CS544 Assignment #2

1. Research a case study of the real CDN delivery and selection scheme and summarize that case with technical explanation
   – presentation for selected study
   -- This question requires a separate PPT file

2. Suppose an analog audio signal is sampled 16,000 times per second, and each sample is quantized into one of 1024 levels. What would be the resulting bit rate of the PCM digital audio signal?

3. Multimedia applications can be classified into three categories. Name and describe each category.

4. Streaming viedo systems can be classified into three categories. Name and describe each of these categories.

5. List three disadvantages of UDP streaming.

6. With HTTP streaming, are the TCP receive buffer and the client's application buffer the same thing? If not, how do they interact?

7. Consider the simple model for HTTP streaming. Suppose the server sends bits at a constant rate of 2 Mbps and playback begins when 8 million bits have been received. What is the initial buffering delay tp?

8. Compare Pros and Cons (Advantages vs. Disadvantages) of packet switching network and circuit switching network for multimedia application/data.

9. Research data encoding schemes and briefly summarize them.

10. Research data compression schemes and briefly summarize them, especially the most commonly used ones.

11. What are Pros and Cons of each transport layer procotols for multimedia application?

12. What is DS0? Relationship with PCM?

Filename format: **CS544_hw#_sec#_lastname_firstname.doc (or pdf)**
e.g.) CS544_hw2_sec01_Jordan_Michael.doc // main campus section 01
CS544_hw2_sec02_Woods_Tiger.pdf // online section 02

CS544_hw2_sec03_Patel_Jatin.pdf // India section 03

Filename format will be the same for remaining semester.

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Due date: 2/21/17 23:59 US Chicago Time