

15-213

“The course that gives CMU its Zip!”

Network Programming

April 20, 2004

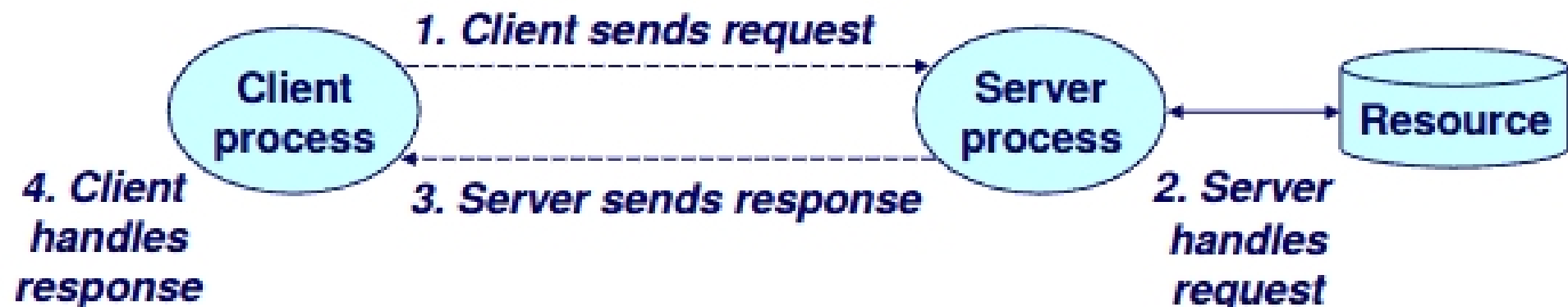
Topics

- Programmer's view of the Internet (review)
- Sockets interface
- Writing clients and servers

A Client-Server Transaction

Most network applications are based on the client-server model:

- A **server** process and one or more **client** processes
- Server manages some **resource**.
- Server provides **service** by manipulating resource for clients.



Note: clients and servers are processes running on hosts (can be the same or different hosts).

A Programmer's View of the Internet

1. Hosts are mapped to a set of 32-bit *IP addresses*.

- 128.2.203.179
- In IP V6, Host addresses are 64 bit: at some point in the future a transition from IP V4 to IP V6 will happen.

2. The set of IP addresses is mapped to a set of identifiers called Internet *domain names*.

- 128.2.203.179 is mapped to www.cs.cmu.edu

3. A process on one Internet host can communicate with a process on another Internet host over a *connection*.