JEE Course
Servlets – Responses

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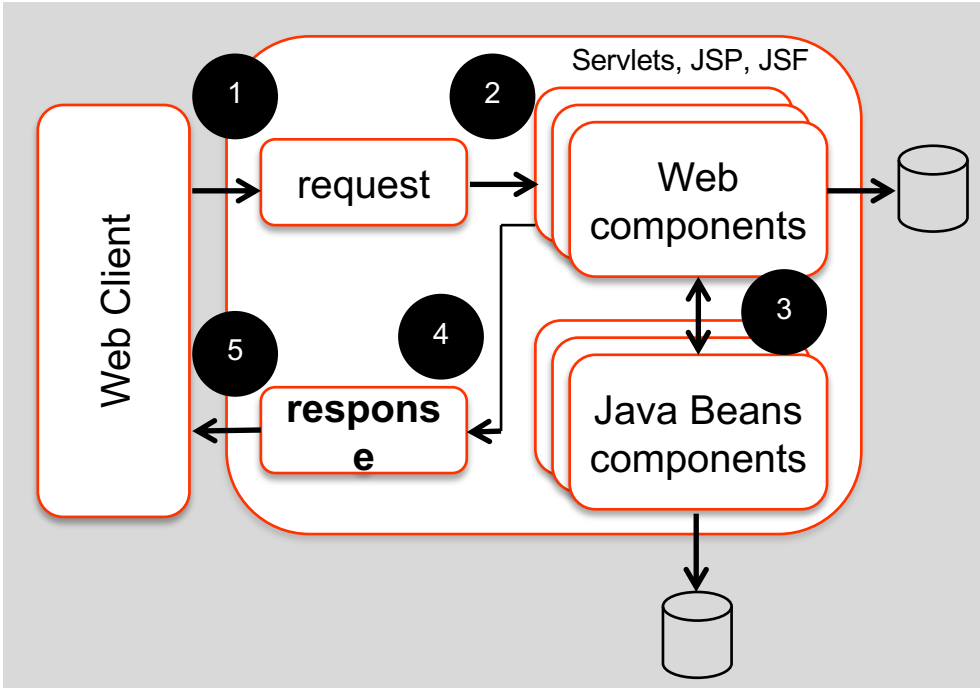
Content

- Generating text and binary data
- Setting HTTP status codes
- Sending headers
- Sending redirect information

Request and Response objects

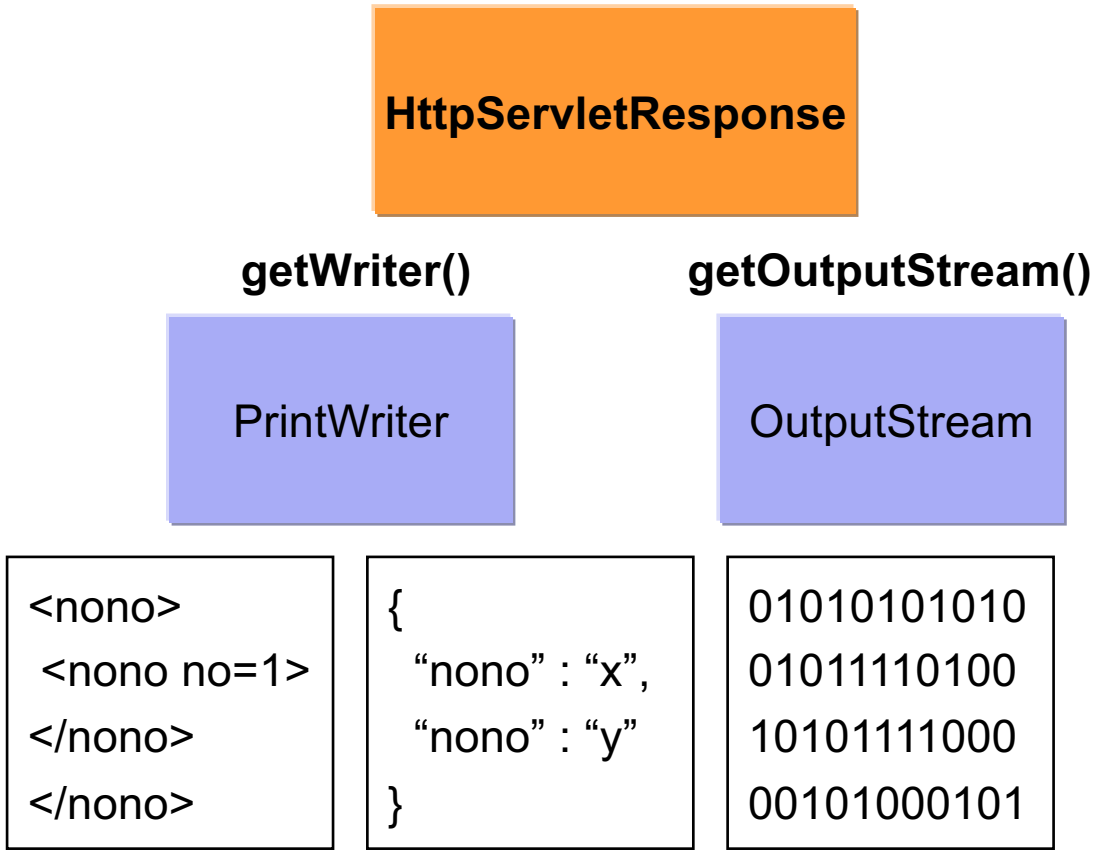
- The response object implements the ***HttpServletResponse*** interface and is used to send information to the client
- Several methods can be used to modify the response object. Some examples:

```
getWriter()
getOutputStream()
setContentType()
setContentLength()
setStatus()
setHeader()
```



Generating response

Text or Binary response ?



Generating a textual responses

- Clients (i.e. browsers) should have a way to identify the format of the response in order to properly parse the server content
- We use the method setContentType( )
- Example:

```
response.setContentType(”application/json”)
```


Example: /module01/example01.html and /module02/example06.html

Generating a binary response

- To send binary data, use the *getOutputStream* method
- Example:

```
OutputStream output = response.getOutputStream();
```

- Do not forget to specify the content type:
- Example:

```
response.setContentType(”application/pdf”)
```


Example: /module01/example03.html

Additional functions

- HTTP response messages are composed by:
  - A status line (HTTP/1.1 200 OK);
  - A list of headers (content-length: 200);
  - A blank line;
  - The content (<html><…></html>).

- Servlets can manipulate these elements, by changing status codes, messages, headers and HTTP content, including multipart content.

Manipulating HTTP status codes (1 of 2)

- HTTP status code can be changed: using *setStatus*
- Integer value ranging from 100 and 599
- You can use a set of predefined constants defined in the *HttpServletResponse* interface
- Examples:

```
SC_OK (200)
SC_NOT_FOUND (404)
```

- Syntax:

```
void setStatus (int CodStatus);
```


Example: /module01/example04.html

Manipulating HTTP status codes (2 of 2)

- You can also change the status message using the *sendError* method
- This method receives a status code and a message
- Syntax:

```
void sendError(int statusCode, String message);
```


Example: /module01/example05.html

Adding response headers

- Headers are used for a variety of useful tasks:
  - Sending cookies,
  - Informing the content size
  - Requesting authentication

- The following methods can be used to add headers:

```
setHeader(String)
setDateHeader(int)
setIntHeader (int)
```


Example: /module03/example06.html

Generating independent links

- To avoid hardcoding the application path, it is recommended to use relative paths
- Another alternative is getting the context path dynamically calling the *getContextPath* method

Example: /module03/example07.html

Redirecting requests

- To request an automatic redirection from the browser, you must specify the status code 302 and set the header *location* with the desired URL.
- These tasks can be performed by using the *sendRedirect* method

Example: /module03/example08.html

Further reading

HttpServletResponse interface:

http://tomcat.apache.org/tomcat-8.0-doc/servletapi/javax/servlet/http/HttpServletResponse.html