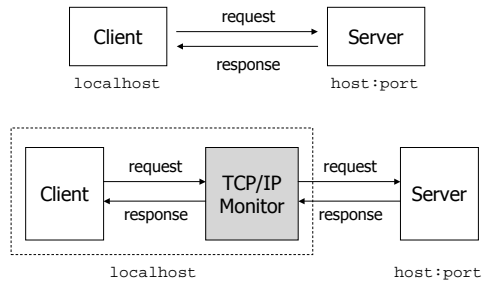


CS320 Web and Internet Programming Handling HTTP Requests

Chengyu Sun
California State University, Los Angeles

TCP/IP Monitor in Eclipse ...



... TCP/IP Monitor in Eclipse

- ◆ Window → Preferences → Run/Debug → TCP/IP Monitor
- ◆ Example: monitor the access of <http://sun.calstatela.edu/~cysun/index.html>
 - Local Monitoring Port?? Host?? Port??
 - Browser URL??

HTTP Request Example

http://cs.calstatela.edu:4040/foo

GET /foo HTTP/1.1

Host: cs.calstatela.edu:4040
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.0; en-US; rv:1.7.3) ...
Accept: text/xml,application/xml,application/xhtml+xml,text/html;q=0.9,...
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 300
Connection: keep-alive
Cookie: nxt/gateway.dll/uid=4B4CF072; SITESERVER=ID=f1675...

HTTP Request

- ◆ Request line
 - Method
 - Request URI
 - Protocol
- ◆ Header
- ◆ [Message body]

Request Methods

- ◆ Actions to be performed regarding the resource identified by the *Request URI*
- ◆ Browser
 - GET
 - POST
- ◆ Editor
 - PUT
 - DELETE
- ◆ Diagnosis
 - HEAD
 - OPTIONS
 - TRACE

HttpServlet Methods

	→	service()
◆ GET	→	◆ doGet()
◆ POST	→	◆ doPost()
◆ PUT	→	◆ doPut()
◆ DELETE	→	◆ doDelete()
◆ HEAD	→	◆ doHead()
◆ OPTIONS	→	◆ doOptions()
◆ TRACE	→	◆ doTrace()

Override HttpServlet Methods

- ◆ Default implementation returns an HTTP Bad Request error
- ◆ doGet(), doPost()
 - Simply call one method from the other

Request Header Fields

◆ User-Agent	◆ Host
◆ Accept	◆ Connection/Keep-alive
◆ Accept-Charset	◆ Content-Length
◆ Accept-Encoding	◆ Cookie
◆ Accept-Language	◆ Referer

HttpServletRequest

- ◆ get`Xxx`() methods
- ◆ http://java.sun.com/products/servlet/2.5/docs/servlet-2_5-mr2/javax/servlet/http/HttpServletRequest.html

Example: RequestInfo

- ◆ Display some request information
 - Method, request URI, request URL ...
- ◆ Display the IP address of the client
- ◆ Determine if gzip compression supported

Request Parameters

- ◆ Query string
 - `?param1=value1¶m2=value2&...`
- ◆ Form data

Example: Add

- ◆ Get two integers from request parameter and display the sum

Parameter Methods

- ◆ Inherited from *ServletRequest*
 - String `getParameter(String p)`
 - Enumeration `getParameterNames()`
 - String[] `getParameterValues(String p)`
 - Map `getParameterMap()`

HTML Forms

- ◆ `<form>`
 - action – URL of the server-side program that process the submitted form data
 - method – GET or POST
 - enctype
 - ◆ multipart/form-data
 - for file uploading
 - require POST

`<input>`

- ◆ name
- ◆ value
- ◆ type
 - Text field ??
 - Password field ??
 - Submit button ??
 - Reset button ??
 - Check box ??
 - Radio button ??
- ◆ more types
 - File upload
 - Hidden field

`<textarea>`

- ◆ name
- ◆ rows
- ◆ cols

`<select>`

- ◆ name
- ◆ size
- ◆ multiple
- ◆ `<option value="something">some text`

Example: Guestbook

◆ Filter HTML characters

- <: <
- >: >
- ": "
- &: &

HTTP Request as User Input

◆ HTTP Request

- Request line and header fields
- Query string
- Form data

◆ Important classes

- `HttpServletRequest` and its superclass
`ServletRequest`

◆ It's still Java!