```
1: # lab 3 exercise 4-1
2:
       .text
3: add $t0, $t0, $t0
4: jal f
5: # jump back here
6:
7: f: add $t0, $t0, $t0
8: add $t0, $t0, $t0
9: jr $ra
10:
11: # (a) jal f stores the return address in $ra and jumps to f
12: \# (b) jr $ra sets the PC to the value stored in $ra
13: # (c) Overall, the program uses function calls with jal and returning with jr.
        # jal f saves the return address in $ra and jumps to f.
14:
15:
        # jr $ra brings execution to line 5 (after jal).
16:
        \# This program runs the way it does because of how functions are set up in assemb
ly.
```