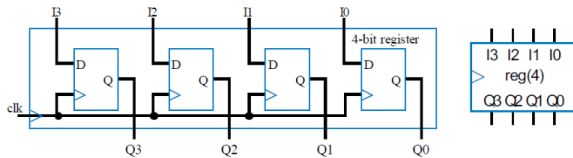


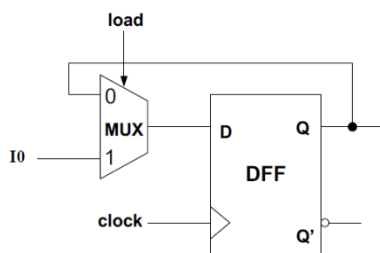
# VE270 Lecture 9 Register and Shifter

## Registers

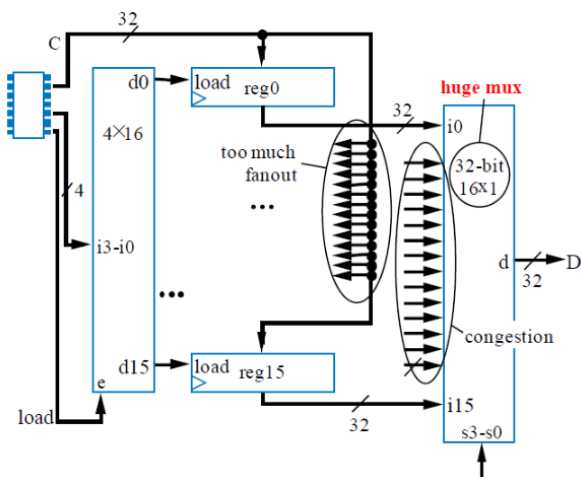
Store data, useful in data-paths.



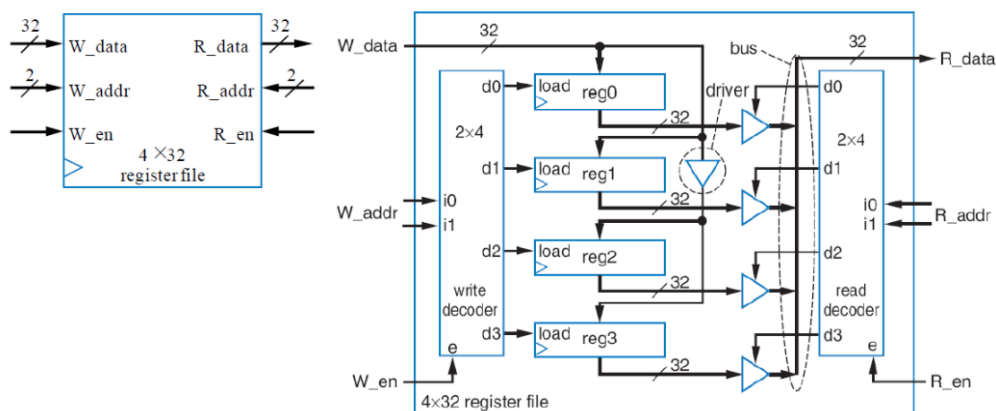
Then we add a mux to D-flipflop, to have a parallel load.



Then if there is too much register need to be controlled, we need to improve it.



The improvement is like that:



Thus we get the timing diagram as

