```
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                                 /      CS 311 - Fall 2013
                                 /
                                 /      This program sums numbers 1 + 2 + 3 + . . . + N, where the
                                 /      user specifies N. The result is stored in Sum, which is
                                 /      printed to the output region.
                                 /
                                 /
                         ORG 100
100 5000 |               INPUT
101 2112 |               STORE N
102 8800 |               SKIPCOND 800      /Skip the summation if N <= 0
103 910F |               JUMP End
         |                                 /
104 1113 |     Loop      LOAD Ctr          /Perform summation
105 3115 |               ADD One
106 2113 |               STORE Ctr
107 A000 |               CLEAR
108 1114 |               LOAD Sum
109 3113 |               ADD Ctr
10A 2114 |               STORE Sum
10B 1112 |               LOAD N
10C 4113 |               SUBT Ctr
10D 8400 |               SKIPCOND 400
10E 9104 |               JUMP Loop
         |                                 /
10F 1114 |     End       LOAD Sum
110 6000 |               OUTPUT
111 7000 |               HALT
         |                                 /
         |                                 /
112 0000 |     N         DEC 0
113 0000 |     Ctr       DEC 0
114 0000 |     Sum       DEC 0
115 0001 |     One       DEC 1
```

Assembly successful.

```
SYMBOL TABLE
-----------------------------------------------------
 Symbol | Defined | References
--------+---------+----------------------------------
 Ctr    |   113   | 104, 106, 109, 10C
 End    |   10F   | 103
 Loop   |   104   | 10E
 N      |   112   | 101, 10B
 One    |   115   | 105
 Sum    |   114   | 108, 10A, 10F
-----------------------------------------------------
```