

# HTTP

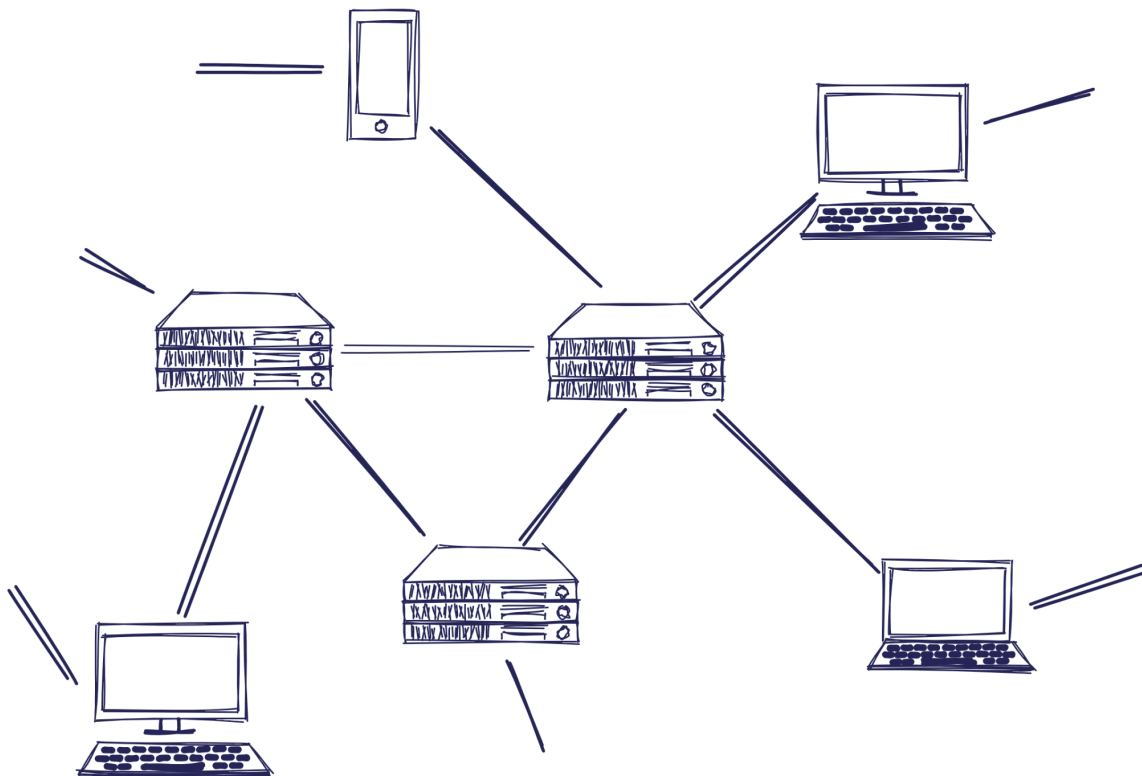
## Learning Objectives

- Understand the basics of HTTP

## Material

### The Internet

The internet is a global network of computers connected together.



In order for these computers to communicate and share information, they need to all follow the same communication protocol. The predominant protocol on the Web is the Hypertext Transfer Protocol (HTTP).

## HTTP

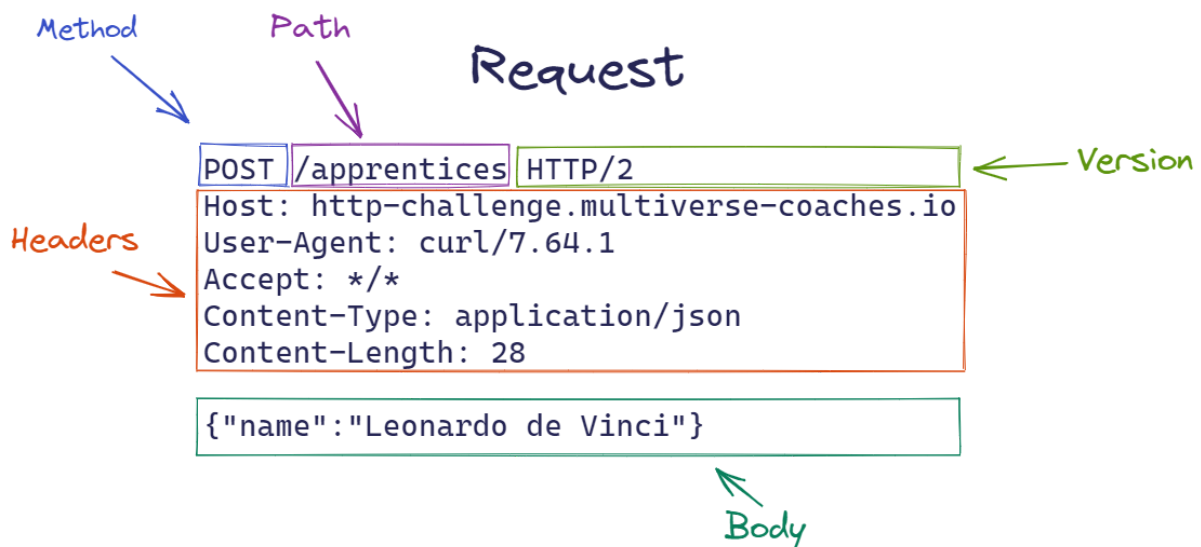
HTTP messages are simply text documents with a standard structure. They come in two types: requests and responses. The *client* always initiates the conversation by making a request to the *server*. The server sends back a response.



## HTTP Requests

Whenever you enter a URL into your search bar or click a link like <https://www.multiverse.io/>, the browser turns the URL into an HTTP request and sends it to the server. The server will then respond with the requested resource (in this case, probably an HTML file). An HTTP request is made up of the following parts:

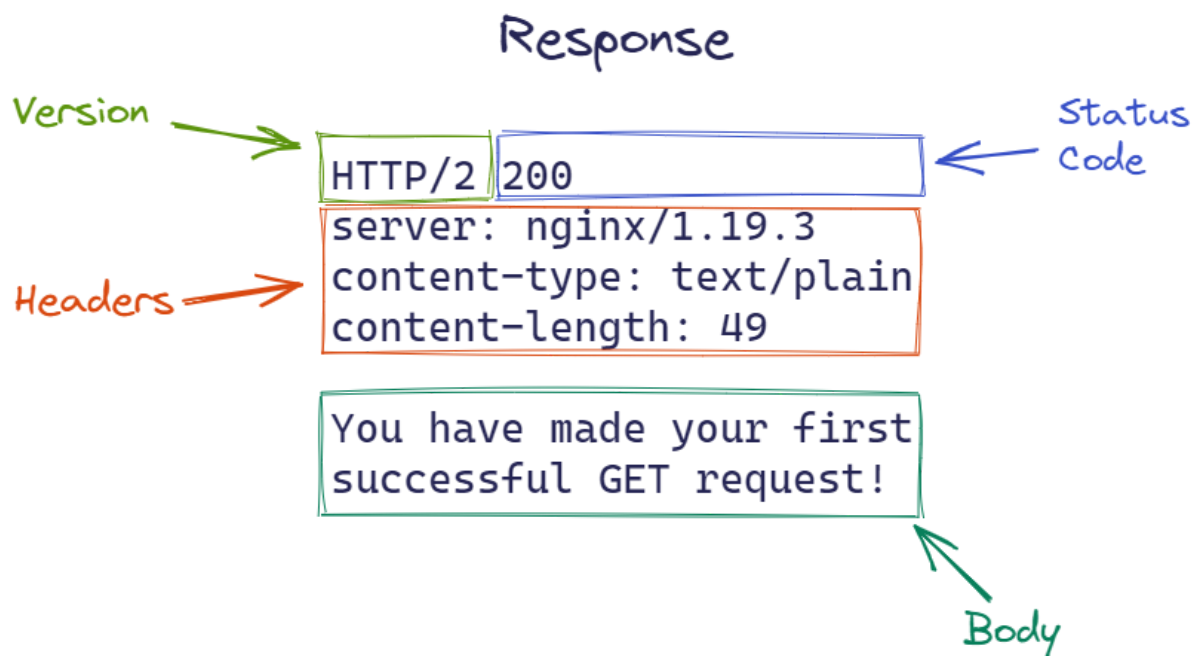
- **Method** - this defines the operation the client wishes to perform. Two commonly used methods are GET (to retrieve data) & POST (to create data).
- **Path** - the path to the resource that will be retrieved/updated
- **Version** - the version of the HTTP protocol
- **Headers** - these convey extra information for the web server e.g. the type of content being sent
- **Body** (optional) - data (e.g. from HTML forms) may be sent in the body



## HTTP Responses

When the server receives a request, it processes it and then issues a response. If the request is for a resource (e.g. an image, a .css file etc.), the server will send this back. Sometimes, however, the server won't send anything back in particular, and the client can infer what happened based on the status code.

- **Version** - the version of the HTTP protocol
- **Status code** - a number indicating whether or not the exchange was successful (e.g. 200=OK, 404=not-found etc.)
- **Headers** - convey extra information for the client e.g. the type of content being sent
- **Body** (optional) - the resource that was requested



## Additional Resources

- [HTTP Crash Course & Exploration](#)