CMSC 417 Homework Three

Name: _____

Read 2.3, especially 2.3.2 consulting wikipedia's entry on HDLC for clarification. Read 2.4. Read 2.5, stop at "Implementation of Sliding Window," and resume at 2.5.3.

Due Wednesday, September 27.

1. In terms of the relationship between MSL, the size of the sequence space, and maximum throughput: (a) As MSL increases, and sequence space is constant, what happens to throughput? (b) As the sequence space increases in size (more sequence numbers) and MSL is constant, what happens to maximum possible throughput? (c) What is the danger that setting and enforcing an MSL avoids?

2. Simulate a CRC with generator $x^3 + x^2 + 1$ and message 11010010110: draw out the division as in Figure 2.17. What is the remainder? Append the remainder to the message (as it would be on transmission), and check the message by seeing that the remainder is zero.