

CS447-002: Lecture Note (Lecture #16, March 18, 2024)

1. Pick up:

- Attendance card
- Quiz #7 question list

2. Announcements:

- Quiz #6 is scheduled today (10 to 15 minutes at the end)

A timekeeper wanted.

- Quiz #7 is scheduled on 3/25 (Monday next week)
- Project #3 has been emailed to the graduate students

3. Medium Access Control (MAC)

- Concept (“What is MAC for?”)
- Three different types of “MAC” (central MAC, token MAC, contention MAC)
- CSMA-CD (Carrier Sense Medium Access with Collision Detection)
 - Persistency algorithms (no-persistent, 1-persistent, p-persistent algorithms)
 - BEB (Binary-Exponential-Backoff) algorithm
 - Performance analyses (as exercises)
- **Token-Ring MAC**
 - <https://ipsit.bu.edu/sc546/sc441Spring2003/fddi/fdditoken.html>
 - <https://www.certificationkits.com/cisco-certification/ccna-articles/cisco-ccna-data-link-conceptslayer-2/data-link-protocols-token-fddi-ethernet/>

4. IP addresses

- Host address and domain address
- IPv4 protocol design
 - 32-bit address space
 - Class-less Inter-Domain Routing (CIDR) and CIDR-prefix
 - Subnets and subnet mask

5. Quiz #6 (10 to 15 minutes)