

Fsm design

states

0	00001	standby
1	00010	entering
2	00100	wait (locked)
3	01000	error
4	10000	wait (unlocked)
5-18 for extra credit switch to 19 bit 1-hot code		

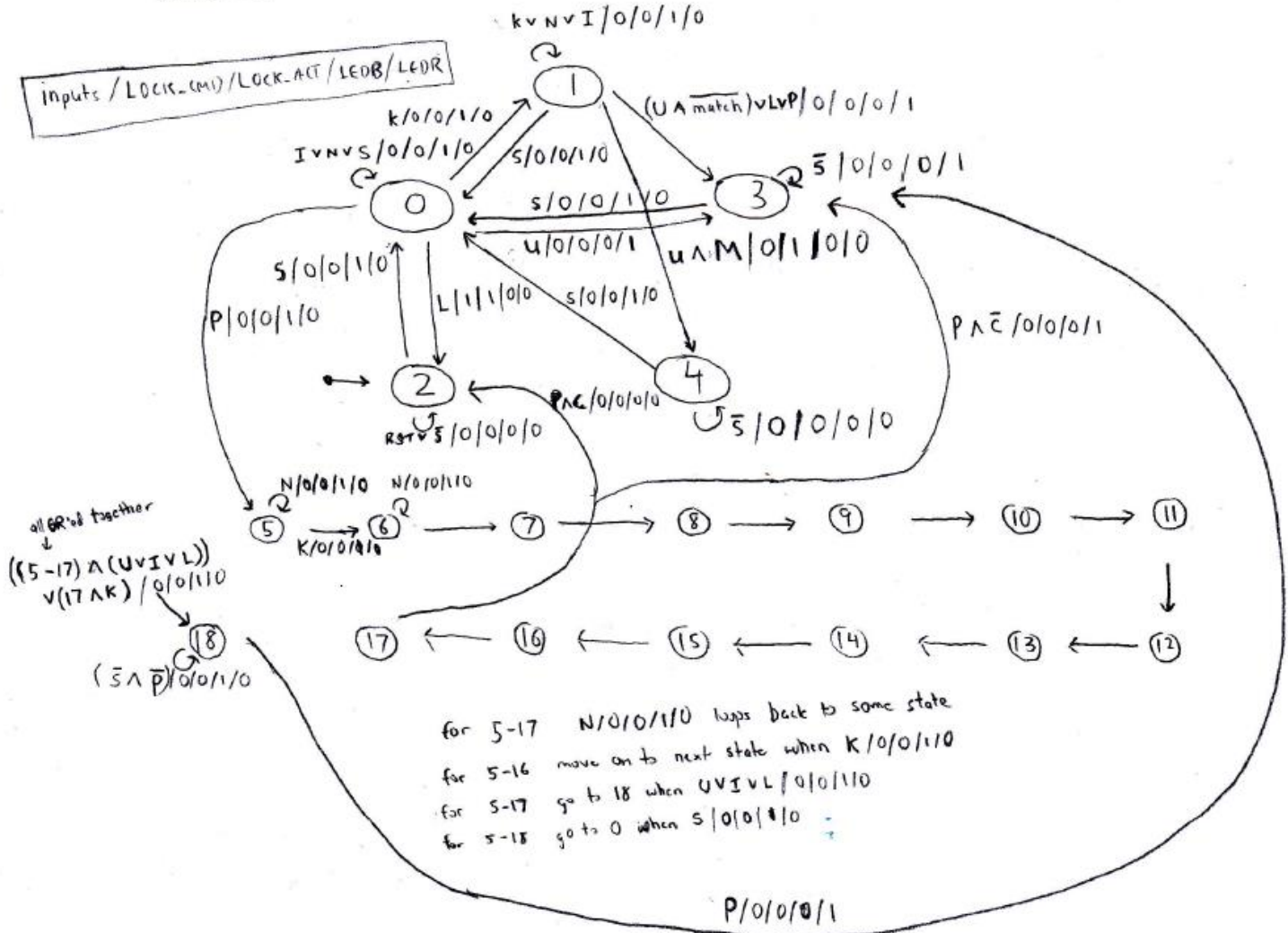
inputs

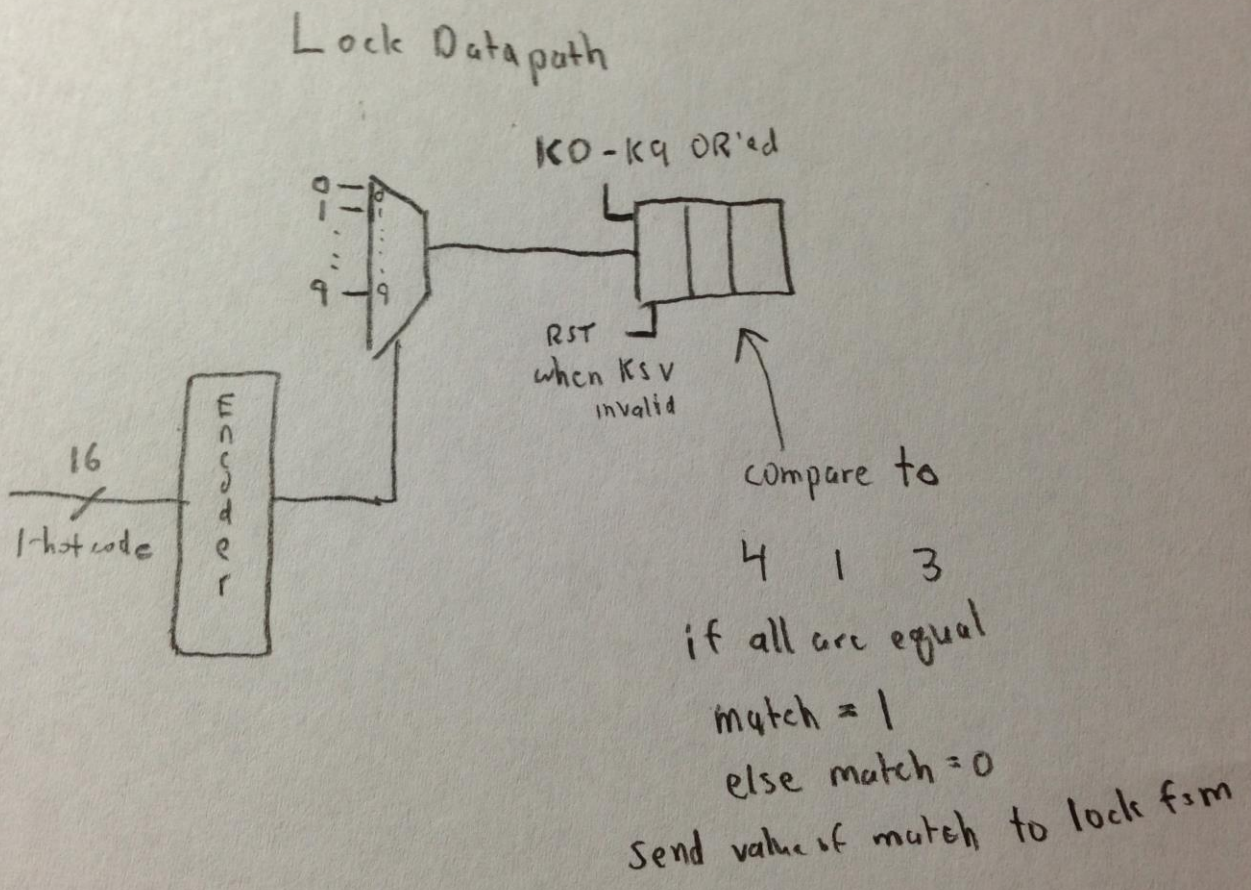
1-hot

- k - OR K_0, K_1, \dots, K_9
- S
- L
- U
- I - invalid
- N - no key
- P - match (from datapath)
- RST
- C - correct (from datapath)

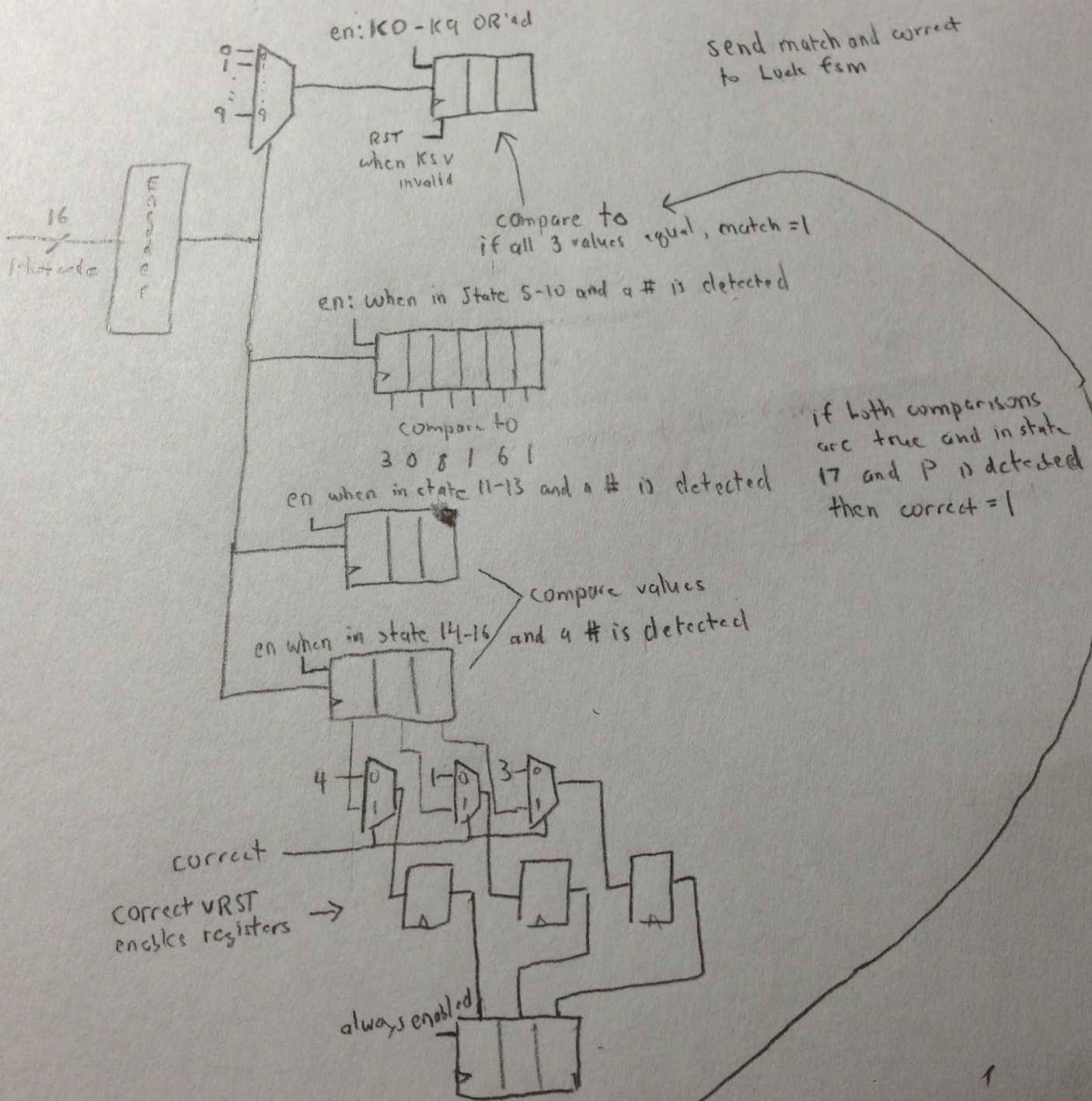
outputs

LOCK_CMD
LOCK_ACT
LEDR
LEDB

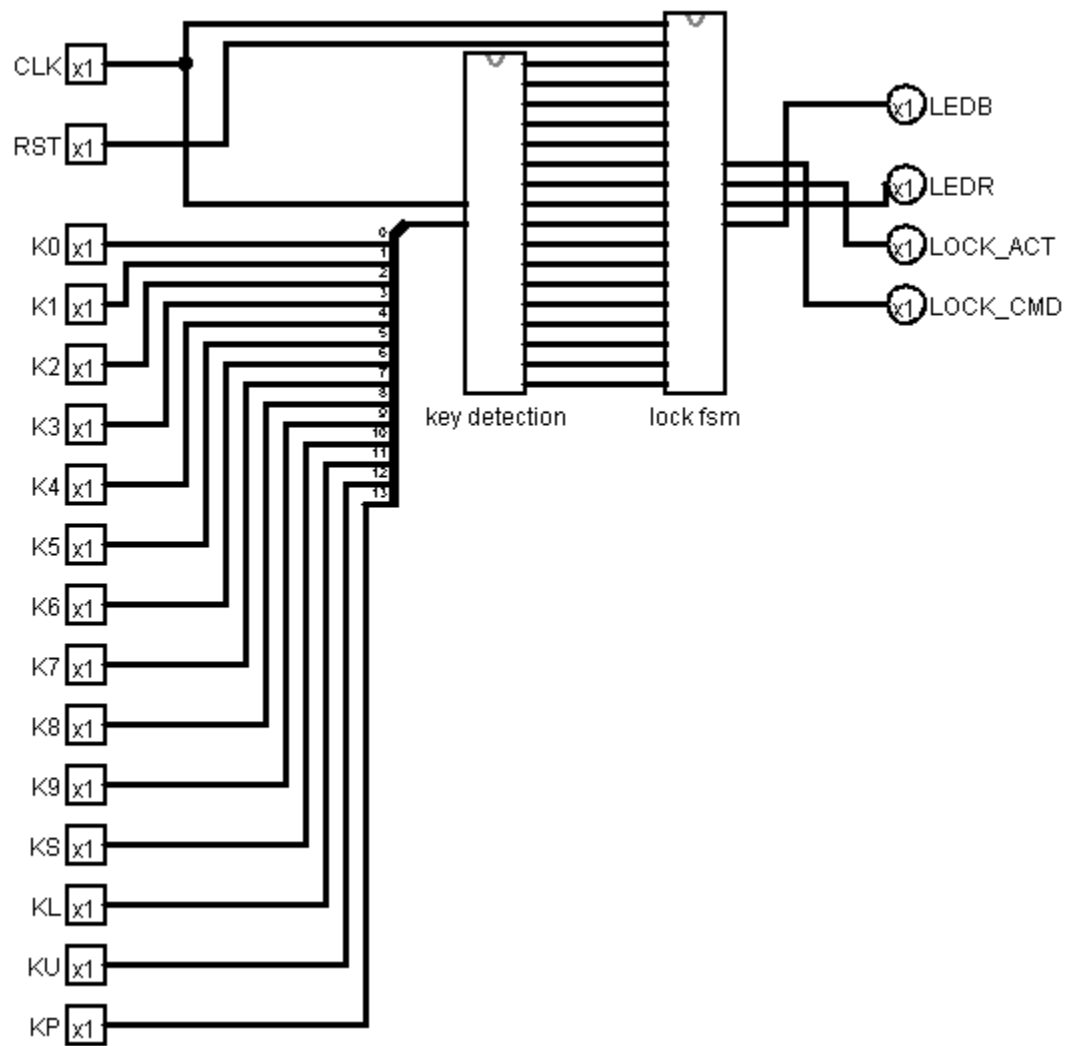




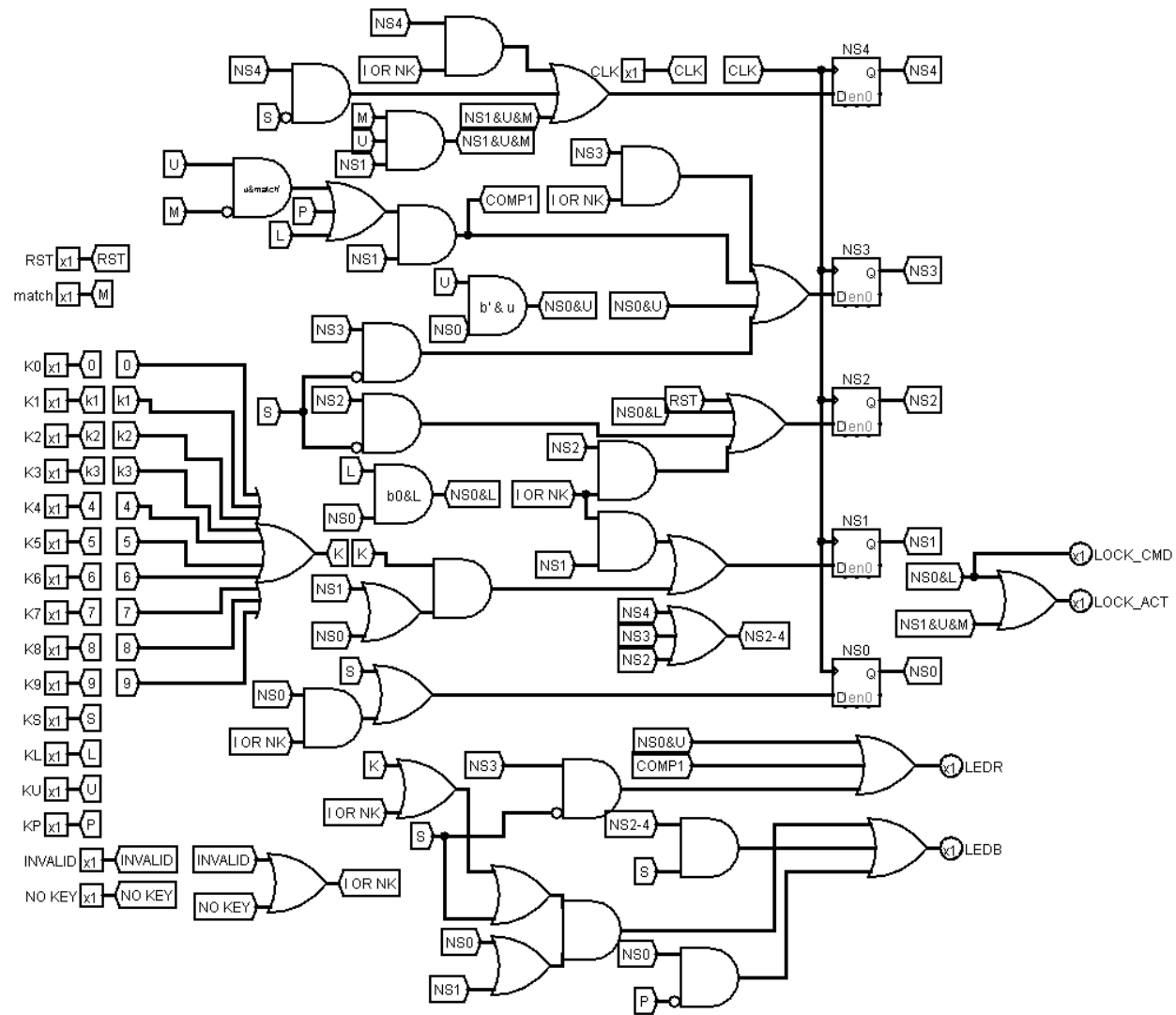
Lock Datapath



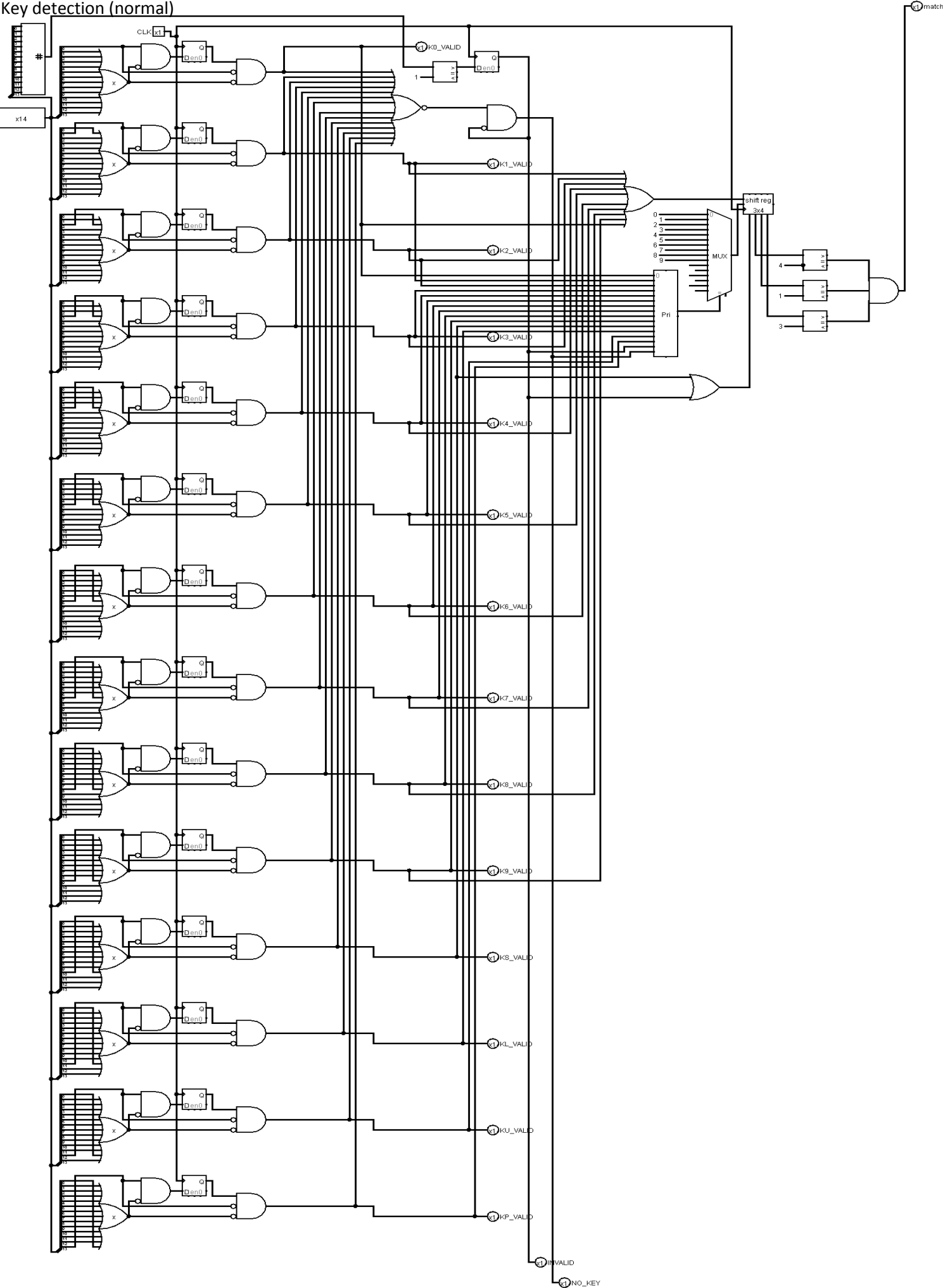
LockController (normal)



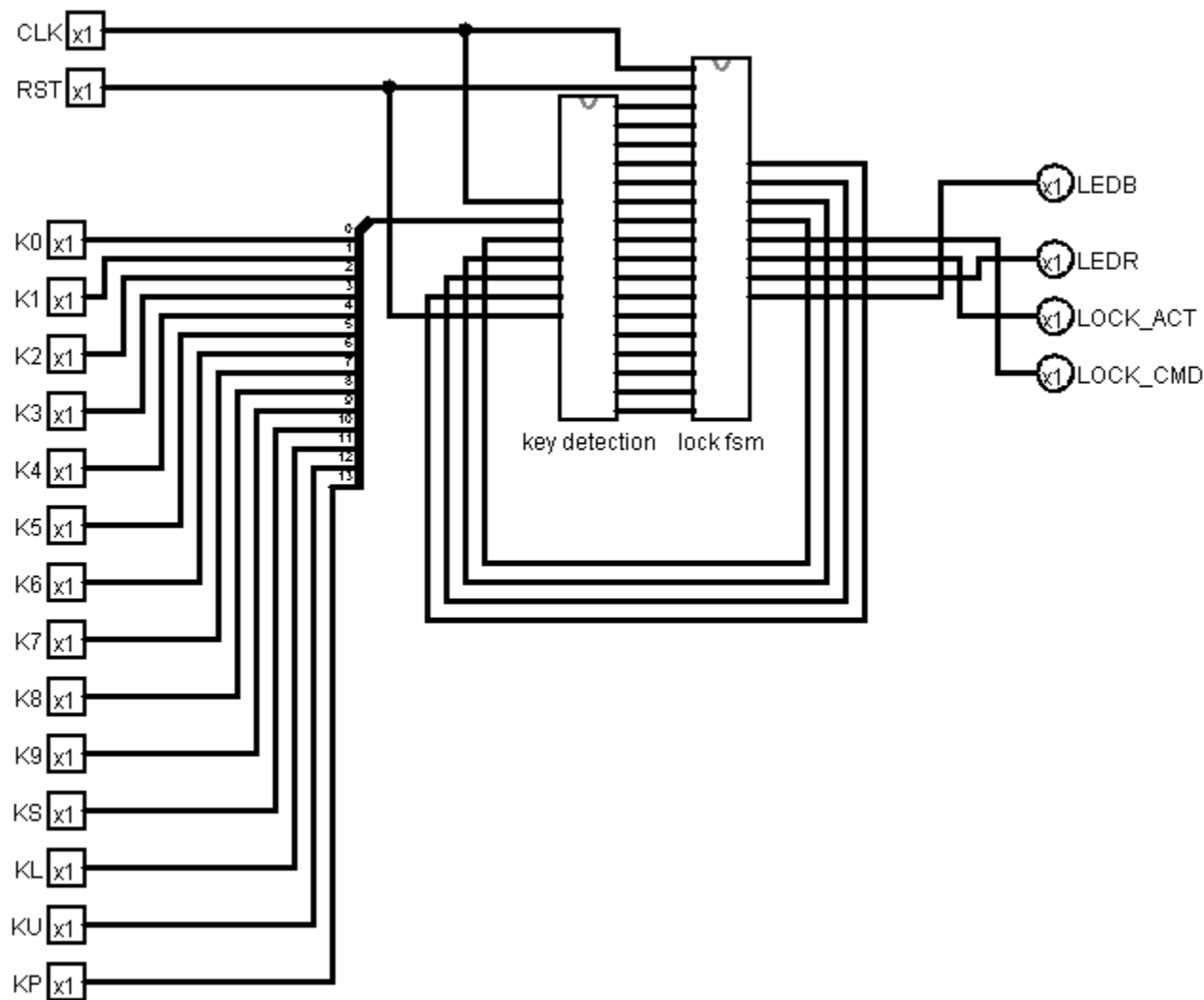
lock fsm (normal)



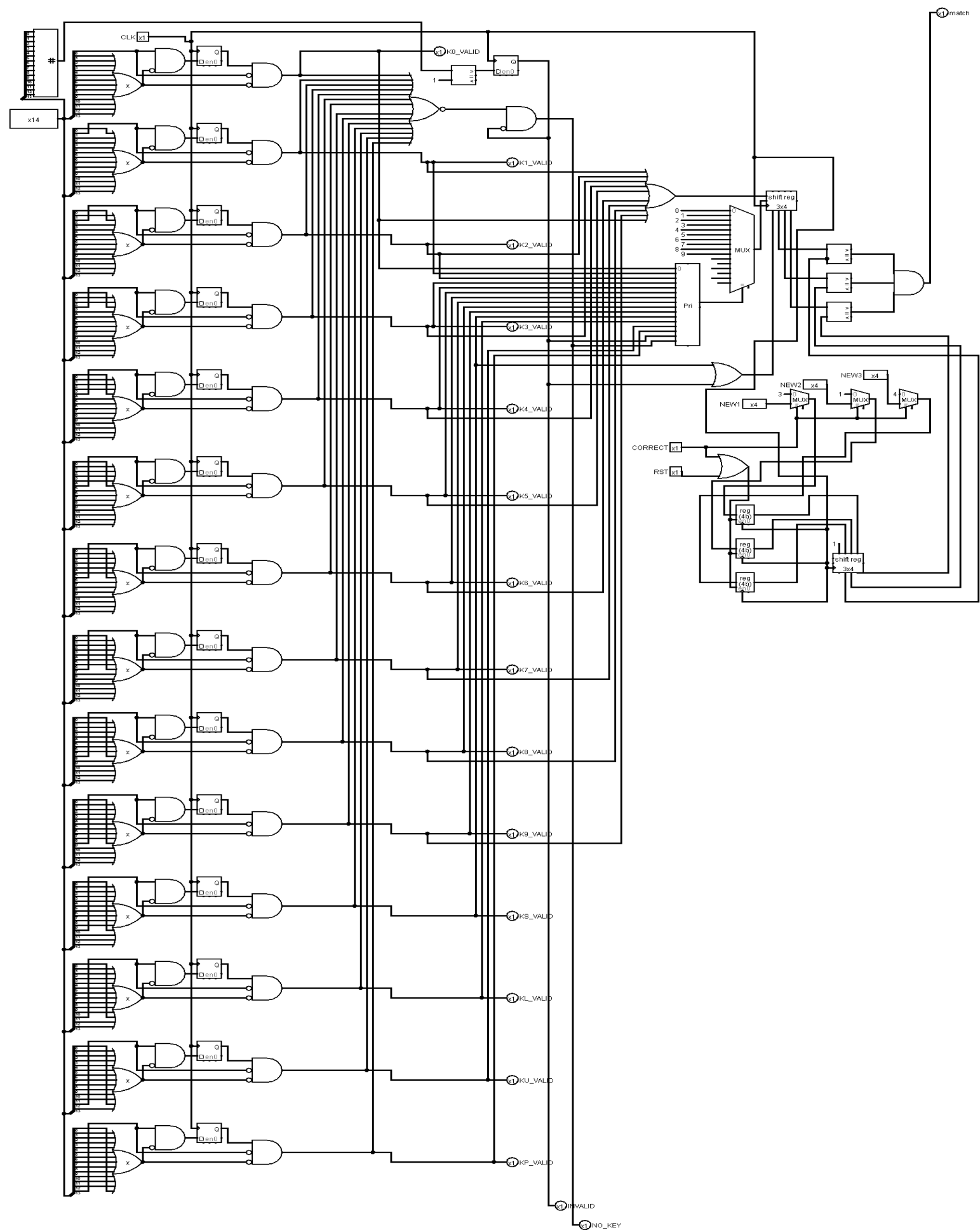
Key detection (normal)



LockController (extra credit)



Key detection (extra credit)



Lock fsm (extra credit)

