1. Protocols that we have studied so far.

2. Introduction

    - Transport layer vs. Network layer

    - Forwarding vs. Routing

    - Forwarding table: longest prefix matching

3. IP: Internet Protocol

    - IP datagram format (Understand each field.)

    - Understand IP fragmentation and reassembly

    - IPv4 addressing

        o Subnets, subnet mask

        o How a network gets subnet part of IP address (See example in ppt.)

        o How a host gets an IP address: DHCP

    - IPv6

        o IPv6 datagram format

        o Tunneling

4. Graph and Tree

    - Fundamentals of graph and tree

    - How to compute a minimum spanning tree of a graph:

        o Prim's algorithm vs. Kruskal's algorithm

5. Routing algorithm

    - Dijkstra's algorithm → "Forwarding table" of a node

    - Hierarchical routing

        o Autonomous System (AS)

        o Intra-AS routing

        o Inter-AS routing