

State Management Quiz

1. Can post requests be bookmarked? What are the problems?

An HTTP POST *can* be bookmarked, but since a bookmark only consists of the URL, all of the form parameters will be lost. This will often mean that the web server doesn't know what to do with the request, since it was expecting some form parameters.

If you submit a form via a GET request, all of the form parameters go into the URL (after the ?), so a bookmark will contain all of the information needed for the webserver to rebuild the page a second time (except for cookies, perhaps, but a webserver is more likely to handle that gracefully)

2. What is the purpose of request dispatching?

Servlet Request Dispatcher is an interface whose implementation defines that an object can dispatch requests to any resource (such as HTML, Image, JSP, Servlet etc.) on the server. Another advantage of this interface is that it is used in two cases:

- To include the response of one Servlet into another (i.e. the client gets the response of both Servlets)
- To forward the client request to another Servlet to honor the request (i.e. the client calls a Servlet but the response to client is given by another Servlet)

3. What is the difference between redirect and request dispatch?

When a servlet does a redirect, request is transfer to another resource to different domain or different server for further processing.

When a servlet does a request dispatch (forward or include), request is transfer to other resource within the same server for further processing.

4. What is an attribute?

An attribute is an object that is used to share information in a web app. Attribute allows Servlets to share information among themselves. Attributes can be SET and GET from one of the following scopes:

- Request (HttpServletRequest)
- Session (HttpSession)
- Application context (ServletContext)

Is a name value pair

- value has type Object
- name is String

5. What is the difference between attributes and parameters?

Parameters come from the client request.

Attributes are set by the server side.

6. What are dangers of using attributes?

Context and session attributes are not thread-safe, only request attributes are thread-safe.

7. What does it mean to say that http is stateless? Give an example of a stateful protocol.

HTTP is a stateless protocol, which means that after a web server responds to a request, there is no “memory” of the request or who sent it.

Stateful protocol keeps state of connections such as FTP, Telnet.

8. Give 5 different methods for maintaining state information (count each attribute scope as one method).

- Request scope: destroyed when servlet finishes processing request.
- Session scope: destroyed when user closes browser.
- Application scope destroyed when Container stopped.
- Cookies saved on browser, temporary (deleted when the browser closes) or permanent.
- Hidden fields on a form.

9. How long does a session last?

As long as the declared value of session-timeout in web.xml states. If there is no value specified there, the container decides this setting (default is 30 minutes) or when user closes browser or clear session cookies.

10. What is a cookie, and how long does a cookie last?

An HTTP cookie (also called web cookie, Internet cookie, browser cookie, or simply cookie) is a small piece of data sent from a website and stored on the user's computer by the user's web browser while the user is browsing.

Temporary cookie:

- Browser removes when it closes (this is default).
- Session cookies are like this.

Permanent cookie:

- A cookie that has a max age set.

11. What is the purpose of URL rewriting?

URL rewriting is a process of appending or modifying any URL structure while loading a page. If your browser does not support cookies, URL rewriting provides you with another session tracking alternative.

12. Why does the request attribute report 'null' for the maintaining state demo?

In maintaining state demo code, the request attribute is null because it only exists with the request inside the `doGet()` method.