

HTTP - METHODS

The set of common methods for HTTP/1.1 is defined below and this set can be expanded based on requirement. These method names are case sensitive and they must be used in uppercase.

S.N.	Method and Description
1	GET The GET method is used to retrieve information from the given server using a given URI. Requests using GET should only retrieve data and should have no other effect on the data.
2	HEAD Same as GET, but only transfer the status line and header section.
3	POST A POST request is used to send data to the server, for example customer information, file upload etc using HTML forms.
4	PUT Replace all current representations of the target resource with the uploaded content.
5	DELETE Remove all current representations of the target resource given by URI.
6	CONNECT Establish a tunnel to the server identified by a given URI.
7	OPTIONS Describe the communication options for the target resource.
8	TRACE Perform a message loop-back test along the path to the target resource.

GET Method

A GET request retrieves data from a web server by specifying parameters in the URL portion of the request. This is the main method used for document retrieval. Following is a simple example which makes use of GET method to fetch hello.htm:

```
GET /hello.htm HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
Host: www.tutorialspoint.com
Accept-Language: en-us
```

```
Accept-Encoding: gzip, deflate
Connection: Keep-Alive
```

Following will be a server response against the above GET request:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Last-Modified: Wed, 22 Jul 2009 19:15:56 GMT
ETag: "34aa387-d-1568eb00"
Vary: Authorization,Accept
Accept-Ranges: bytes
Content-Length: 88
Content-Type: text/html
Connection: Closed

<html>
<body>
<h1>Hello, World!</h1>
</body>
</html>
```

HEAD Method

The HEAD method is functionally like GET, except that the server replies with a response line and headers, but no entity-body. Following is a simple example which makes use of HEAD method to fetch header information about hello.htm:

```
HEAD /hello.htm HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
Host: www.tutorialspoint.com
Accept-Language: en-us
Accept-Encoding: gzip, deflate
Connection: Keep-Alive
```

Following will be a server response against the above GET request:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Last-Modified: Wed, 22 Jul 2009 19:15:56 GMT
ETag: "34aa387-d-1568eb00"
Vary: Authorization,Accept
Accept-Ranges: bytes
Content-Length: 88
Content-Type: text/html
Connection: Closed
```

You can notice that here server does not send any data after header.

POST Method

The POST method is used when you want to send some data to the server, for example

file update, form data etc. Following is a simple example which makes use of POST method to send a form data to the server which will be processed by a process.cgi and finally a response will be returned:

```
POST /cgi-bin/process.cgi HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
Host: www.tutorialspoint.com
Content-Type: text/xml; charset=utf-8
Content-Length: 88
Accept-Language: en-us
Accept-Encoding: gzip, deflate
Connection: Keep-Alive

<?xml version="1.0" encoding="utf-8"?>
<string xmlns="http://clearforest.com/">string</string>
```

Server side script process.cgi process the passed data and send following response:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Last-Modified: Wed, 22 Jul 2009 19:15:56 GMT
ETag: "34aa387-d-1568eb00"
Vary: Authorization, Accept
Accept-Ranges: bytes
Content-Length: 88
Content-Type: text/html
Connection: Closed

<html>
<body>
<h1>Request Processed Successfully</h1>
</body>
</html>
```

PUT Method

The PUT method is used to request the server to store the included entity-body at a location specified by the given URL. The following example request server to save the given entity-boy in **hello.htm** at the root of the server:

```
PUT /hello.htm HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
Host: www.tutorialspoint.com
Accept-Language: en-us
Connection: Keep-Alive
Content-type: text/html
Content-Length: 182

<html>
<body>
<h1>Hello, World!</h1>
</body>
</html>
```

The server will store given entity-body in **hello.htm** file and will send following response back to the client:

```
HTTP/1.1 201 Created
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Content-type: text/html
Content-length: 30
Connection: Closed

<html>
<body>
<h1>The file was created.</h1>
</body>
</html>
```

DELETE Method

The DELETE method is used to request the server to delete file at a location specified by the given URL. The following example request server to delete the given file **hello.htm** at the root of the server:

```
DELETE /hello.htm HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
Host: www.tutorialspoint.com
Accept-Language: en-us
Connection: Keep-Alive
```

The server will delete mentioned file **hello.htm** and will send following response back to the client:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Content-type: text/html
Content-length: 30
Connection: Closed

<html>
<body>
<h1>URL deleted.</h1>
</body>
</html>
```

CONNECT Method

The CONNECT method is used by the client to establish a network connection to a web server over HTTP. The following example request a connection with a web server running on host tutorialspoint.com:

```
CONNECT www.tutorialspoint.com HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
```

The connection is established with the server and following response is sent back to the client:

```
HTTP/1.1 200 Connection established
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
```

OPTIONS Method

The OPTIONS method is used by the client to find out what are the HTTP methods and other options supported by a web server. The client can specify a URL for the OPTIONS method, or an asterisk (*) to refer to the entire server. The following example request a list of methods supported by a web server running on tutorialspoint.com:

```
OPTIONS * HTTP/1.1
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
```

The server will send information based on the current configuration of the server, for example:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Allow: GET,HEAD,POST,OPTIONS,TRACE
Content-Type: httpd/unix-directory
```

TRACE Method

The TRACE method is used to echo the contents of an HTTP Request back to the requester which can be used for debugging purpose at the time of development. The following example shows the usage of TRACE method:

```
TRACE / HTTP/1.1
Host: www.tutorialspoint.com
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
```

The server will send following message in response of the above request:

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2009 12:28:53 GMT
Server: Apache/2.2.14 (Win32)
Connection: close
Content-Type: message/http
Content-Length: 39

TRACE / HTTP/1.1
Host: www.tutorialspoint.com
User-Agent: Mozilla/4.0 (compatible; MSIE5.01; Windows NT)
```