Key elements of HTTP Requests are:

1. URL
2. Form Data (if any)
3. HTTP Method
4. Cookies (if any)

Key elements of HTTP Response are:

1. Status code
2. Content Type
3. Actual Content
4. Cookies (if any)

**Status Code:**

* Status code represents the status of HTTP Request For example,

Status Code: Description

200 Server successfully handled the request

404 Requested Resource (static/dynamic) is not found at server side

500 Server encountered an unexpected condition which prevented it from fulfilling the request.

* It’s a Mandatory information & it will be present in Header of HTTP Response
* Generally Webserver provides “Status Code” info in Http Response

**Content Type OR Multipurpose Internet Mail Extensions (MIME)**

* Content Type OR Multipurpose Internet Mail Extensions (MIME) Type, tells the browser that what type of content it’s going to receive so that it can prepare itself to handle the response data
* For example,
* Open an Adobe Reader to handle PDF content
* Open Media Player to handle media content etc.
* It’s a mandatory information & it will be present in Header of HTTP Response
* The default content type is “text/html”
* Few Examples:

text/html

appplication/pdf

video/quicktime

Many more…

**Actual Content**:

* It’s a Mandatory information & it will be present in Body of HTTP Response
* In case of static resource content of the resource becomes the “Actual Content”
* In case of dynamic resource, content present in servlets/ JSP becomes the “Actual Content”
* In case of Error Scenarios webserver generates error information & it becomes the “Actual Content”.

**Request Components:**

**Web Url**

* Web application is a “Collection of Web Resources” & every web resource (static/dynamic) should have its unique address in the form of web URL
* Hence every request should consist of Web URL (Mandatory information) & it will be present in Header HTTP Request.

**Form Data:**

* Data collected using HTML form is called as Form Data
* i.e Whenever we make request by Submitting Form, Then ONLY HTTP Request will have Form Data
* Hence in HTTP Request it’s an Optional Information
* **If Present, it may be present in either Header or Body of HTTP Request which depends on HTTP Method Present in the Request..**

**HTTP Method**

* It’s a mandatory information present in the header of the HTTP Request
* HTTP Method is the first component in the HTTP Request header
* HTTP 1.0 had 3 mehods & in HTTP 1.1, Five new Methods got introduced so in total HTTP 1.1 has 8 different methods & every Http Request should consist of “ONE of the 8 HTTP Methods”

(Present in HTTP 1.1)

1. HEAD
2. TRACE
3. PUT
4. DELETE
5. OPTIONS
6. GET
7. POST
8. CONNECT

Code Word: htpp dog c

**POST Method**

* This method allows user to Post the data of unlimited size to the server using HTML FORM (i.e Form Data)
* Post requests have a body
* Hence data sent using the POST is present in the body of the HTTP Request.

**GET Method**

* **This method allows us to get the data from server**
* **It’s a default method**
* **Get requests “Using the GET Method the form-data is present in the Header part of HTTP Request “in the form of Query String”**

**What determines whether Browser sends GET or POST requests:**

1. **Typing a URL in Browser makes request to contain GET method**
2. **Clicking on a Hyper link in Browser makes request to contain GET Method**
3. **Submitting the form with method= “get” form attribute in Browser makes request to contain Get method.**
4. **Submitting the form with method = “post” form attribute in Browser makes request to contain “POST” method.**
5. **Submitting the form with “No method form attribute declaration “ in Browser makes request to contain “GET” method.**

**Differences between GET & POST**

|  |  |
| --- | --- |
| GET | POST |
| GET method allows to get the data from server | POST method allows to Post data of unlimited size to the server. |
| GET is a default method | POST is not a default. We have to explicitly declare method =”POST” . |
| GET requests “do not have a Body” OR “have Empty Body” | POST requests “do have a body” |
| Hence incase of GET , Form Data will be present in N THE FORM OF Query String. HEADER I | In case of POST, Form Data will be present in Body. |
| Insecure; because form data get exposed to the outside world | Secure; because form data will be present in the Body & hence it will not be exposed to the outside world |
| The amount of data sent using GET is restricted because URL can contain Only limited characters. | There is no restriction on the amount of data sent using the POST method. |
| We cannot send the files using GET | We can entire files using POST for Ex: Resume Upload, video files Etc. |
| We “can bookmark” the GET requests | We “cannot bookmark” POST requests. |