



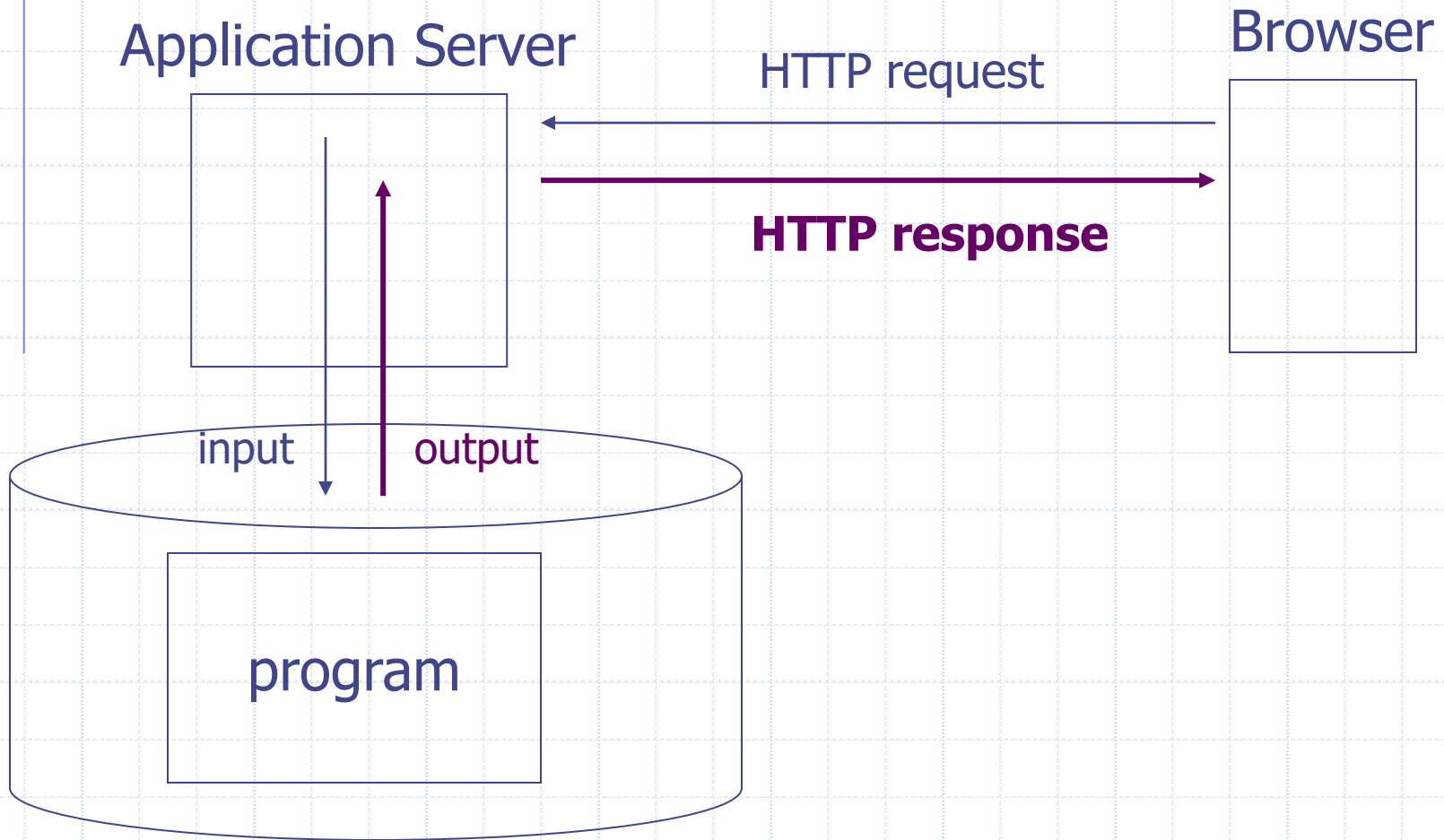
CS3220 Web and Internet Programming

Generating HTTP Responses

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HTTP Response As Output



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

- ◆ 200 OK
- ◆ 302 Found (for redirect)
- ◆ 401 Unauthorized
- ◆ 403 Forbidden
- ◆ 404 Not Found
- ◆ 500 Internal Server Error

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

<error-page> in web.xml

- ◆ Showing customized error pages for common errors, e.g. 404 Page Not Found
- ◆ Example:

```
<error-page>  
  <error-code>404</error-code>  
  <location>/WEB-INF/404.html</location>  
</error-page>
```

```
<error-page>  
  <error-code>403</error-code>  
  <location>/WEB-INF/403.html</location>  
</error-page>
```

Header Fields

◆ Request

- Accept
- Accept-Charset
- Accept-Encoding
- Accept-Language
- Connection
- Content-Length
- Cookies

◆ Response

- Content-Type
- Content-Encoding
- Content-Language
- Connection
- Content-Length
- Set-Cookie

More Response Header Fields

◆ Location

- for redirect

◆ Refresh

- "Push"
- Incremental display

◆ Content-Disposition (RFC2183)

RFC2616, Section 14

<http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html>

HttpServletResponse

◆ <http://download.oracle.com/javaee/7/api/javax/servlet/http/HttpServletResponse.html>

Header Methods in HttpServletResponse

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

More HttpServletResponse Methods

- ◆ `setContentType(String type)`
- ◆ `sendRedirect(String location)`
 - Set status code to 302
- ◆ `getWriter()`
 - For text responses, e.g. HTML pages
- ◆ `getOutputStream()`
 - For binary responses, e.g. images

Example: Add Revisited

- ◆ Redirect the user back to the input form if the parameters are missing or invalid
 - `sendRedirect()` does not terminate the execution of `doGet()` or `doPost()`

Example: Countdown

- ◆ Automatically refreshes the display every second
 - The `Refresh` header

Example: Download

- ◆ Download an image file from the server
 - File and FileInputStream
 - Content type
 - Binary response
 - Content-Length and Content-Disposition header

Summary

◆ HTTP Response

- Status Line, Headers, Response Body

◆ Status code ranges and some common status codes

◆ Generate non-HTML responses

- Use of headers
- Writer vs. OutputStream