

15-213

“The course that gives CMU its Zip!”

Network programming Nov 27, 2001

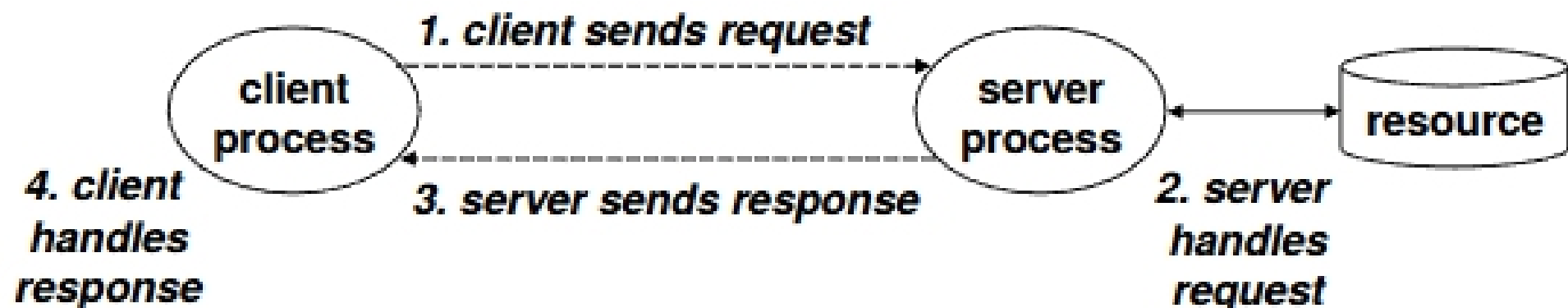
Topics

- Client-server model
- Sockets interface
- Echo client and server

Client-server model

Every network application is based on the client-server model:

- Application is a server process and one or more client processes
- Server manages some resource, and provides service by manipulating resource for clients.
- Client makes a request for a service
 - request may involve a conversation according to some server protocol
- Server provides service by manipulating the resource on behalf of client and then returning a response



Clients

Examples of client programs

- Web browsers, ftp, telnet, ssh

How does the client find the server?

- The address of the server process has two parts: *IPaddress:port*
 - The *IP address* is a unique 32-bit positive integer that identifies the host (adapter).
 - » dotted decimal form: $0x8002C2F2 = 128.2.194.242$
 - The *port* is positive integer associated with a service (and thus a server process) on that machine.
 - » port 7: echo server
 - » port 23: telnet server
 - » port 25: mail server
 - » port 80: web server