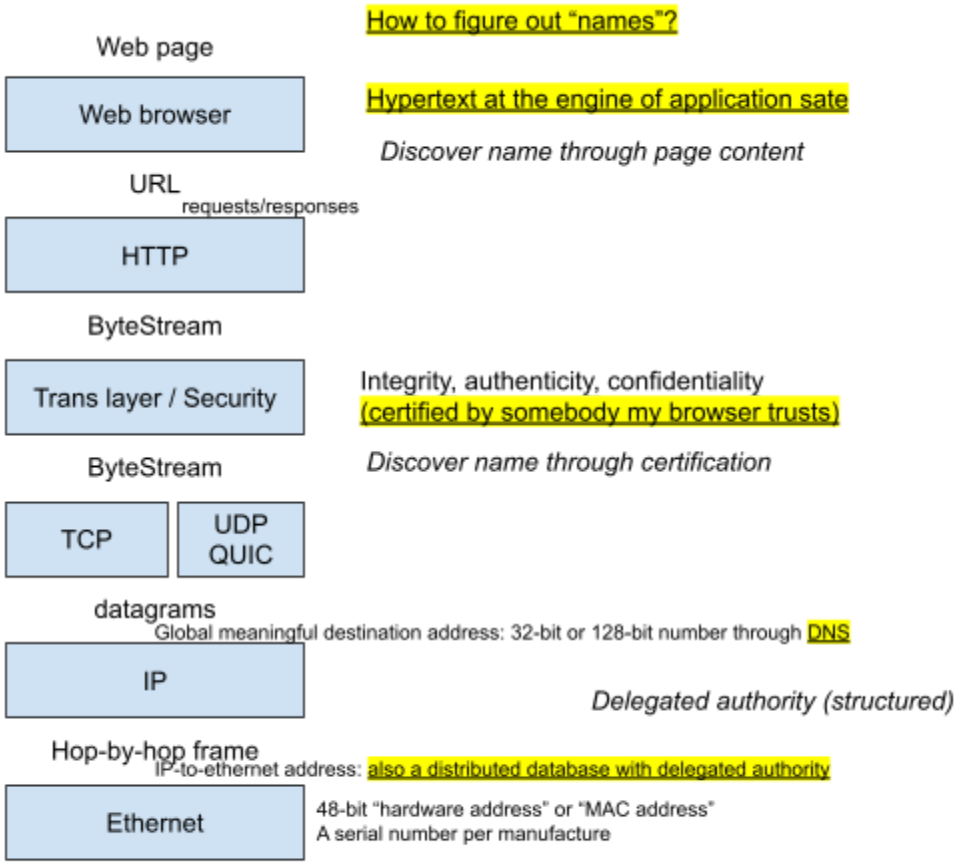
- Naming for web pages: URL (scheme, hostname, path, query)
    - Hypertext - people would care that the link always goes to somewhere
    - World wide web: what if we don't care about whether hypertext link works or not
    - (This is totally unrelated to the lecture, but here is another interesting piece of essay from the early days: https://www.jwz.org/doc/worse-is-better.html)
    - Hypertext as the engine of application state (REST)
- HTTP: requests/responses



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- (https://news.ycombinator.com/item?id=35744130: https://ma.ttias.be/theres-more-than-one-way-to-write-an-ip-address/)
- `host` takes in a url and returns the 32-bit or 128-bit number as a user-space process
    - `host` gets the address of DNS server through DHCP service
    - DNS - distributed database with delegated authority
    - Top-level root name servers (198.41.0.4) delegate subdomains (e.g. com. Or edu.) to other name servers, and looking for the IP address given a URL would recursively follow this delegation relationship (e.g. edu. => mit.edu. => lamp.mid.edu.)
- `wireshark`
- IP-to-Ethernet

- ISPs ask local authorities for ranges of IP addresses, and can assign IP address in these assigned ranges to its customers
- It needs to in “ranges” to make routing feasible