



# AJAX

Asynchronous  
Javascript  
And  
XML

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# Introduction

**AJAX is a developer's dream, because you can:**

- ✓ Update a web page without reloading the page
- ✓ Request data from a server - after the page has loaded
- ✓ Receive data from a server - after the page has loaded
- ✓ Send data to a server - in the background



# Introduction

- **What is AJAX?**

AJAX = Asynchronous JavaScript And XML.

- AJAX is not a programming language.

- AJAX just uses a combination of:

A browser built-in XMLHttpRequest object (to request data from a web server)

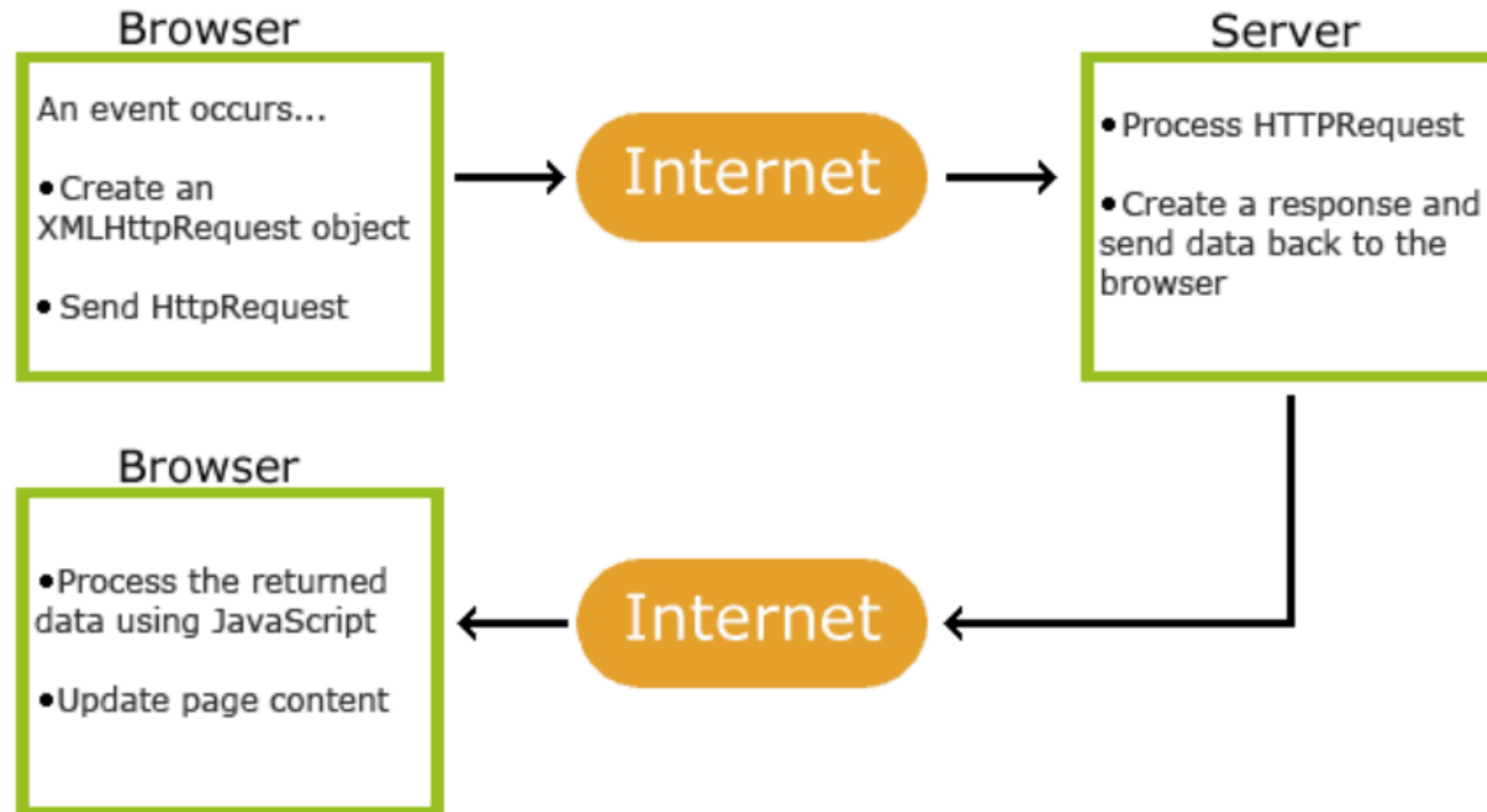
JavaScript and HTML DOM (to display or use the data)



# Introduction

- AJAX allows web pages to be updated asynchronously by exchanging data with a web server behind the scenes.
- This means that it is possible to update parts of a web page, without reloading the whole page.

# How AJAX Works





# The XMLHttpRequest Object

- All modern browsers support the XMLHttpRequest object.
- All modern browsers have a built-in XMLHttpRequest object.
- The XMLHttpRequest object can be used to exchange data with a server behind the scenes.
- Syntax for creating an XMLHttpRequest object:  

```
variable = new XMLHttpRequest();
```
- Example  

```
var xhr = new XMLHttpRequest();
```



# Send a Request To a Server

- To send a request to a server, we use the `open()` and `send()` methods of the `XMLHttpRequest` object:


```
xhr.open("GET", "ajax_info.txt", true);  
xhr.send();
```





# Send a Request To a Server

Method	Description
<code>open(<i>method</i>, <i>url</i>, <i>async</i>)</code>	Specifies the type of request  <i>method</i> : the type of request: GET or POST <i>url</i> : the server (file) location <i>async</i> : true (asynchronous) or false (synchronous)
<code>send()</code>	Sends the request to the server (used for GET)
<code>send(<i>string</i>)</code>	Sends the request to the server (used for POST)



# GET demo code

- ➡ [RUN\(getReqTxt.html\)](#)
- ➡ [RUN\(getReqJs.html\)](#)

# POST demo code

- To POST data like an HTML form, add an HTTP header with `setRequestHeader()`. Specify the data you want to send in the `send()` method:


`setRequestHeader(header, value)`

Adds HTTP headers to the request

*header*: specifies the header name

*value*: specifies the header value

- [RUN\(postReq.html\)](#)



# Asynchronous - True or False?

- Server requests should be sent asynchronously.
- The `async` parameter of the `open()` method should be set to `true`
- By sending asynchronously, the JavaScript does not have to wait for the server response, but can instead:
  - execute other scripts while waiting for server response
  - deal with the response after the response is ready



# Synchronous Request

- To execute a synchronous request, change the third parameter in the open() method to false:

```
xhr.open("GET", "ajax_info.txt", false);
```

[RUN\(synchReq.html\)](#)

Synchronous XMLHttpRequest (async = false) is not recommended because the JavaScript will stop executing until the server response is ready. If the server is busy or slow, the application will hang or stop



# AJAX XML

➤ [RUN\(getReqXml.html\)](#)





# AJAX Live Search

- The following example will demonstrate a live search, where you get search results while you type.

[RUN\(liveSearch.html\)](#)

- Live search has many benefits compared to traditional searching:
  - Results are shown as you type
  - Results narrow as you continue typing
  - If results become too narrow, remove characters to see a broader result

# AJAX RSS Reader



- RSS stands for Real Simple Syndication
- RSS is used to share content between websites.
- RSS Reader is a program which display RSS feeds from the websites.

## AJAX RSS Reader

- The following example will demonstrate an RSS reader, where the RSS-feed is loaded into a webpage without reloading:

[RUN\(RSSReader.html\)](#)





# AJAX Poll

- The following example will demonstrate a poll where the result is shown without reloading.

[RUN\(getPoll.html\)](#)

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धन्यवाद।

THANK YOU

merci, grazie, kam ouen, gratzias, manana, mahalo, cheers, toda, hvala, gracias, kitos, welalin, grassie, thank you, danki, mahalo, danks, takk, domo arrigato, danke, kitos, takk, miigwetch, talofa, modupe, dankon, mes, na gode, thanks, gratitude, dziekuje