CS 338

Fri, 27 Oct 2023
Local net.

```
   173.45.67.88
   |    |
   |    | Bob
   |    |
   |    |
   |__________|
   router

```

```
 Ethernet header
    src MAC addr
    dest MAC addr

 IP header
    src IP
    dest IP

 TCP SYN
    src port
    dest port
```

"medium access control"
Need

- Translate domain name to IP address

- Translate IP addr into next-hop MAC address

DNS

ARP

Address Resolution Protocol
Two data structures

1. **Routing table**
   Given an IP address dest., which local IP should I hand it to?

2. **ARP cache**
   Given a local IP, which MAC addr. does that machine have?
Pretend 172.16.41.2 is my local next hop but is not in my ARP cache.

2
That's me.

Mal

route

That's me 00:50:46.

Hey! Who has IP 172.16.41.2?
Day 1: I go to carleton.edu
I save some cookies

Day 2: I go to carleton.edu
I send the saved cookies
with my request.

more to come....