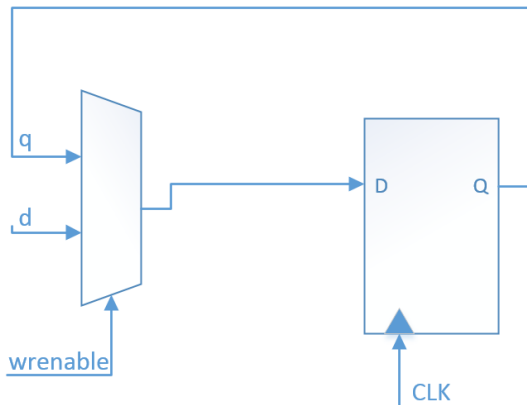


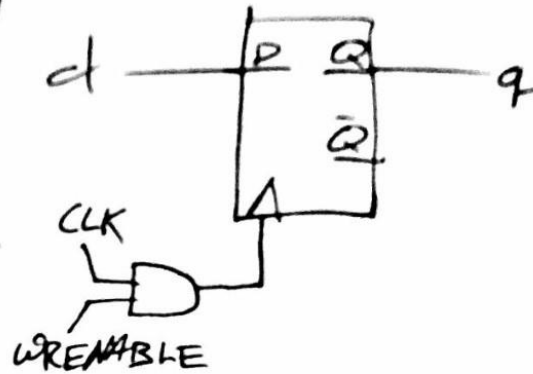
Deliverable 1

Implementation I



Implementation II

"Gated Clock"



Deliverable 6

The 'address' input is a four-bit binary representation of a number (0-31). 'enable' is a 1-bit boolean. If 'enable' is 0, the shift does effectively nothing and the decoder outputs 32'b0 as expected. When 'enable' = 1, however, the shift moves the 1 ~~to~~ to the 'address' th bit ~~of~~ of the output. The shift guarantees that only one 1 is output when 'enable' = 1, as expected. The shift also allows 'address' to directly manipulate the position of the 1 in the output.