

Java HW1 7.36 資工二 黃塏茗 412410096

1. Use a sentinel-controlled loop to read 10 positive numbers.
Compute and display their sum.

00	+1014	READ temp
01	+2014	LOAD temp
02	+4112	BRANCHENG 到 12
03	+3016	ADD sum
04	+2116	STORE sum
05	+2015	LOAD counter
06	+3017	ADD 1
07	+2115	STORE 回 counter
08	+2015	LOAD counter
09	+3118	SUBTRACT 10
10	+4212	BRANCHZERO 到 12
11	+4000	BRANCH 回 00
12	+1116	WRITE sum
13	+4300	HALT
14	+0000	Temp
15	+0000	Counter
16	+0000	Sum
17	+0001	常數 1
18	+0010	常數 10
19	-99999	結束

2. Use a counter-controlled loop to read seven numbers, some positive and some negative, and compute and display their average.

00	+2012	LOAD counter
01	+3115	SUBTRACT 7
02	+4216	BRANCHZERO 到 16
03	+1011	READ temp
04	+2011	LOAD temp
05	+3013	ADD sum

06	+2113	STORE sum
07	+2012	LOAD counter
08	+3014	ADD 1
09	+2112	STORE counter
10	+4000	BRANCH 回 00
11	+0000	temp
12	+0000	Counter
13	+0000	Sum
14	+0001	常數 1
15	+0007	常數 7
16	+2013	LOAD sum
17	+3215	DIVIDE 7
18	+2116	STORE avg
19	+1116	WRITE avg
20	+4300	HALT
21	-99999	結束

3. Read a series of numbers, and determine and display the largest number. The first number read indicates how many numbers should be processed.

00	+1020	READ N
01	+2020	LOAD N
02	+3121	SUBTRACT counter
03	+4119	BRANCHNEG 到 19 (若 $N \leq 0$ 結束)
04	+1023	READ current
05	+2023	LOAD current
06	+3122	SUBTRACT max
07	+4110	BRANCHNEG 到 10 (若 $current > max$ 更新)
08	+2023	LOAD current
09	+2122	STORE max
10	+2021	LOAD counter
11	+3024	ADD 1
12	+2121	STORE counter
13	+2020	LOAD N

14	+3121	SUBTRACT counter
15	+4218	BRANCHZERO 到 18
16	+4004	BRANCH 到 04
17	+2022	LOAD max
18	+1122	WRITE max
19	+4300	HALT
20	+0000	N
21	+0000	counter
22	+0000	max
23	+0000	current
24	+0001	常數 1
25	-99999	結束