,-13,+19,+7,+11,+19,
-1,-7,-17,-2,-19,-11,+15,-11,-16,+15,-10,+25,-5,+9,+17,-16,+12,+10,+5,-2,-17,+11,+16,

5,+14,+6,-18,-13,+1,+15,+30,-23,+28,-7,-10,-19,-21,+20,-5,+12,-9,-10,-9,-15,-23,-1,+1
7,-2,-10,-1,-13,+28,+22,-6,-8,+43,+42,-8,+27,+4,-18,+49,+19,-8,+9,-2,-1,+37,-12,-11,+

0,-1,+9,-7,+18,-9,-8,-4,+7,+18,-3,-16,+18,-5,+11,+12,-1,+9,+11,-14,-9,+19,+24,+30,-27
,+76,-35,-34,-82,+14,-25,-10,-3,-7,-14,+16,-4,-2,-5,-18,+9,-7,-1,+6,-15,+11,+18,-4,+1

25,-8,+49,+50,-19,+60,-16,-96,+200,+34,-148,-153,-45,-1,-45,-61788,-16,-5,-8,-6,+3,-6
,+16,+18,+10,-14,+9,-20,+6,+18,+9,+13,+7,+11,-5,-11,+17,+13,-4,-4,-3,-11,-17,-2,+4,+9

17,+7,-16,+12,-8,+1,-9,-9,-7,-7,+1,+1,+4,+2,-16,+7,+4,-18,-7,+12,+7,-1,-14,+9,-17,-8,
+13,+19,-18,-17,-14,-10,-9,-12,-19,-17,+14,-16,+18,-15,-14,-17,-9,-14,-15,-19,-19,+10

```
"
set list = $LISTFROMSTRING(Input,"")
set status = $LISTVALID(list)
IF status '= 1 {
```

```

do $system.Status.DisplayError(status)
write $system.Status.GetErrorText(status)
QUIT}
// found out how many items are in list
set end = $LISTLENGTH(list)
//write list length
write !, "There are "_end_" entries in the input list to process."
// set previous record counter to 0
set prevrecord = 0
set FreqCount = 0
// Loop through list
FOR i=1:1:end{
//set current value in list
set insertitem = $LIST(list,i)
//create new object to save to Global
set newrecord = ##class(AOC2018.Day1).%New()
//set Frequency change value = to insertitem variable
set newrecord.FrequencyChange = insertitem
//If not at beginning of list calculate current frequency
IF prevrecord '= 0 {
    //set prevrecord = currentrecord-1
    set newrecord.CurrentFrequency = prevfreq + newrecord.FrequencyChange
    set prevfreq = newrecord.CurrentFrequency
    set prevrecord = prevrecord+1
    set status = newrecord.%Save()
    write status
}
// IF at beginning of list set CurrentFrequency to 0
ELSE {
set FreqCount = 1
set newrecord.FreqCount = FreqCount
set newrecord.CurrentFrequency = insertitem
set prevfreq = newrecord.CurrentFrequency
set prevrecord = prevrecord+1
set status = newrecord.%Save()
write status
}
    set status = newrecord.%Save()
    &sql(SELECT COUNT (CurrentFrequency) INTO :FreqCount FROM AOC2018.Day1
WHERE CurrentFrequency = :prevfreq)
    set newrecord.FreqCount = FreqCount
    set status = newrecord.%Save()
    write status

}
return status
}

```

I passed the input into a string, however I could of picked this up as a file.

The code above ran quite quickly. The kill global came out of part 2 from this task, which I will post in the comments.

Let me know how you might approach this differently

[#Contest](#) [#ObjectScript](#) [#Caché](#)

Source URL: <https://community.intersystems.com/post/belated-advent-code-2018-day-1>