

# SPRING 2005

## HOME WORK ASSIGNMENT 2

CS 4/55231 INTERNET ENGINEERING

Department of Computer Science, Kent State University

Due Date: \_\_\_\_ (5x100=500 points)

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1. (TCP) Read the RFC0793 that describes TCP. How many types of TCP events are there? What are the events in each type? What is supposed to happen if a TCP segment arrives, and the state is closed and the segment does not have an RST? [it sends an RST]
2. (TCP) What is reincarnation of connection problem in TCP sequence numbering? What mechanism has been suggested in RFC0793 to avoid reincarnation?
3. (IP) In the beginning I have shown you a program which can find out hops to a IP destination. Explain how this TRACE ROUTE program finds out the hops. Explain the operation of the involved protocols.
4. (BGP) Draw the top level packet types and explain the purpose of the four types of BGP messages (a) OPEN, (b) UPDATE, (c) NOTIFICATION and (c) KEEP ALIVE.
5. (BGP) Explain with example what is the role of MULTI-EXIT-DICRIMINATOR in BGP?