Eric Yang

304263623

CS 118

Dis 1A

Homework 3

28.Using peer 15, peer 6 sends a message asking for its predecessor and successor. Once peer 5 gets this message, it send a message back saying it (peer 5) is the predecessor and peer 8 is the successor. Now peer 6 can join once it tells peer 5 to change its successor to peer 6.

2. For Host A, source port is 80 and destination port is 26145. The source IP is the IP of B and the destination IP is the IP of A

For Host C 1st process, source port is 80 and destination port is 7532. The source IP is the IP of B and the destination IP is the IP of C

For Host C 2nd process, source port is 80 and destination port is 26145. The source IP is the IP of B and the destination IP is the IP of C

7. The receiver doesn’t need the sequence number since it can ignore the duplicate since it had already received the original and moved on. The sender also ignores duplicates.

12. It should still work since we are sending the same packet again when there is an error which means the original packet might have been lost. If there are premature timeouts, the number of times the nth packet is sent approaches infinity as n approaches infinity.

14. If data is sent infrequently, NAK would not be preferable since it requires the next packet to detect that the previous is missing. This means recovery could take a long time. However, if a lot of data is sent, NAK would work well. Few errors means NAKs are used infrequently.

22. a. The window is size 4 and the sequence must begin in range k-4 to k. This is because the window can start at most at k assuming all the ACKs for k-1 and before have been received. The window can start at least at k-4 if the ACKs for k-1 and before have not been received.

b. The possible values of ACK value are in range k-5 to k-1. This is because when the receiver is waiting for k, it has sent the ACK values k-4 through k-1 to sender which could still be propagating back. Receiver also can’t send ACK lower than k-5 since the sender must have received that ACK for k-5.