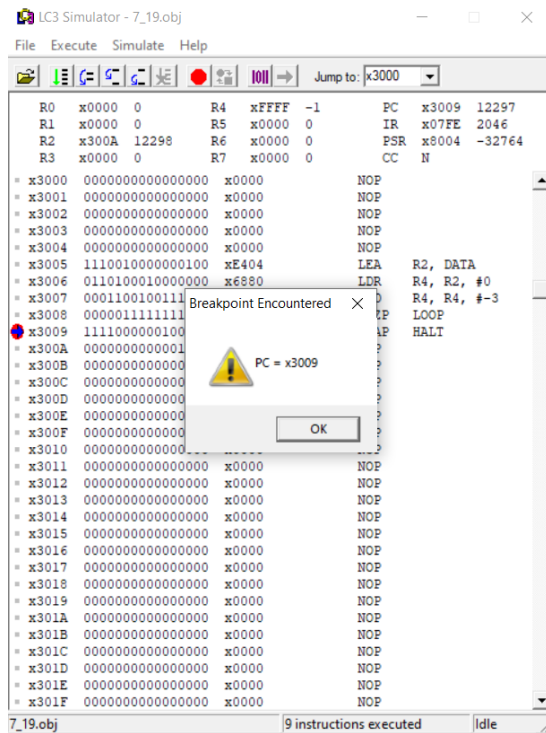
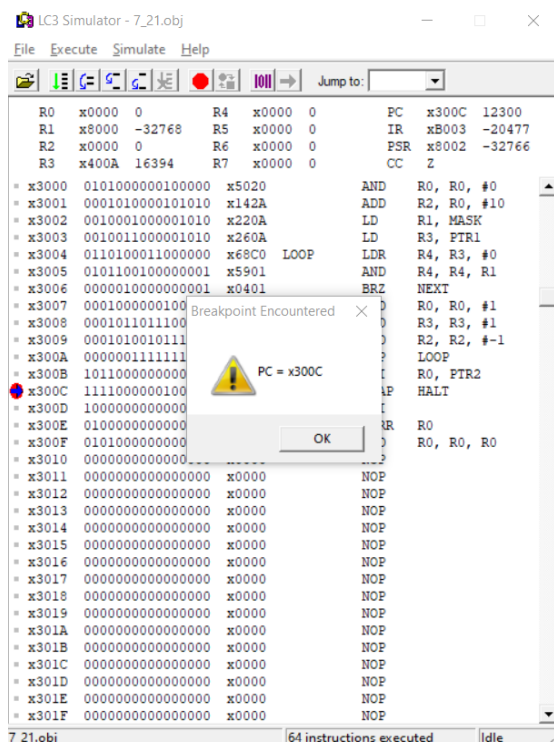


Screenshot 7.19



Screenshot 7.21



Screenshot 7.23

LC3 Simulator - 7_23.obj

File Execute Simulate Help

Jump to: []

| Address | Hex | Dec | Hex | Dec | PC | Hex | Dec |
|---------|-------|-------|-----|-------|----|-----|-------|
| R0 | x4001 | 16385 | R4 | x0000 | 0 | PC | x3018 |
| R1 | x3FFE | 16382 | R5 | x0001 | 1 | IR | x0E01 |
| R2 | xFFFD | -3 | R6 | x0000 | 0 | PSR | x8001 |
| R3 | x0000 | 0 | R7 | x0000 | 0 | CC | P |

```

* x3000 00100000000011000 x2018 LD R0, PTR
* x3001 0001001000100000 x1220 ADD R1, R0, #0
* x3002 0110010001000000 x6440 AGAIN LDR R2, R1, #0
* x3003 0000010000000010 x0402 BRZ CONT
* x3004 0001001001100001 x1261 ADD R1, R1, #1
* x3005 0000111111111100 x0FFC BRNZP AGAIN
* x3006 0001001001111111 x127F CONT ADD R1, R1, #-1
* x3007 0110011000000000 R3, R0, #0
* x3008 0110100001000000 R4, R1, #0
* x3009 1001100100111111 R4, R4
* x300A 0001100100100000 R4, R4, #1
* x300B 0001011011000000 R3, R3, R4
* x300C 0000101000000000 NO
* x300D 0001000000010000 R0, R0, #1
* x300E 0001001001111111 R1, R1, #-1
* x300F 1001010000011111 R2, R0
* x3010 0001010010100000 R2, R2, #1
* x3011 0001010001000010 x1442 ADD R2, R1, R2
* x3012 0000110000000001 x0C01 BRNZ YES
* x3013 0000111111110011 x0FF3 BRNZP LOOP
* x3014 0101101101100000 x5B60 YES AND R5, R5, #0
* x3015 0001101101100001 x1B61 ADD R5, R5, #1
* x3016 0000111000000001 x0E01 BRNZP DONE
* x3017 0101101101100000 x5B60 NO AND R5, R5, #0
* x3018 1111000000100101 xF025 DONE TRAP HALT
* x3019 0100000000000000 x4000 PTR JSRR R0
* x301A 0000000000000000 x0000 NOP
* x301B 0000000000000000 x0000 NOP
* x301C 0000000000000000 x0000 NOP
* x301D 0000000000000000 x0000 NOP
* x301E 0000000000000000 x0000 NOP
* x301F 0000000000000000 x0000 NOP
  
```

7_23.obj 19 instructions executed Idle

Screenshot 7.24

LC3 Simulator - 7_24.obj

File Execute Simulate Help

Jump to: [x3000]

| Address | Hex | Dec | Hex | Dec | PC | Hex | Dec |
|---------|-------|-----|-----|-------|----|-----|-------|
| R0 | x0000 | 0 | R4 | x0000 | 0 | PC | x3003 |
| R1 | x0000 | 0 | R5 | x0000 | 0 | IR | x0403 |
| R2 | x0004 | 4 | R6 | x0000 | 0 | PSR | x8001 |
| R3 | x0000 | 0 | R7 | x0000 | 0 | CC | P |

```

* x3000 0101010010100000 x54A0 AND R2, R2, #0
* x3001 0001010010100100 x14A4 ADD R2, R2, #4
* x3002 0000010000000011 x0403 BRZ DONE
* x3003 0001011011000011 x16C3 ADD R3, R3, R3
* x3004 0001010010111111 x14BF ADD R2, R2, #-1
* x3005 0000111111111100 x0FFC BRNZP LOOP
* x3006 1111000000100101 xF025 DONE TRAP HALT
* x3007 0000000000000000 x0000 NOP
* x3008 0000000000000000 x0000 NOP
* x3009 0000000000000000 x0000 NOP
* x300A 0000000000000000 x0000 NOP
* x300B 0000000000000000 x0000 NOP
* x300C 0000000000000000 x0000 NOP
* x300D 0000000000000000 x0000 NOP
* x300E 0000000000000000 x0000 NOP
* x300F 0000000000000000 x0000 NOP
* x3010 0000000000000000 x0000 NOP
* x3011 0000000000000000 x0000 NOP
* x3012 0000000000000000 x0000 NOP
* x3013 0000000000000000 x0000 NOP
* x3014 0000000000000000 x0000 NOP
* x3015 0000000000000000 x0000 NOP
* x3016 0000000000000000 x0000 NOP
* x3017 0000000000000000 x0000 NOP
* x3018 0000000000000000 x0000 NOP
* x3019 0000000000000000 x0000 NOP
* x301A 0000000000000000 x0000 NOP
* x301B 0000000000000000 x0000 NOP
* x301C 0000000000000000 x0000 NOP
* x301D 0000000000000000 x0000 NOP
* x301E 0000000000000000 x0000 NOP
* x301F 0000000000000000 x0000 NOP
  
```

7_24.obj 22 instructions executed Idle