

State Management Quiz

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

An HTTP POST can not be bookmarked in a sense that a bookmark only consists of the URL and 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 it is GET request, all of the form parameters go into the URL, so a bookmark will contain all of the information needed for the webserver to rebuild the page a second time.

2. What is the purpose of request dispatching?

The purpose of request dispatcher is to forward a request from the servlet to another resource (Servlet, JSP file, or HTML file on the server) or to include the content of a resource (servlet, JSP page, HTML file) in the response.

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

Request dispatch: passes the request to another resource on the server. Request and response objects passed to destination servlet. Browser is completely unaware of servlet forward and hence the URL in the browser address bar will remain unchanged

Redirect: server sends HTTP status code 3xx to the client along with the redirect URL (usually 302 temporary redirect)

- the client then sends a new request to the URL, address bar will change to new URL
- only HTTP message sent, request and response objects cannot be sent

4. What is an attribute ?

An attribute in servlet is an object that can be set, get or removed from one of the following scopes: request scope, session scope, application scope. The servlet programmer can pass information from one servlet to another using attribute.

5. What is the difference between attributes and parameters?

Attributes: An object bound into one of the three servlet API objects HttpServletRequest, HttpSession, ServletContext. It is a name-value pair set in the server-side, the name is String and value has type Object.

Parameters come from the client's request.

6. What are the dangers of using attributes?

The problem using attributes is it's not thread safe in the global scope.

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 requestor who sent it. means the client and server are aware of each other during a current request only. Afterward, both of them forget each other. Some examples of stateful protocols are, Transmission Control Protocol (TCP) and Border Gateway Protocol (BGP).

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

Container managed state (3 scopes)

1. request scope: destroyed when servlet finishes processing request
2. session scope: destroyed when the user closes the browser
3. application scope destroyed when Container stopped.

4. Cookies saved on a browser,
temporary (deleted when the browser closes)
permanent

5. Hidden fields on a form

9. How long does a session last?

A session lasts until its invalidated or until the settled value is over.

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

A cookie is a small piece of information that is persisted between the multiple client requests.

There are 2 types of cookies in servlets.

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?

The purpose of URL Rewriting is, If the client has disabled cookies in the browser then session management using cookie won't work. In that case, URL Rewriting can be used as a backup.

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

Because Request scope attributes only be available for that request, always destroyed when servlet finishes processing requests.