

Beaconfire Inc, Home Work, Week2 Day10.

By (Ping) Nalongsone Danddank.

ndanddank@gmail.com

wechatID: ndanddank

Short Answer:

1. What are the HTTP request methods? Describe what each one does.

-> is packet of Information that one computer sends to another computer to communicate something.

is a packet of binary data sent by client to server, contains:

Request Line: specified the method Token(GET, PUT...) then followed by Request URI, then HTTP Protocol.

Request header: use to pass additional information about the request to server.

Request Body: is part of the HTTP request where additional content can be sent to server, like JSON or XML

GET method: requests a representation of the specified resource, only retrieve data.

POST - used to submit an entity to the specified resource, often causing a change in state or side effects on the server.

PUT - replaces all current representations of the target resource with request payload.

DELETE - deletes the specified resource.

2. Explain the differences between POST, PUT, and PATCH.

-> POST - used to request that the origin server accept the entity enclosed in the request as a new subordinate or the resource. In other word, POST is used to create/add. (always creating a resource)

-> PUT - used to request that enclosed entity by stored under the supplied request-URI. If the request-URI refers to an already existing resource, the enclosed entity considered as a modified version of the one residing on the origin server. If the Request-URI does not point to an existing resource, then that URI will defined as a new resource by the requesting user agent, the origin server can create the resource with that URI. So, we can say PUT is used to create/add and update. (checking if resource exists then update, else create new resource)

-> PATCH is always for update the part of resource.

3. What does it mean for HTTP to be stateless?

-> means each time a client retrieves a webpage, the client opens a separate connection to the web server and the server automatically does not keep any record of previous client request.

4. What is URL and What is URI?

-> URL - Uniform Resource Locator, is used to describe the identity of an item or locate resources on the web, and provide the way to retrieve the resource. URL is a type of URI.

URI - Uniform Resource Identifier, provides a technique for defining the identity of an item by using location, name or both. Is used to distinguish one resource for other, and it Is the supper-set of URL.

5. What are the HTTP Response Status Codes?

->are three-digit codes issued by a server in response to a browser-side request from a client. And there are 5 classes of status code Like: 1XX informational, 2XX Successful, 3XX Redirection (indicates that further action needs to be taken by the user agent in order to fulfill a request), 4XX Client Error, 5XX Server Error.

6. What is DNS and what role does it have?

-> Domain Name System, like the phone book of the internet. When people access information online through domain names, like www.google.com. web browsers interact through IP addresses, then DNS will translates domain name to IP, so browsers can load internet resources from the server.

7. What is servlet?

-> is a java Interface, it provides standards for process HTTP requests

8. What is servlet life cycle? Explain what each method does.

-> A servlet life cycle can be defined as the entire process from its creation till the destruction.

-> there are 3 methods in servlet life cycle:

init() call only once when servlet is created, cannot be called again;

service() to process a client request: is the main method to perform the actual task. It is called by the container and service method invokes doGet, doPost, doPut, doDelete... so we have to override these methods for which you want. When servlet is terminated, call destroy() method. And finally, servlet is handled by garbage collector of JVM.

9. How does Servlet process a request?

- Web server receives HTTP request
- Web server forwards the request to servlet container
- If the required servlet is not in the container, it will be dynamically retrieved and loaded into address space
- The container invokes the init() method of the servlet for initialization (invoked once when the servlet is loaded first time)
- The container invokes the service() method of the servlet to process the HTTP request, i.e., read data in the request and build a response. The servlet remains in the container's address space and can process other HTTP requests.
- Web server returns the dynamically generated results to the correct location

10. What is Tomcat?

-> is a popular open source web server and Servlet container for Java code.

- Tomcat provides a "pure Java" HTTP web server environment in which Java code can run.

11. How to configure Servlet? Briefly describe both ways.

-> Two ways of servlet configuration

-> XML Configuration - web.xml file is located in the WEB-INF directory of your Web application. The first entry, under the root servlet element in web.xml, defines a name for the servlet and specifies the compiled class that executes the servlet. (Or, instead of specifying a servlet class, you can specify a JSP.) The servlet element also contains definitions for initialization attributes and security roles for the servlet.

The second entry in web.xml, under the servlet-mapping element, defines the URL pattern that calls this servlet.

-> Annotation Configuration

- @WebServlet() — on servlet class

- name
- urlPattern
- loadOnStartup • displayName
- initParams