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AJAX : Steps to perform AJAX operations :-

- 1) a client event occurs
- 2) An XMLHttpRequest object is created.
- 3) The XMLHttpRequest object is configured.
- 4) " " " makes an asynchronous request to the webserver.
- 5) The webserver returns the result containing ~~XML~~ data (XML or JSON)
- 6) The XMLHttpRequest object calls the callback() function and processes the result.
- 7) The HTML DOM is updated.

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XMLHttpRequest Object :- This object is key to AJAX. Although this object was there since 2000 but became popular & in 2005 after the AJAX and Web 2.0 came into existence.

XHR is an API that can be used by JavaScript, VBScript and other web browser scripting languages to transfer and manipulate XML/JSON data and to and from a webserver using HTTP.

Following are some methods and properties XMLHttpRequest methods

- 1) XHR object can update a webpage w/o reloading the page.
- 2) Request data from server after the page has loaded.
- 3) Receive data from server after page has loaded.
- 4) Send data to a server in the background

## XMLHttpRequest Methods :-

- 1) abort() : Cancels the current request
- 2) getAllResponseHeaders() : Returns the complete set of HTTP headers as a string.
- 3) getResponseHeader(headerName) : Returns the value of the specified HTTP header.
- 4) open(method, URL)  
~~open~~
- 5) send(content) : Sends the request
- 6) setRequestHeader(label, value) : Adds a label/value pair to the 'http' header to be sent.

## XMLHttpRequest Properties :-

- (1) onreadystatechange : An event handler for an event that fires at every state change (0-4)
  - (2) readyState :- The ready state property defines the current state of the XMLHttpRequest object. The following table
- |     |  |
|-----|--|
| 0 - | The request is not initialized                       |
| 1 - | " " has been set up. (server connection established) |
| 2 - | " " sent   |
| 3 - | " " in process (request received)                    |
| 4 - | " " completed  |



## AJAX:

AJAX is a web development technique for creating interactive web applications. If you know javascript, HTML, CSS, and XML, then you need to spend just one hour to start with AJAX.

→ AJAX stands for Aynchronous Javascript and XML. AJAX is a new technique for creating better, faster, and more 'interactive' web applications with the help of XML, HTML, CSS and JavaScript.

- (a) Ajax uses XML & HTML for content, CSS for presentation along with DOM and Javascript for dynamic content display.
- (b) AJAX is a web browser technology independent of web server software.
- (c) A user can continue to use the application while the client program requests information from the server in the background.
- (d) Intuitive and natural user interaction. Clicking not required, mouse movement is a sufficient event trigger.