

1. Difference between HTTP/1.1 and HTTP/2

- **Multiplexing:** HTTP/1.1 loads resources synchronously like one after the other, so this in turn acts as a bottleneck cause if one resource cannot be loaded, it blocks all the resources behind or after the current resource.

Whereas on the other hand HTTP/2 uses a single TCP connection to send multiple streams of data at once so that no resource blocks the other resources. This is achieved by splitting the data into binary-code and numbering these messages so that the client knows which stream each binary message belongs.

- **Server Push:** Server serves content to the client only when the clients request for the resource. But this approach is not effective or practical for modern web pages, which have a humongous amount of resources that clients need to request. HTTP/2 solves this by allowing the server to push content to a client before the client asks for it. The server also sends a message letting the client know what pushed content to expect.
- **Header Comparison:** Small files load more fastly and quickly than the large ones. To improve the speed and performance of the web pages both the HTTP/1.1 and HTTP/2 compress HTTP messages to make them smaller, but HTTP/2 uses a more advanced compression method called HPACK and results in faster loading.

In a nutshell the advantages of HTTP/2 over HTTP/1.1 are loading multiple resources at a time in a parallel way, pushing the content to client without the need to request for each individual resource finally compression the header to improve the performance

2. GET vs POST

Both the GET and POST methods are used to transfer the data from client to server in HTTP protocol but main difference is GET carries request parameter appended in URL string while POST carries request parameter in message body which makes it more secure way of transferring data from client to server in http protocol. As GET method appends the request it has a certain maximum length where POST method has no max-length.

3. Fetching all the names of countries in REST API.

Api: <https://restcountries.eu/rest/v2/all#>

Code Snippet:

```
let jsonResponse = `{response from api}`
for( let i =0; i < jsonResponse.length; i++ ) {
    console.log( jsonResponse[i].name )
}
```