```
.ORIG x3000      ;Start at x3000
AND R2, R2, #0  ;Clear R2
LD R1, x0FE      ;Load [x3100] into R1
AND R2, R1, #1  ;Put least significant bit of R1 into R2
ST R2, x0FD      ;Store R2 in 3101
HALT
.END
```