

## CS320 Web and Internet Programming Generating HTTP Response

Chengyu Sun  
California State University, Los Angeles

## WebClient

- ◆ Given HTTP request
- ◆ Display HTTP response



## HTTP Response Example

```
HTTP/1.1 200 OK
Content-Type: text/html; charset=ISO-8859-1
Content-Length: 168
Date: Sun, 03 Oct 2004 18:26:57 GMT
Server: Apache-Coyote/1.1
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
<html><head><title>Servlet Life Cycle</title></head>
<body>
n is 299 and m is 440
</body>
</html>
```

## HTTP Response

- ◆ Status line
  - Protocol
  - Status code
- ◆ Header
- ◆ [Message body]

## Common Status Codes

- ◆ 404 (Not Found)
- ◆ 403 (Forbidden)
- ◆ 401 (Unauthorized)
- ◆ 200 (OK)

## Status Codes

- ◆ 100 – 199: Informational. Client should respond with further action
- ◆ 200 – 299: Request is successful
- ◆ 300 – 399: Files have moved
- ◆ 400 – 499: Error by the client
- ◆ 500 – 599: Error by the server

## Redirect Codes

- ◆ 301 (Moved Permanently)
  - GET
- ◆ **302** (Found)
  - a.k.a. (Moved Temporarily)
  - GET
- ◆ 303 (See Other)
  - GET *and* POST
- ◆ 307 (Temporary Redirect)
  - GET but *not* POST

## HttpServletResponse Methods

- ◆ void setStatus( int sc )
- ◆ void sendRedirect( String location )
  - 302
  - Handle relative URL
- ◆ Example
  - Course selector

## Header Fields

- |                   |                    |
|-------------------|--------------------|
| ◆ Request         | ◆ Response         |
| ▪ Accept          | ▪ Content-Type     |
| ▪ Accept-Charset  |                    |
| ▪ Accept-Encoding | ▪ Content-Encoding |
| ▪ Accept-Language | ▪ Content-Language |
| ▪ Connection      | ▪ Connection       |
| ▪ Content-Length  | ▪ Content-Length   |
| ▪ Cookies         | ▪ Set-Cookie       |

## More Response Header Fields

- ◆ Location
  - for redirect
- ◆ Refresh
  - "Push"
  - Incremental display
- ◆ Cache-Control, Expires, Pragma
  - for cache policies

## HttpServletResponse Methods

- ◆ setContentype()
- ◆ addHeader(), setHeader()
- ◆ addIntHeader(), setIntHeader()
- ◆ addDateHeader(), setDateHeader()
- ◆ containsHeader()

## Examples

- ◆ Incremental display
- ◆ gzip
- ◆ jpeg