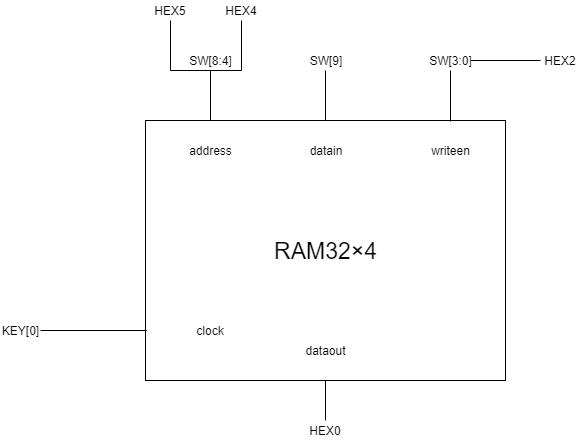
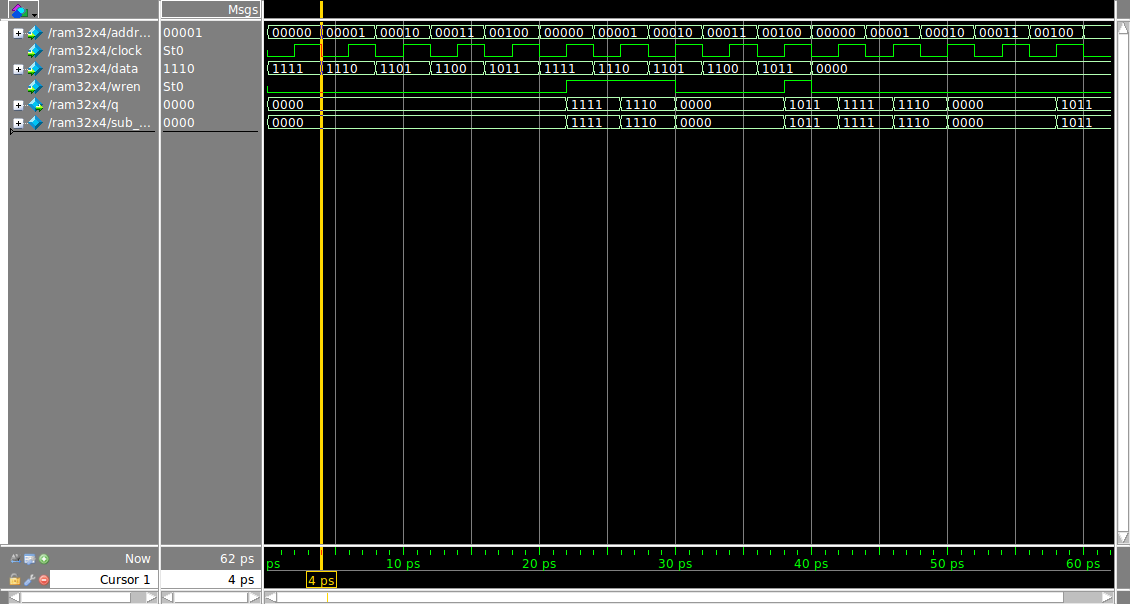
Part1

1.

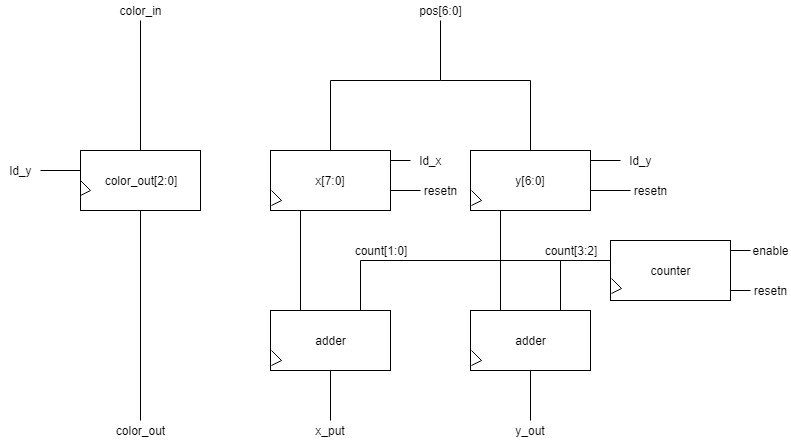




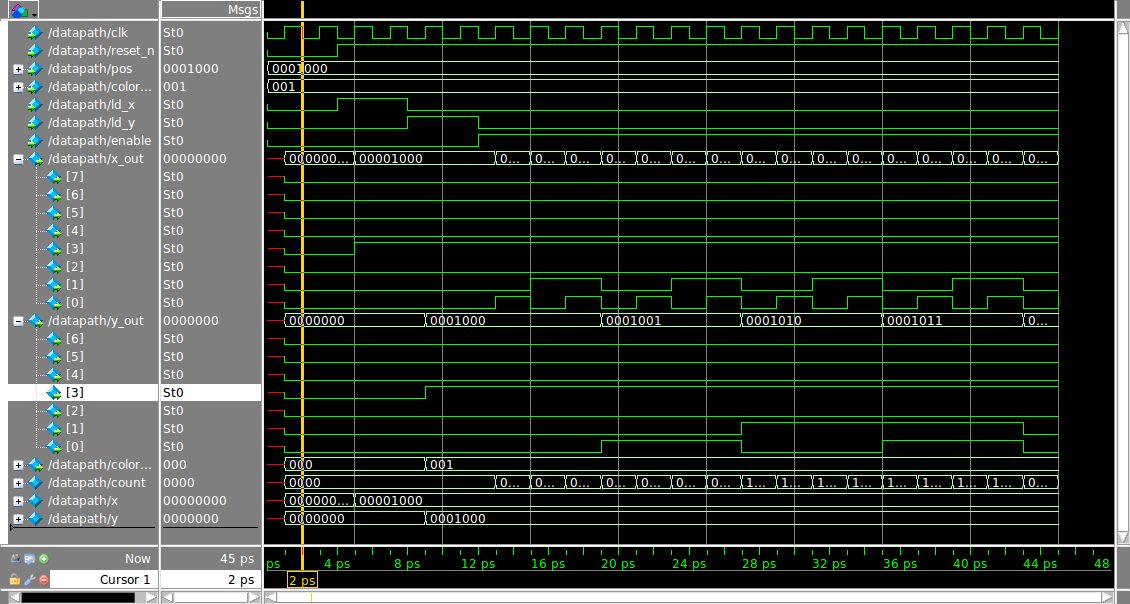
Part2

1.

DATAPATH SCHEMATIC

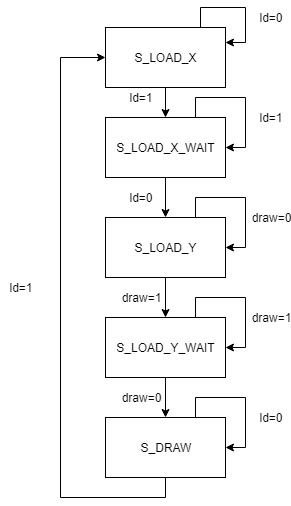


DATAPATH SIMULATION



2.

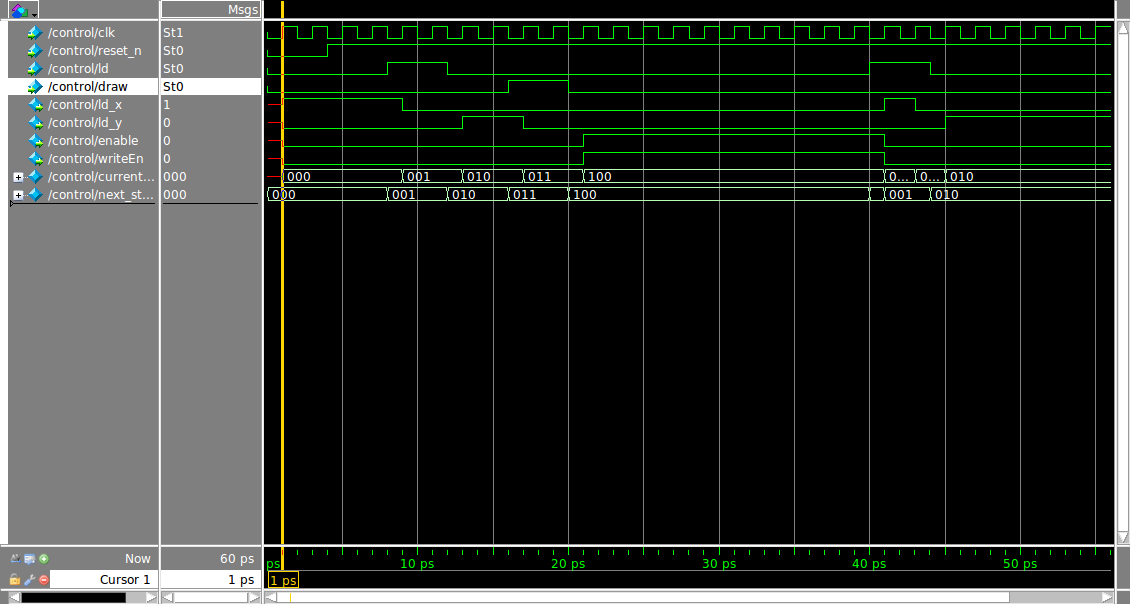
STATE DIAGRAM



STATE TABLE

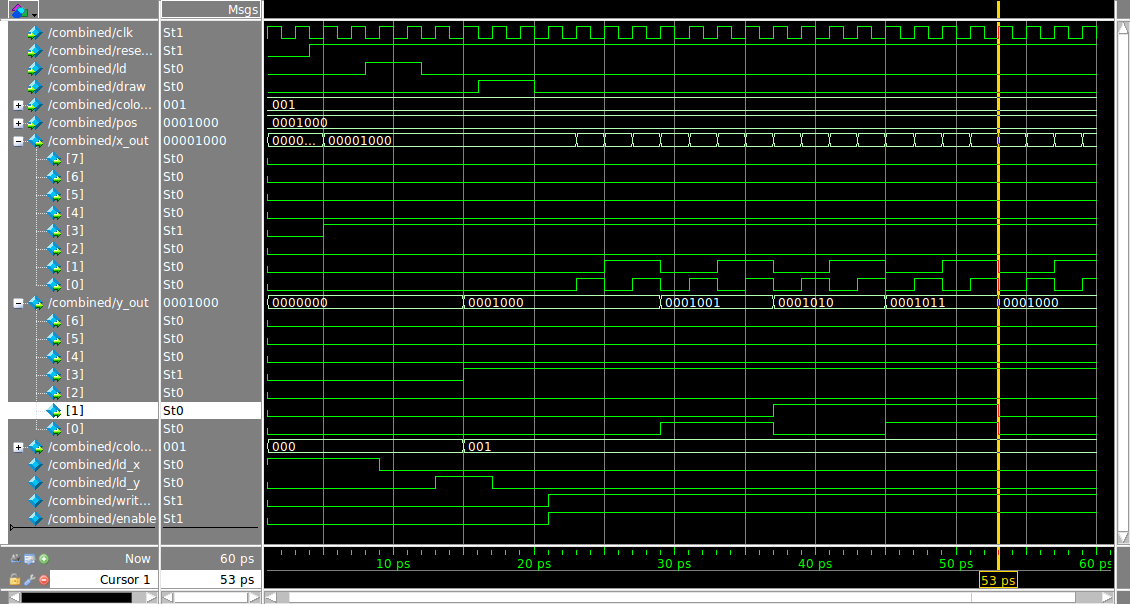
|  |  |  |  |
| --- | --- | --- | --- |
| Current state | ld | draw | Next state |
| S\_LOAD\_X | 0 | Z | S\_LOAD\_X |
| S\_LOAD\_X | 1 | Z | S\_LOAD\_X\_WAIT |
| S\_LOAD\_X\_WAIT | 1 | Z | S\_LOAD\_X\_WAIT |
| S\_LOAD\_X\_WAIT | 0 | Z | S\_LOAD\_Y |
| S\_LOAD\_Y | Z | 0 | S\_LOAD\_Y |
| S\_LOAD\_Y | Z | 1 | S\_LOAD\_Y\_WAIT |
| S\_LOAD\_Y\_WAIT | Z | 1 | S\_LOAD\_Y\_WAIT |
| S\_LOAD\_Y\_WAIT | Z | 0 | S\_DRAW |
| S\_DRAW | 0 | Z | S\_DRAW |
| S\_DRAW | 1 | Z | S\_LOAD\_X |

CONTROL SIMULATION



3.

COMBINED SIMULATION



3.

