

HttpServletResponse

The response of a servlet to a client is an HTTP flow modeled by two classes: `ServletResponse` and `HttpServletResponse`. These two classes expose methods that make it possible to set this response and to parameterize it, in particular to fix the MIME type of this response, or the encoding of the characters in the case of a textual response.

The content of the response of a servlet is not sent to the client directly; it is first saved in a buffer. The `Response` class exposes some methods that control this buffer.

A response can be controlled in character mode, via a `PrintWriter`, or in binary mode, via a `ServletOutputStream`.

Finally, the `HttpServletResponse` class exposes some methods to control the HTTP headers associated with this response.

Output Buffer Control

The output buffer is controlled by the `ServletResponse` class. This class exposes the following methods:

- `reset()` and `resetBuffer()` : these methods empty the buffer of its contents. The `reset()` method also clears the parameters of the HTTP header that would have been set.
- `setContentType(String)*` and `getContentType()` : controls the MIME type of the content carried by this buffer. This type must be set before the buffer is sent to the client, even partially.
- `setCharacterEncoding(String)*` and `getCharacterEncoding()` : controls the character encoding of this buffer. Like the MIME type, encoding must be set before the buffer is returned to the client, even partially.
- `setContentLength()` : sets the size of the content sent to the client. This method is carried by the `ServletResponse` class, and sets the HTTP Content-length attribute in the case of an HTTP response. There is no `getContentLength ()` method.
- `setLocale(Locale)` and `getLocale()` : controls the language in which the response is sent. As for other methods, this must be set before sending the buffer.

Finally, the two methods `getWriter()**` and `getOutputStream()` allow access to the contents of the response through an object of type `PrintWriter` (extension of `Writer`), or a `ServletOutputStream` object (extension of `OutputStream`).

HTTP response control

The `HttpServletResponse` class provides three controls on the HTTP response:

- The first is used to set the parameters of the header. The methods that support this feature are `addHeader(String, String)*`, `addIntHeader(String, int)`, etc. You can also set the status of this response by calling the `setStatus(int)` method.
- The second returns HTTP code in order to signal an error or a problem in the processing of the request. This point is handled by the `sendError(int, String)` method.
- The last redirects of the request to another URL: `sendRedirect(String)*`