**HTTP Methods**

<https://www.geeksforgeeks.org/blogs/5-http-methods-in-restful-api-development/>

**The GET Method**

GET is used to request data from a specified resource.

/test/demo\_form.php?name1=value1&name2=value2

Note that the query string (name/value pairs) is sent in the URL of a GET request:

Some notes on GET requests:

1. GET requests can be cached
2. GET requests remain in the browser history
3. GET requests can be bookmarked
4. GET requests should never be used when dealing with sensitive data
5. GET requests have length restrictions
6. GET requests are only used to request data (not modify)

The POST Method

POST is used to send data to a server to create/update a resource.

Example: Sign up page for Facebook or any other website.

The data sent to the server with POST is stored in the request body of the HTTP request:

Some notes on POST requests:

1. POST requests are never cached
2. POST requests do not remain in the browser history
3. POST requests cannot be bookmarked
4. POST requests have no restrictions on data length

**Compare GET vs. POST**

|  |  |  |
| --- | --- | --- |
|  | GET | POST |
| BACK button/Reload | Harmless | Data will be re-submitted (the browser should alert the user that the data are about to be re-submitted) |
| Bookmark | Can be bookmarked | Can not be bookmarked |
| Cached | Can be cached | Not cached |
| Encoding type | application/x-www-form-urlencoded | application/x-www-form-urlencoded or multipart/form-data. Use multipart encoding for binary data |
| History | Parameters remain in browser history | Parameters are not saved in browser history |
| Restrictions on data length | Yes, when sending data, the GET method adds data to URL; and the length of the URL is limited (max URL length is 2048 characters) | No restrictions |
| Restriction on data type | Only ASCII char allowed | No restriction. Binary data is also allowed. |
| Security | Get is less secured compared to POST because data is sent is part of URL.  Never use GET when sending passwords or other sensitive information! | POST is a little safer than GET because the parameters are not stored in browser history or in web server logs |
| Visibility | Data is visible to everyone in the URL | Data is not displayed in URL. |

**The PUT Method**

PUT is used to send data to a server to create/update a resource.

The difference between POST and PUT is that PUT requests are idempotent. That is, calling the same PUT request multiple times will always produce the same result. In contrast, calling a POST request repeatedly have side effects of creating the same resource multiple times.

**The HEAD Method**

HEAD is almost identical to GET, but without the response body.

In other words, if GET /users returns a list of users, then HEAD /users will make the same request but will not return the list of users.

A HEAD request is useful for checking what a GET request will return before actually making a GET request - a HEAD request can read the Content-Length header to check the size of the file, without actually downloading the file.

**The DELETE Method**

The Delete method deletes the specific resource.

**The PATCH Method**

The patch method used to apply partial modification to a resource.

**The OPTIONS Method**

The OPTIONS method describes the communication options for the target resource.

**The CONNECT Method**

The CONNECT method is used to start a two-way communications (a tunnel) with the requested resource.

**The TRACE Method**

The TRACE method is used to perform a message loop-back test that tests the path for the target resource (useful for debugging purposes).