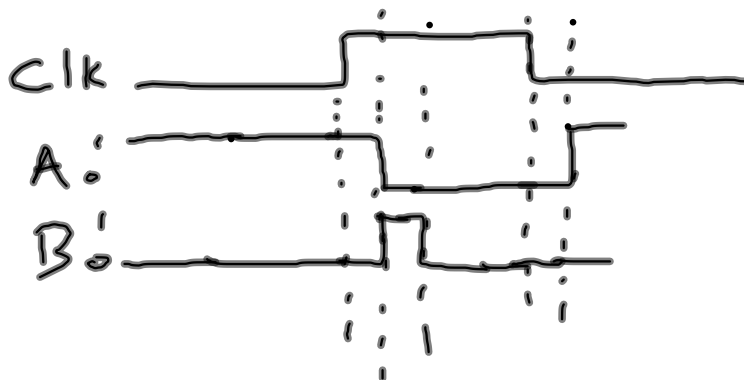
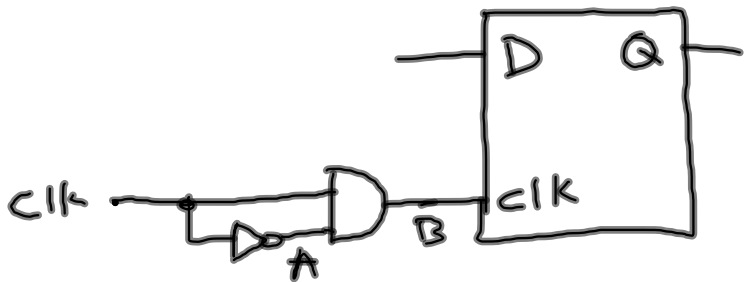
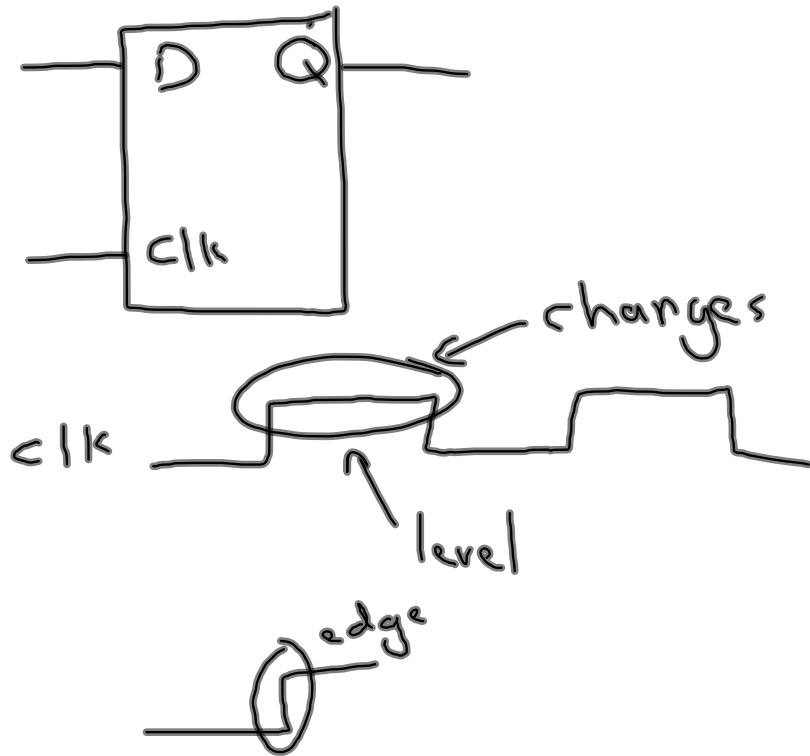
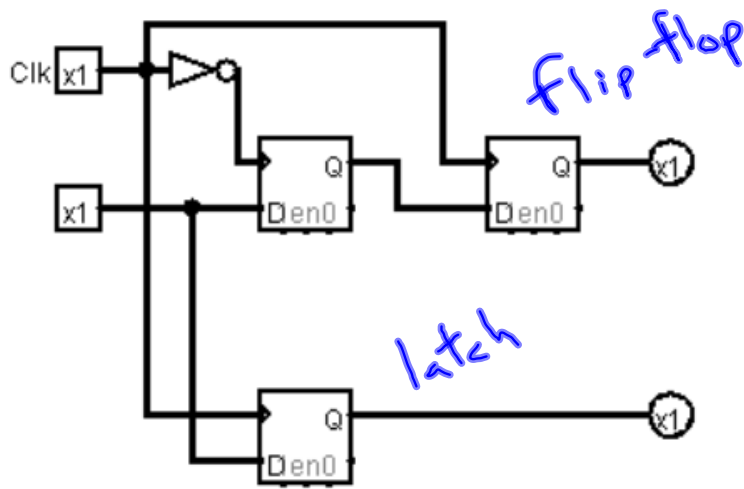
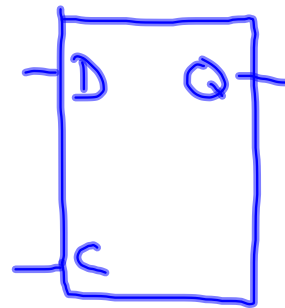
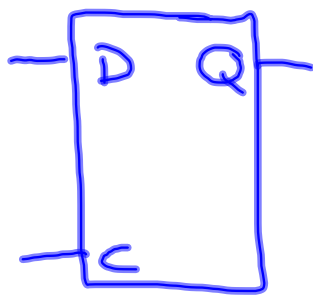
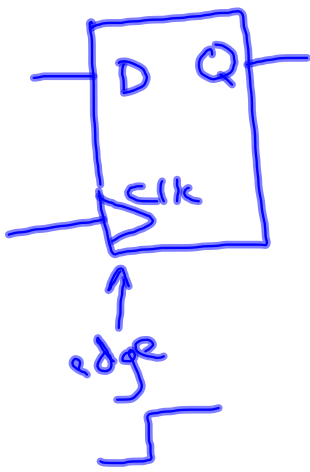


D latch

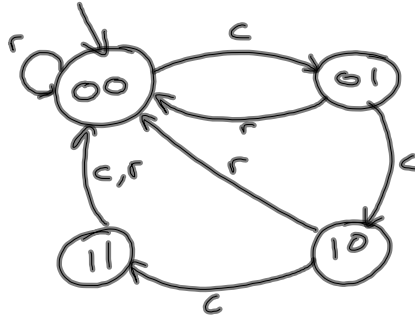
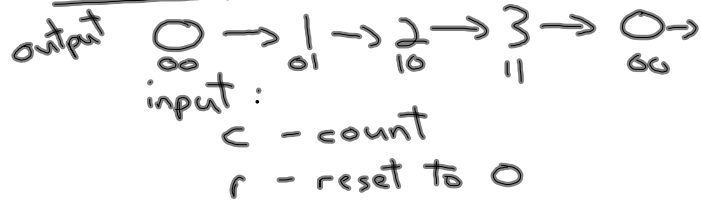




D-f.F.

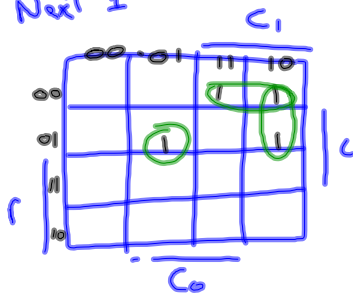


Counter



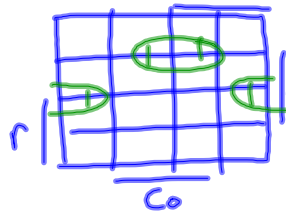
| Current state c_1, c_0 | input r c | Next state | output |
|-----------------------------|--------------|------------|--------|
| 00 | 00 | 00 | 00 |
| 00 | 01 | 01 | 01 |
| 00 | 10 | 00 | 00 |
| 00 | 11 | 00 | 00 |
| 01 | 00 | 01 | 01 |
| 01 | 01 | 10 | 10 |
| 01 | 10 | 00 | 00 |
| 01 | 11 | 00 | 00 |
| 10 | 00 | 10 | 10 |
| 10 | 01 | 11 | 11 |
| 10 | 10 | 00 | 00 |
| 10 | 11 | 00 | 00 |
| 11 | 00 | 11 | 11 |
| 11 | 01 | 00 | 00 |
| 11 | 10 | 00 | 00 |
| 11 | 11 | 00 | 00 |

Next 1



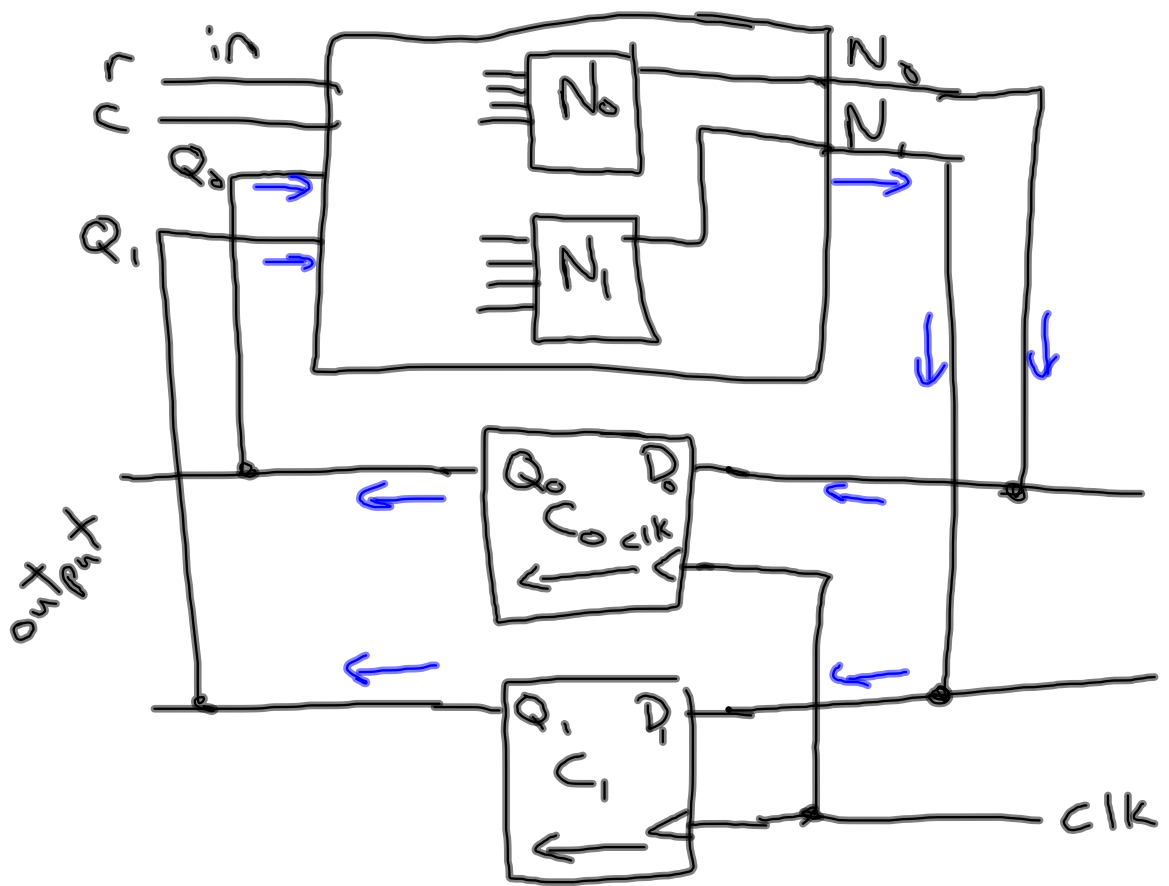
$$N1 = c_1 \bar{c}_0 \bar{r} + c_1 \bar{c}_1 \bar{r} + \bar{c}_1 c_0 \bar{r} c$$

Next 0



$$N0 = c_0 \bar{r} \bar{c} + \bar{c}_0 c \bar{r}$$





0 0 0 0
0 0 0 0
0 0 0 0

0 0 0 0
0 0 0 0
0 0 0 0