

HTTP request methods are important components responsible for supplying the request and specifying the client-requested operation. In this lesson, you will learn about various HTTP methods and how they are used.

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What Are HTTP Request Methods?

The Internet consists of a set of resources hosted on various web servers. To access these resources, users use various web browsers capable of sending requests to the server and displaying the information from it. HTTP is a protocol that is used in requests and responses for effective communication between client and server. A message sent by the client to the server is known as an HTTP request. When these requests are being sent, clients can use various methods, known as HTTP request methods.

HTTP methods are case-sensitive, which means they should only be used in capital letters. Moreover, this is in contrast to HTTP header field names, which are case-insensitive.

What Are the Types of HTTP Request Methods?

Various HTTP methods (**GET**, **POST**, **PUT**, **HEAD**, **DELETE**, **TRACE**, **OPTIONS**, and **CONNECT**.) Are explained below.

GET Method

The GET method is one of the most commonly used methods of HTTP. It is usually implemented to **request a particular resource data** from the Web server by specifying the parameters as a **query string** (name and value pairs) in the URL part of the request.

Example:

```
http://example.com/category/index.php?category_name=HTML&lesson=introduction
```

The various characteristics of the GET method are:

- The GET requests can be bookmarked as they appear in the URL.
- The GET request can be cached.
- The GET request is saved in the browser history if it is executed using a web browser.
- There are character length restrictions (2048 characters maximum) for this method as they appear in the URL.
- The GET method cannot be used to send binary data such as images and Word documents.
- The data can only be retrieved from requests that use the GET method and have no other effect.
- When communicating sensitive data such as login credentials, a GET request should not be used as it appears in the URL, making it less secure.
- Since the GET request only requests data and does not modify any resources, it is considered a safe and ideal method to request data only.

Another example of the 'GET' method is Google search, where the search parameter appears on the URL when a user searches for a keyword. It helps display search results on different pages using pagination, and individual page URLs can also be bookmarked for later use.

POST Method

The POST method is a commonly used HTTP method that **sends data to the Web server in the request body of HTTP**. The various characteristics of the POST method are:

- The POST requests cannot be bookmarked as they do not appear in the URL.
- The POST requests do not get cached.
- The POST requests are not saved as history by the web browsers.
- There is no restriction on the amount of data to be sent in a POST request.
- The POST method can be used to send ASCII as well as binary data.
- When communicating sensitive data, such as when submitting an HTML form, a POST request must be used.
- The data sent by the POST method goes through the HTTP header, so security depends on the HTTP protocol. By using secure HTTP (HTTPS), you can ensure that your information is protected.

Here is an example code snippet that submits an HTML form using the POST method:

Example:

```
<html>
<body>

  <form action="registration.php" method="post">
    Name: <input type="text" name="name">
    Email: <input type="text" name="email">
    <input type="submit">
  </form>

</body>
</html>
```

PUT Method

The HTTP PUT request method is used to **update existing resources with uploaded content** or to **create a new resource** if the target resource is not found. The difference between POST and PUT is that PUT requests are static, which means calling the same PUT method multiple times will not yield a different result because it will update the same content each time while POST Request Will create new content each time.

HEAD Method

The HTTP HEAD method is almost identical to the GET method, but the only difference is that it will **not return any response body**. For example, if GET/users return a record of users, then HEAD/users make the same request, but it will not return any of the users' records.

The HEAD request becomes useful for testing whether the GET request will actually respond before making the actual GET request. Sometimes this will be useful in some situations, such as checking the response of a URL before downloading a file.

DELETE Method

The HTTP DELETE method is **used to delete any specific resource**.

TRACE Method

The HTTP TRACE method is **used for performing a message loop-back**, which tests the path for the target resource. It is useful for debugging purposes.

OPTIONS Method

HTTP OPTIONS method is used for **describing the communication preferences** for any target resource.

CONNECT Method

HTTP CONNECT method is used for **establishing a tunnel to the server** recognized by a given URI.