Homework #2 (Due on 12:00am, Thursday, Nov. 5th, 2009)

1. CRC checksums: Please calculate the CRC R of $D = 0101 \ 1100 \ 1010 \ 0111 \ 1110 \ 1111$. Please use the 4 bit generator G = 1001.

2. Why do we need multiple identifiers for one entity such as IP-addresses, MAC addresses etc.?

3. How does a switch learn? Do you know the difference between a router, a switch, a hub and a bridge?

4. Please look into the Ethernet frames using wireshark and, in the best case scenario, observe an ARP request. What happens, if you want to connect to a host that is not in your local area network?