

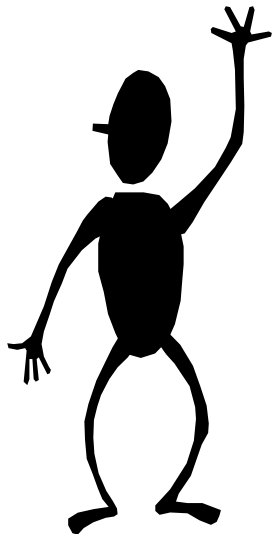
HTTP Messages

Signal transmitted, message recieved

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Ydych chi'n gwybod yr amser?



What? Is that Welsh?



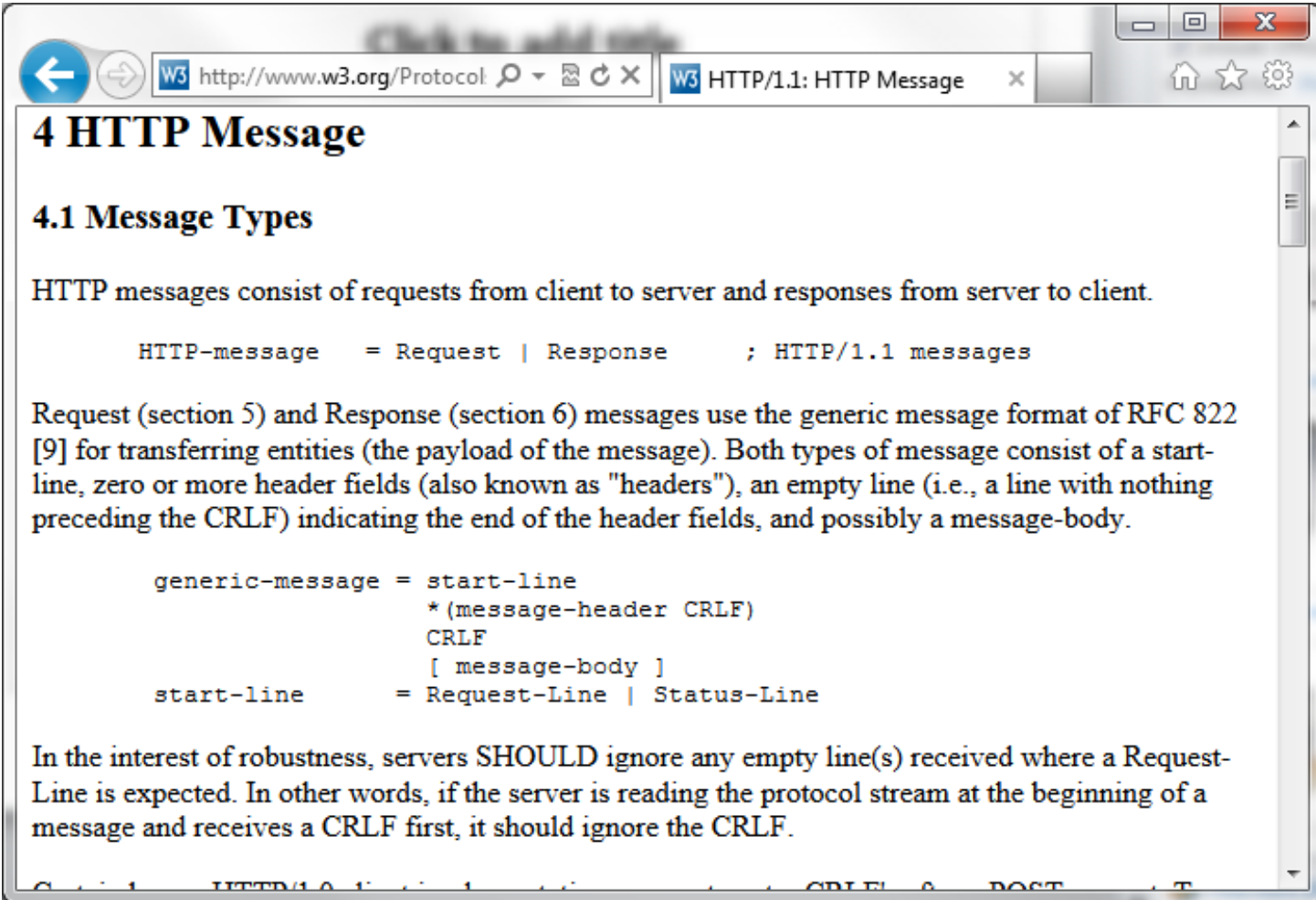
1001001 CAN I HAS PAGE.HTM? 1001001



FATAL ERROR



<http://www.w3.org/Protocols/rfc2616/rfc2616-sec4.html#sec4>



The screenshot shows a web browser window with the address bar displaying `http://www.w3.org/Protocols/rfc2616/rfc2616-sec4.html#sec4`. The browser has two tabs: the active tab is titled "HTTP/1.1: HTTP Message" and the other is partially visible. The page content is as follows:

4 HTTP Message

4.1 Message Types

HTTP messages consist of requests from client to server and responses from server to client.

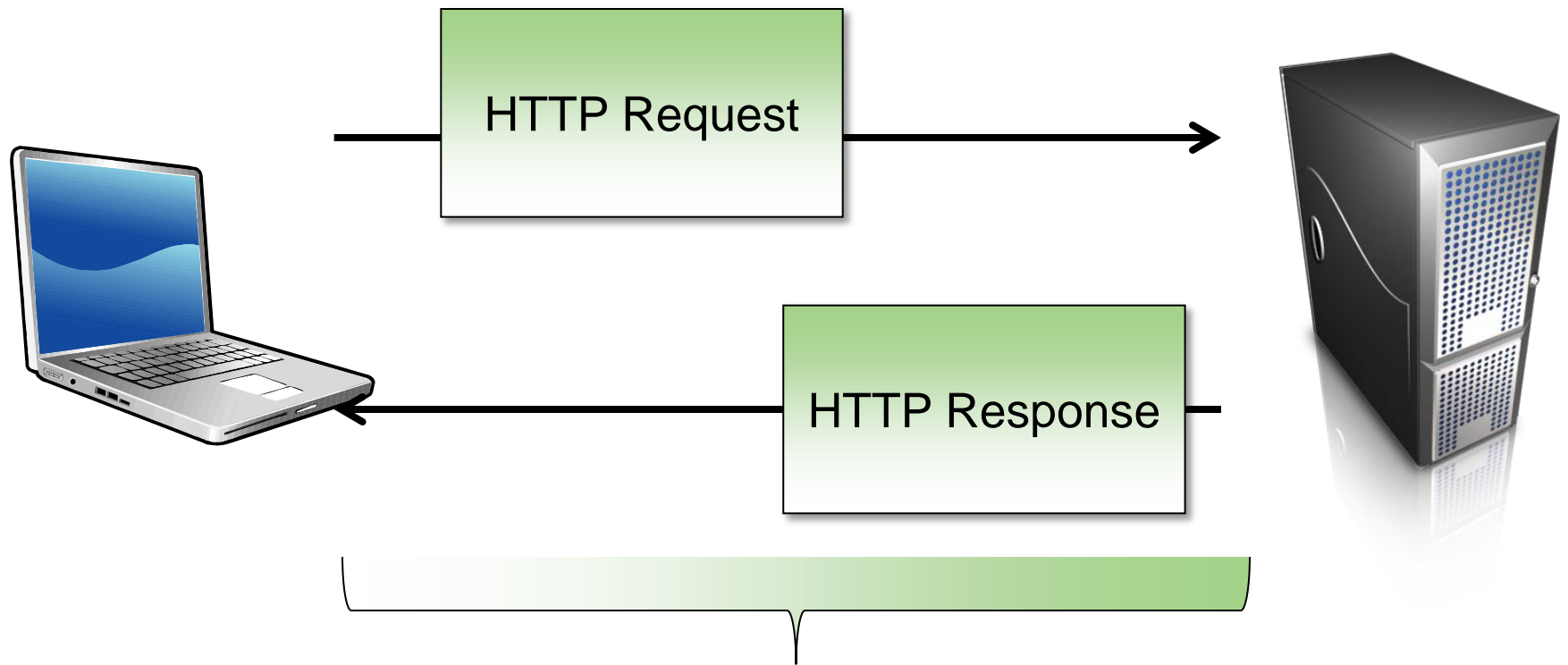
```
HTTP-message    = Request | Response          ; HTTP/1.1 messages
```

Request (section 5) and Response (section 6) messages use the generic message format of RFC 822 [9] for transferring entities (the payload of the message). Both types of message consist of a start-line, zero or more header fields (also known as "headers"), an empty line (i.e., a line with nothing preceding the CRLF) indicating the end of the header fields, and possibly a message-body.

```
generic-message = start-line
                  *(message-header CRLF)
                  CRLF
                  [ message-body ]
start-line       = Request-Line | Status-Line
```

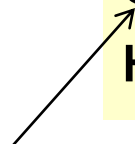
In the interest of robustness, servers SHOULD ignore any empty line(s) received where a Request-Line is expected. In other words, if the server is reading the protocol stream at the beginning of a message and receives a CRLF first, it should ignore the CRLF.

At the bottom of the page, the start of the next section is visible: "4.2 Request Message".



A Single HTTP Transaction

HTTP Request Methods



GET /odetocode.jpg HTTP/1.1
Host: odetocode.com

Method	Description
GET	Retrieve a resource
POST	Update a resource
PUT	Store a resource
DELETE	Remove a resource
HEAD	Retrieve the headers for a resource

Safe versus Unsafe

Safe



GET

Unsafe



POST

Request Messages

```
[method] [URL] [version]  
[headers]  
[body]
```

```
GET http://server.com/articles/741.aspx HTTP/1.1
```

```
Host: odetocode.com
```

```
Accept-Language: fr-FR
```

```
Date: Fri, 9 Aug 2002 21:12:00 GMT
```


Common Request Headers

Header	Description
Referer	The URL of the referring page
User-Agent	Information about the browser
Accept	Preferred media types
Accept-Language	Preferred language
Cookie	Cookie information
If-Modified-Since	Date of last retrieval
Date	Creation timestamp for the message

Full Request

GET / HTTP/1.1

Host: server.com

Connection: keep-alive

User-Agent: Mozilla/5.0 (Windows NT 6.1; WOW64) Chrome/16.0.912.75 Safari/535.7

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8

Referer: <http://www.google.com/url?&q=broccoli>

Accept-Encoding: gzip,deflate,sdch

Accept-Language: en-US,en;q=0.8

Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.3

Response Message

```
[version] [status] [reason]  
[headers]  
[body]
```

HTTP/1.1 200 OK

Cache-Control: private

Content-Type: text/html; charset=utf-8

Server: Microsoft-IIS/7.0

X-AspNet-Version: 2.0.50727

X-Powered-By: ASP.NET

Date: Sat, 14 Feb 2003 04:00:08 GMT

Content-Length: 17151

<html>

... content ...

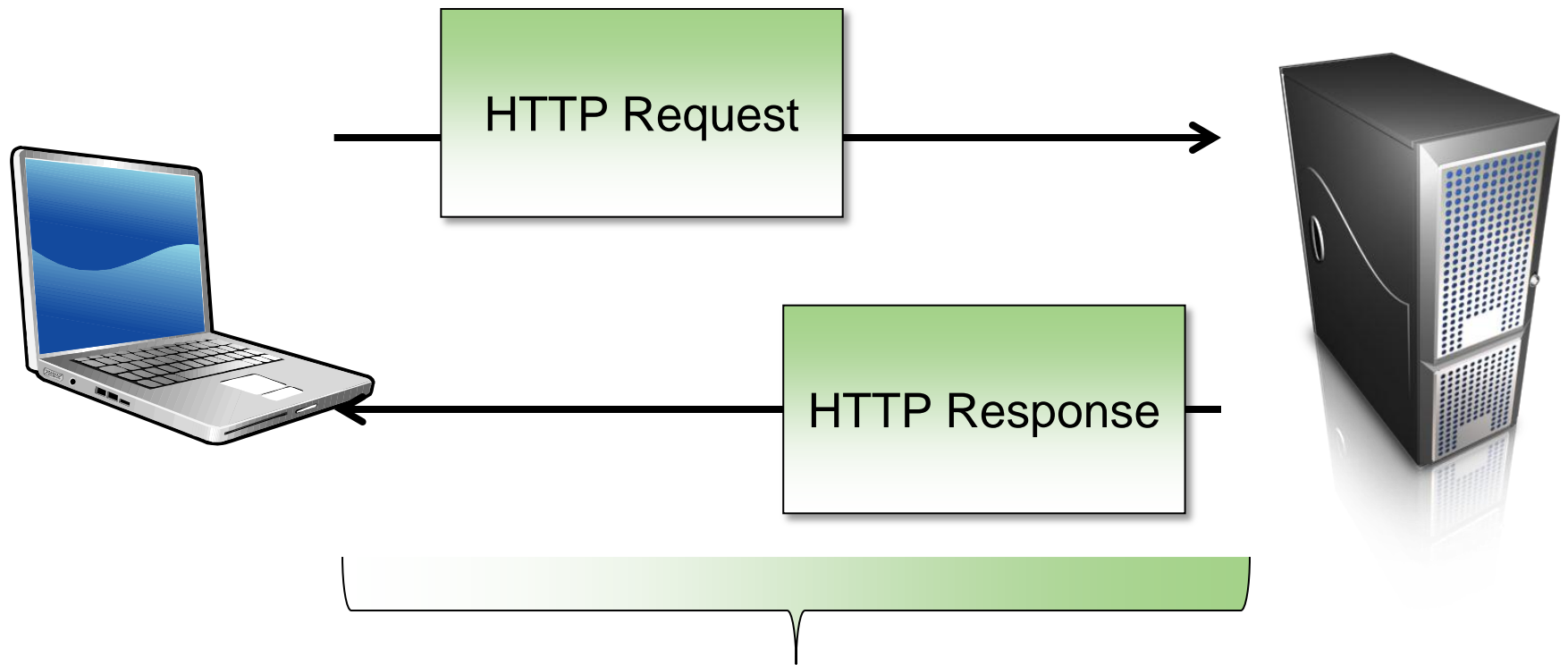
</html>

Status Code Categories

Range	Category
100-199	Informational
200-299	Successful
300-309	Redirection
400-499	Client Error
500-599	Server Error

Popular Status Codes

Code	Reason	Description
200	OK	Success!
301	Moved Permanently	Resource moved, don't check here again
302	Moved Temporarily	Resource moved, but check here again
304	Not Modified	Resource hasn't changed since last retrieval
400	Bad Request	Bad syntax?
401	Unauthorized	Client might need to authenticate
403	Forbidden	Refused access
404	Not found	Resource doesn't exist
500	Internal Server Error	Something went wrong during processing
503	Service Unavailable	Server will not service the request



A Single HTTP Transaction