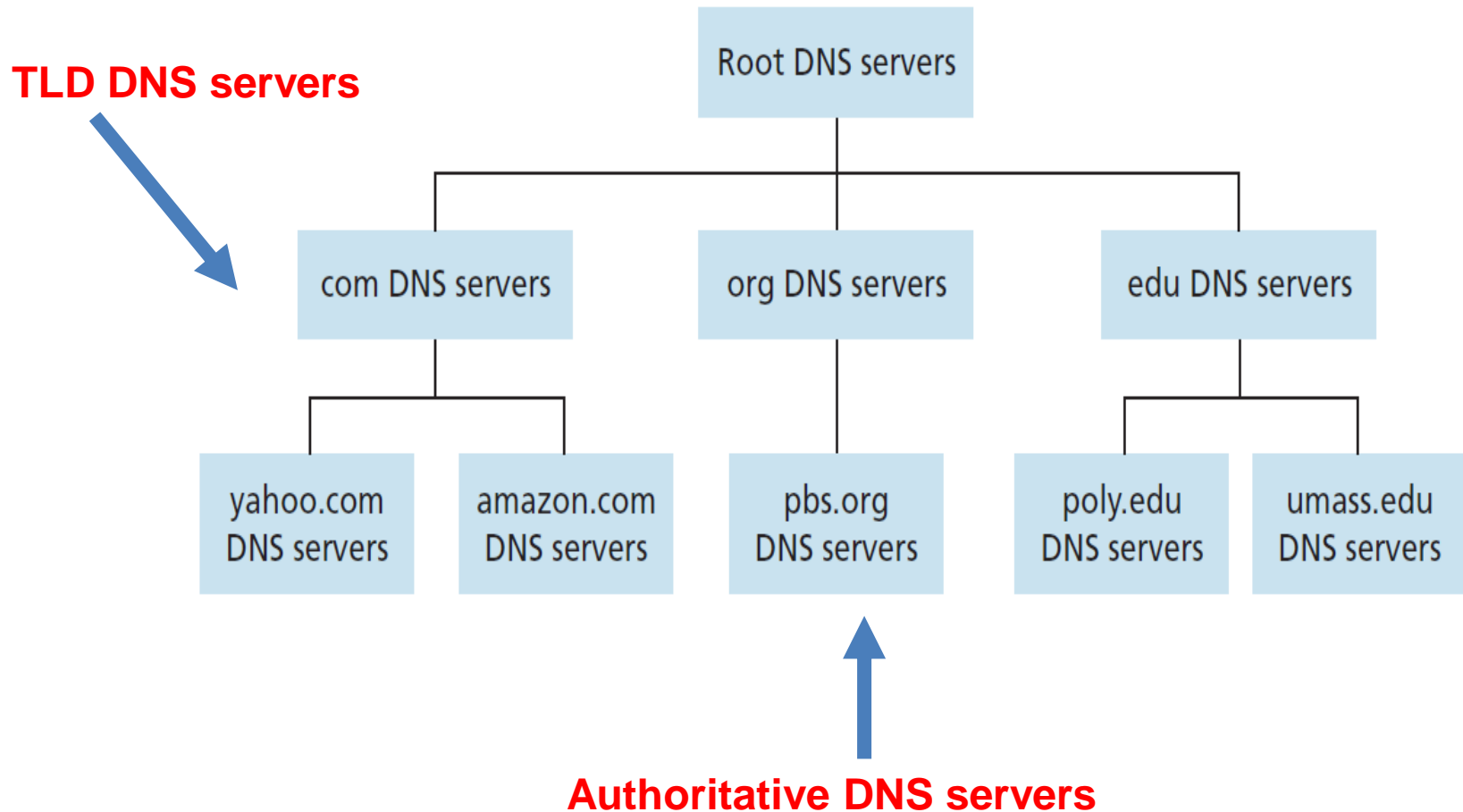# DNS Basics

Lakiotakis Emmanouil
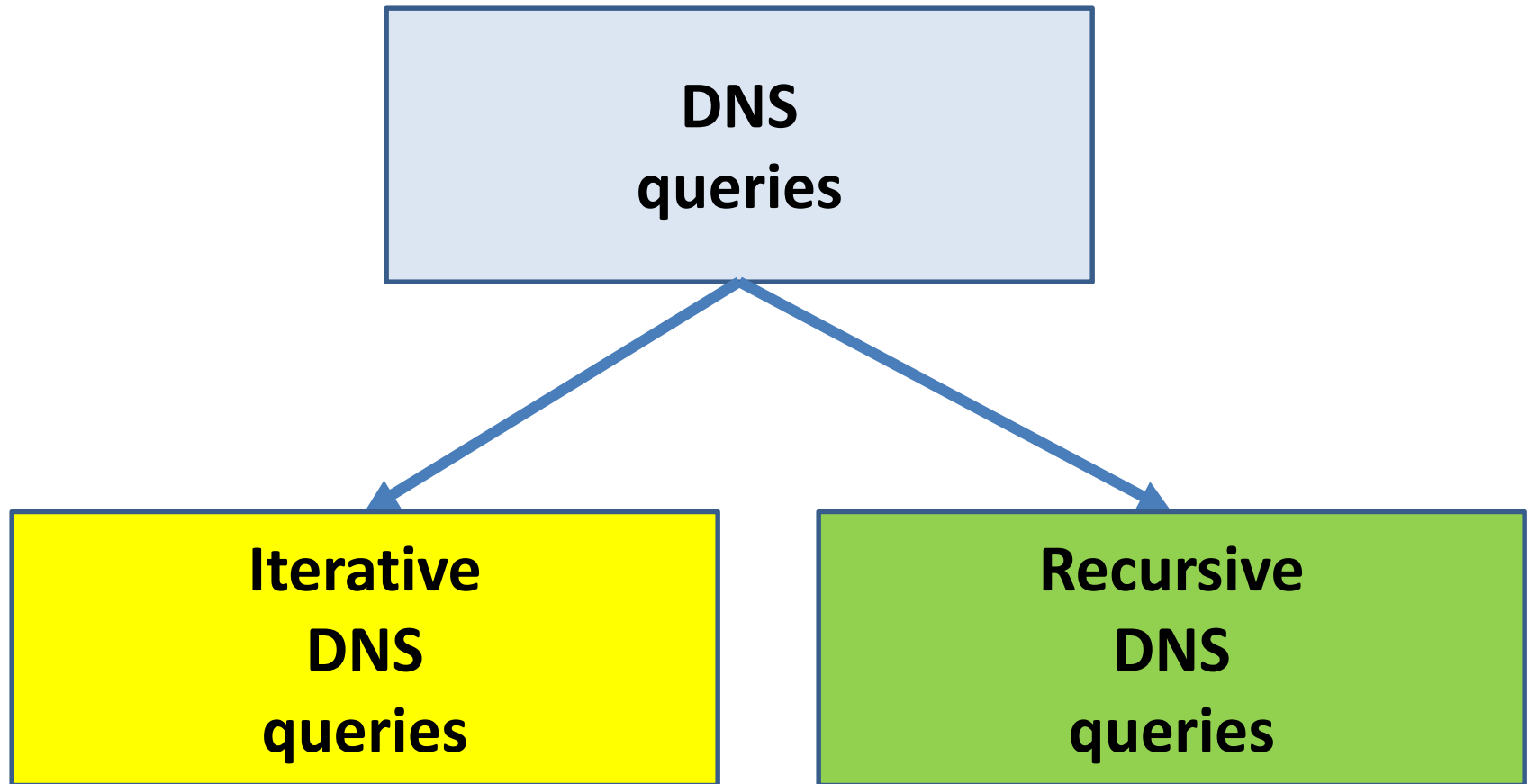
HY335B
Spring 2017

Hierarchy of DNS
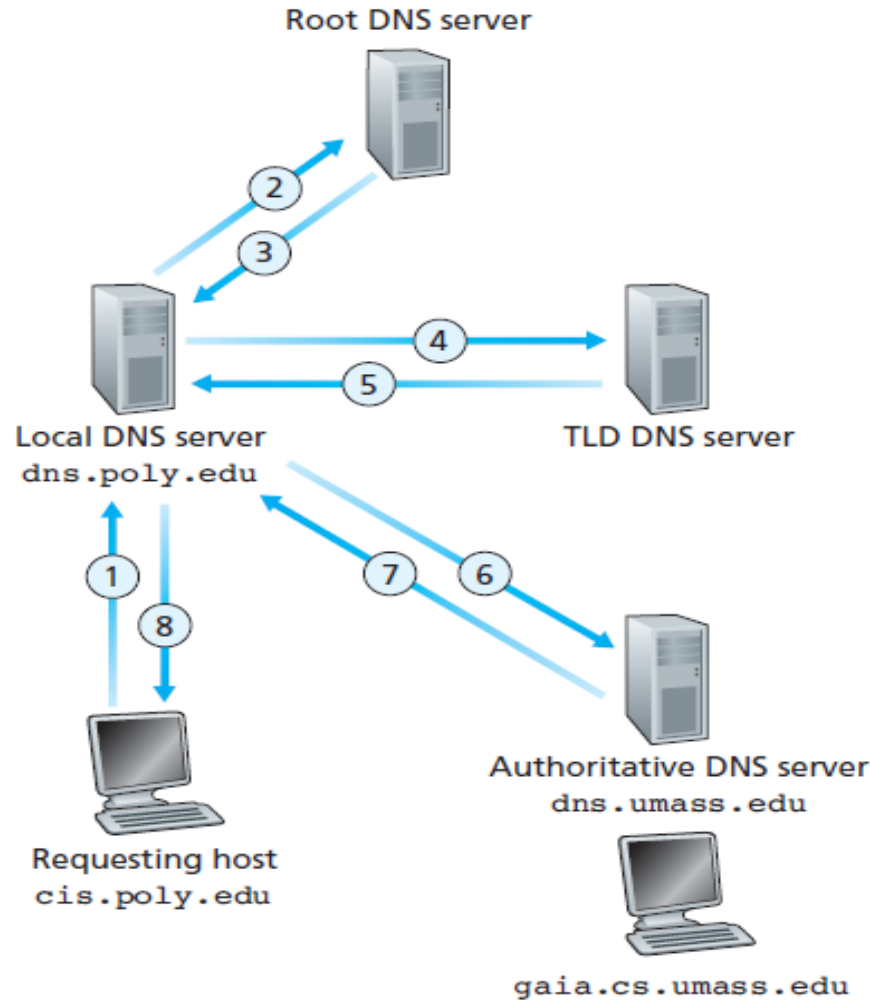
DNS server types

- Root DNS servers
- Top-Level Domain DNS servers (TLD)
- Authoritative DNS servers
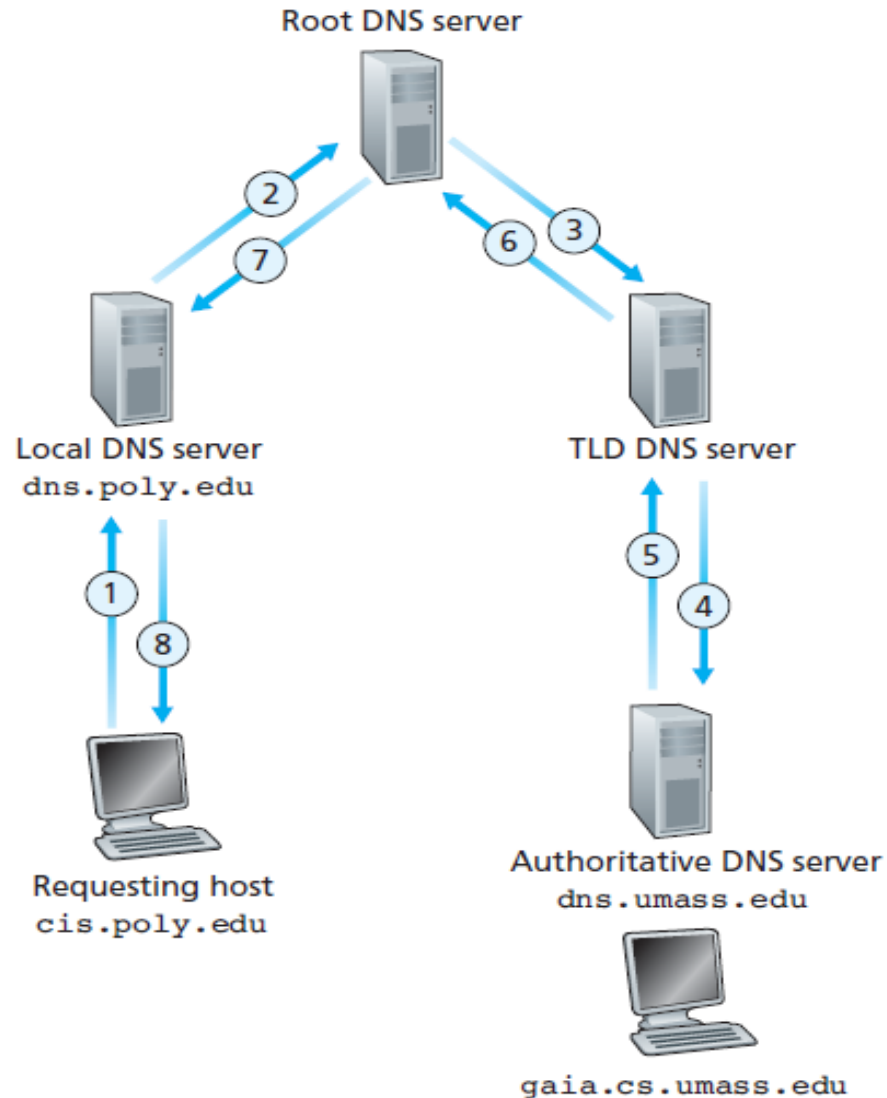- Local DNS servers

DNS queries

```
         ┌─────────────────┐
         │       DNS       │
         │     queries     │
         └─────────────────┘
          ╱               ╲
         ╱                 ╲
┌──────────────┐    ┌──────────────┐
│   Iterative  │    │   Recursive  │
│      DNS     │    │      DNS     │
│    queries   │    │    queries   │
└──────────────┘    └──────────────┘
```

DNS queries

Iterative queries

DNS queries

Improve DNS performance

Question: how improve DNS performance?

Answer: Use DNS caching

Reduce delay and number of DNS messages