CSE315 – HW2

Due to: 9.01.17 11:00

Q1) Design a logic circuit that computes n*m for two 2-bit numbers n_1n_0 and m_1m_0

Q2) Implement a 4-bit register with the functionality specified in the following table. A is the current value of the register, and B is the loaded value.

S1S0	Action	Output
00	Load	B
01	Keep current value	A
10	if (B<A) load B/4 else load B+4	if(B<A) B/4; else B+4
11	if (B>A+1) load B*2 else load A-2	if (B>A+1)B*2; else A-2

Q3) Implement an up-counter and a down counter that pulses every 20 clock cycles.