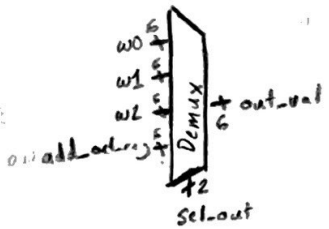
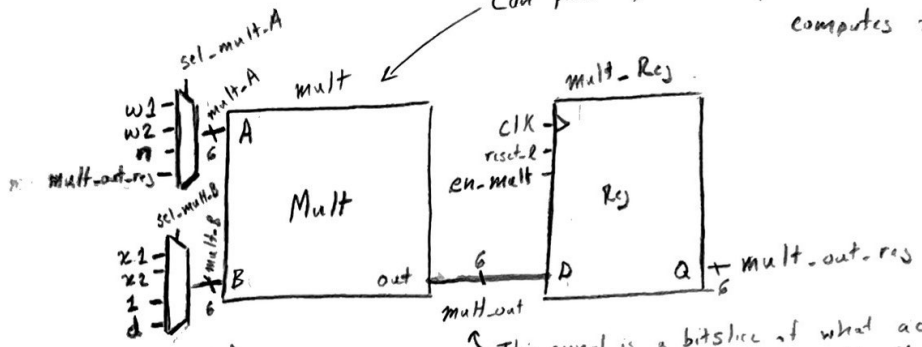
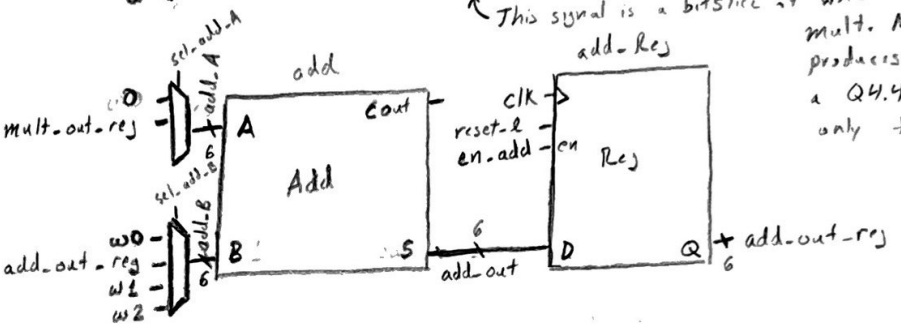
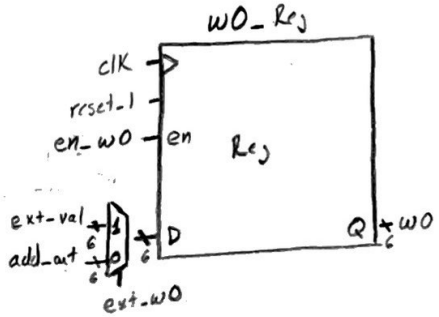
* Using Q3.3 fixed point format
6-bits

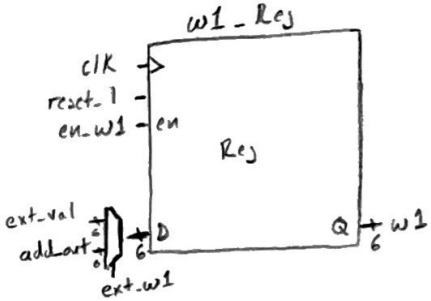
* As of right now the multiplier is assumed to be combinational.

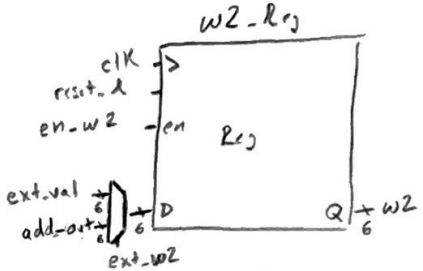


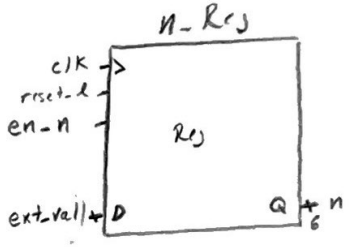


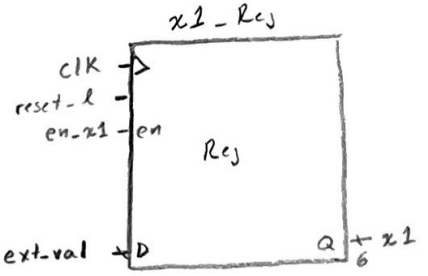


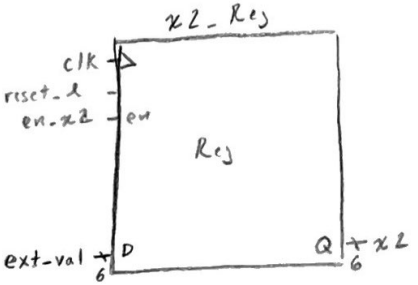


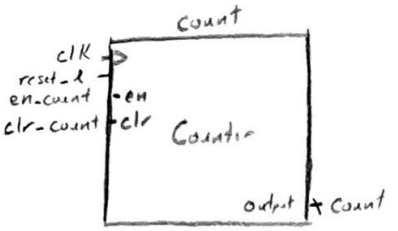












If (add_out_reg > 0)
    class = 1
else
    class = 0

*only update when correct ≠ class

If (correct)
    d = 1
else
    d = -1