

CS447 Networks and Data Communications

June 16 Lecture Summary

0. Announcements:

- (1) Homework #1 submission due
- (2) Quiz #1 at the end of today

1. Project I Introduction

- (1) Demonstration (client & server)
- (2) Project #1 description and requirements (Socket_summer_2026.ppt)
 - “client & server application model”
 - Concept of “socket connections”
 - Network ports and network addresses
 - client/server process organization
 - Major WinSock APIs and their syntax
 - “sockaddr_in” structure – for specifying the server-side and the client-side network ports and the network addresses
- (3) **Project #1 requirements (Summer2026_CS447_Project_01.doc)**
 - Functional requirements
 - Structural requirements (source code file) – including the development platform
 - Submission requirements
- (4) **MAC address, IP address, and host name translation (DNS and ARP)**
 - MAC (Medium Access Control) address and ARP (Address Resolution Protocol)
 - Software address and physical addresses
 - Routers

(5) Exercise Questions on June 16th

- Exercise_Questions_on_June_16_2026_solutions.pdf
- EXERCISE #1

(6) IP (Internet Protocol)

- IP addresses for the identifiers for each NIC (Network Interface Card)
- Net ID (domain addresses) and host addresses
- The classic three address-class
- IP subnets and subnet masks
 - DHCP (Dynamic Host Configuration Protocol) – assigned IP addresses and permanent IP addresses
 - The purpose of IP subnets

(7) Exercise Questions on June 16th

- Exercise_Questions_on_June_16_2026_solutions.pdf
- EXERCISE #2

(8) Quiz #1

- A timekeeper wanted (1:15 p.m.)