

## Appendix A – HTTP

### *What's HTTP?*

HTTP means HyperText Transfer Protocol. A protocol is just a convention for computer dialogs. It assumes that the computers participating in the conversation have a way of sending messages to each other.

HTTP uses a simple conversation pattern: the client connects to the server, initiates the dialog by asking the server for something, the server then tries to provide the client with an answer (back).

An example of a simple HTTP request and response would be the client asking "give me the file A" and the server answering "I have it, here is the content of file A: (...content of file A...)".

But in reality the protocol uses its own simplified language which looks more like "GET /fileA" answered by "200 OK (...content of file A...)".

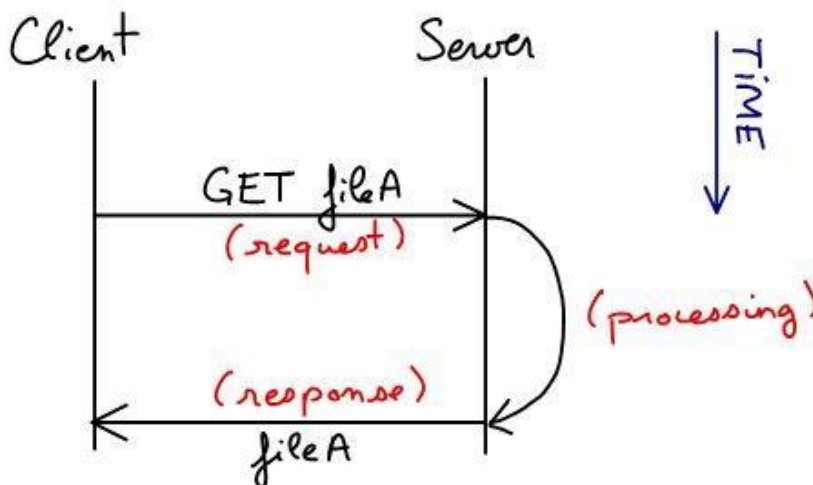


Image from: <http://blog.monstuff.com/archives/000149.html>

### *Loading a web page*

When a browser loads a web page, it does a GET request for the URL requested. The content of the page is usually in a special text format called **HTML** that allows links, images and **various** style effects.

The browser analyses the HTML in order to display it to the user. But doing so, it may find that it needs more content to render the page correctly, like images.

When that happens, the browser initiates one HTTP request for each image.

When all the necessary information is downloaded, it is combined into the page the user sees on his screen.

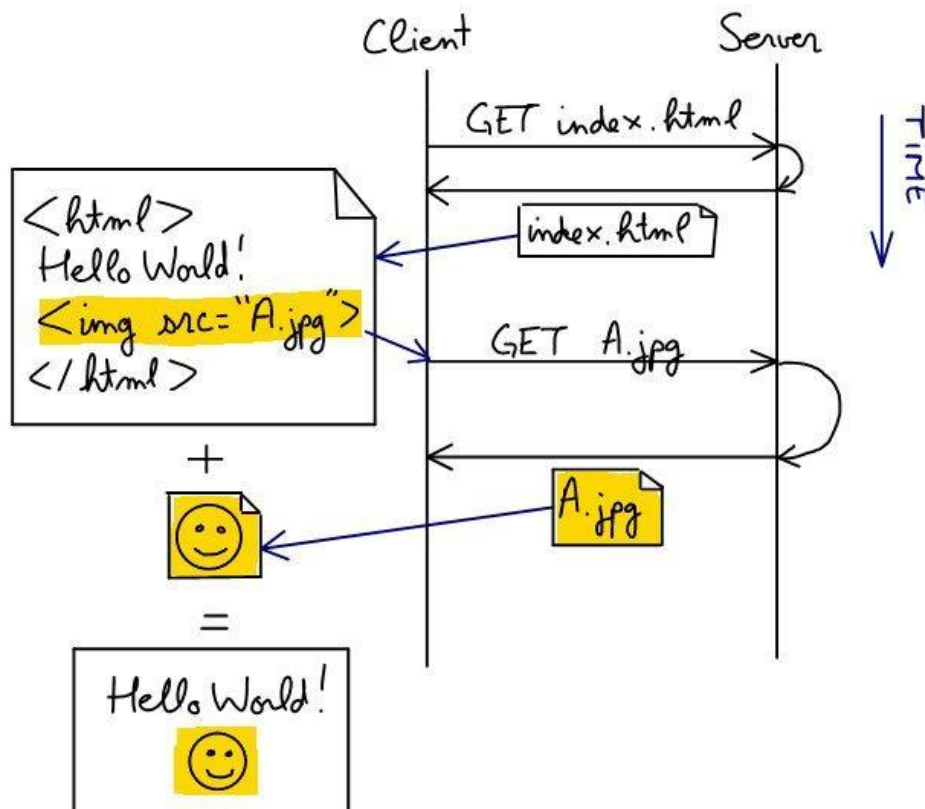


Image from: <http://blog.monstuff.com/archives/000149.html>

## **HTTP request methods**

### **GET**

A **resource** is some chunk of information that can be identified by a URL (it's the **R** in **URL** - Uniform Resource Locator). The most common kind of resource is a file, but a resource may also be a dynamically-generated query result, a document that is available in several languages, or something else.

**GET** is the most common HTTP method; it says "give me this resource". Method names are always uppercase.

A typical request looks like this:

## **GET /path/to/file/index.html HTTP/1.0**

The path is the part of the URL after the host name, also called the *request URI* (a URI is like a URL, but more general).

The HTTP version always takes the form "**HTTP/x.x**", uppercase.

## **POST**

A **POST** request is used to send data to the server to be processed in some way. A **POST** request is different from a **GET** request in the following ways:

- There's a block of data sent with the request, in the message body.
- The *request URI* is not a resource to retrieve; it's usually a program to handle the data you're sending.
- The HTTP response is normally program output, not a static file.

## **PUT**

A **PUT** request uploads a document from either the local file system or a remote HTTP server to the destination HTTP server.

## **DELETE**

A **DELETE** request deletes a resource (or makes it unavailable) for future references.