

Concepts for Operating a Web Site

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- 1 TCP/IP
 - IP Address
 - Port
- 2 HTTP
 - Versions
 - Methods
 - Sample request
 - Status Codes
- 3 Data
 - HTML
 - XHTML, XML

Outline

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HyperText Transfer Protocol

- Request/response protocol between clients¹ and servers²
- Transfers HTML
- Uniform Resource Identifiers (URIs) (or, more specifically, URLs) using the http: or https: URI schemes

¹Web browsers: graphical, text mode, cellphone

²Apache, IIS

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- Query string
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GET

Requests a representation of the specified resource. By far the most common method used on the Web today

HEAD

Asks for the response identical to the one that would correspond to a GET request, but without the response body. This is useful for retrieving meta-information written in response headers, without having to transport the entire content

POST

Submits user data (e.g. from a HTML form) to the identified resource. The data is included in the body of the request

PUT

Uploads a representation of the specified resource

DELETE

Deletes the specified resource (rarely implemented)

TRACE

Echoes back the received request, so that a client can see what intermediate servers are adding or changing in the request

OPTIONS

Returns the HTTP methods that the server supports. This can be used to check the functionality of a web server

CONNECT

For use with a proxy that can change to being an SSL tunnel

Warnings

- Methods GET and HEAD are defined as safe, i.e. intended only for information retrieval
- Methods GET, HEAD, PUT and DELETE are defined to be idempotent, meaning that multiple identical requests should have the same effect as a single request
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A Sample Request

HEAD

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can@portable:~$ nc cs.bilgi.edu.tr 80
HEAD / HTTP/1.1
Host: cs.bilgi.edu.tr

HTTP/1.1 200 OK
Date: Sat, 11 Mar 2006 23:20:34 GMT
Server: Apache/2.0.55 (Debian) [...]
X-Powered-By: PHP/4.4.2-1
Content-Type: text/html
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Request received, continuing process.

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- 302 Found (HTTP/1.1)
- 303 See Other (HTTP/1.1)
- 304 Not Modified
- 305 Use Proxy

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See basic authentication scheme and digest access authentication.

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- Typed links
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Typed links

A typed link in a hypertext system is a link to another document or part of a document that includes information about the character of the link.³

A link might also specify that,

- the document supports the conclusion of the article pointing to it
- it contradicts the article pointing to it
- it is an older version of the document
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