CNT 4007 Computer Network Fundamentals, Spring 2017
Homework Assignment 2
given by
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Out: Feb. 08 (Wednesday)

Due: 10:40am (Hard Deadline) Wednesday Feb. 15

- The problem sets form an important part of the learning in this course. Thus you are required to do them in order to pass.

- Try to be as clear and precise as possible in your presentation. Sloppy answers may be at a disadvantage, i.e., likely to receive fewer points.

- Please submit your answers via SAKAI system.

- No late assignments are accepted !!

Problem 1

Consider an HTTP client that wants to retrieve a Web document at a given URL. The IP address of the HTTP server is initially unknown. What transport- and application-layer protocols besides HTTP are needed in this scenario?

Problem 2

Review the section on "Peer-to-Peer File Distribution" of Cahpter 2. Please then write **(with your own words)** the **ONE-PAGE** summary of the paper.

Problem 3

Draw the FSM for the receiver side of Protocol *rdt 3.0*. [NOTE: you need to explain the reasoning process on how you come out the final answer.]

Problem 4

The transport layer handles the transmission error by requesting the damaged segments to be retransmitted. If the probability of a segment being damaged is p, what is the mean number of the transmissions required to send a segment? You can assume the acknowledgements are never lost for solving this question. [NOTE: you need to explain the reasoning process on how you come out the final answer.]