Ajax - Asynchronous JavaScript and XML
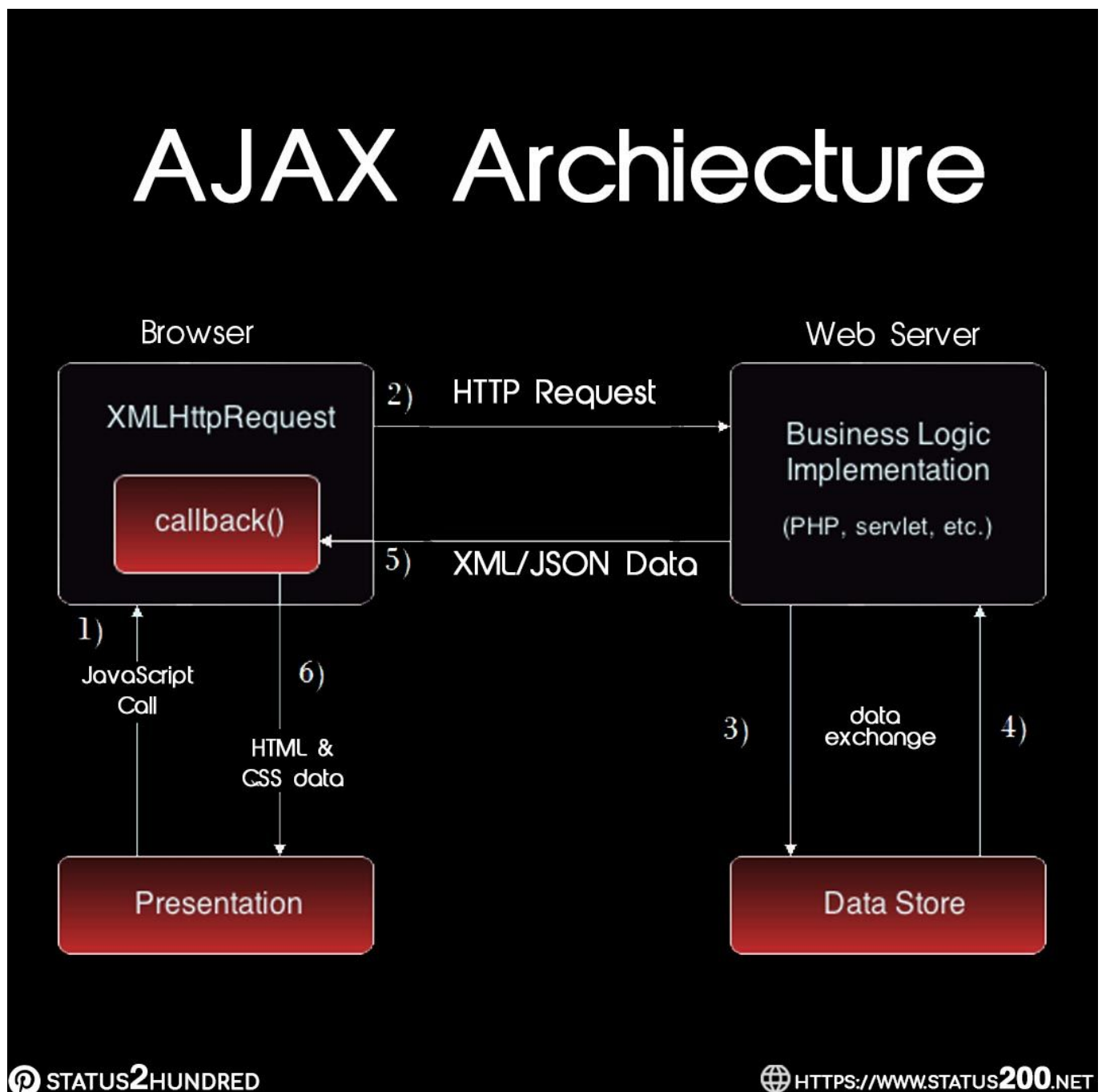
AGENDA

1. Ajax overview
2. HTTP APIs
3. REST API
4. XMLHttpRequest

1. Ajax overview

Source: https://in.pinterest.com/pin/849913760926810878/

Ajax is made up of the following technologies:

- XHTML and CSS for presenting information.
- Document Object Model (DOM) for dynamically interacting with and displaying the presented information.
- XMLHttpRequest object to manipulate data asynchronously with the web server.
- XML, HTML, and XSLT for data interchange and manipulation.
- JavaScript for binding data requests and information display.

2. HTTP APIs

An HTTP API is an API that uses **Hypertext Transfer Protocol** as the communication protocol **between the two systems**.

#	Name	Desc
1	`Most Popular` REST API	Representational State Transfer and is an architectural pattern for creating web services
2	GraphQL API	GraphQL API allows requests to call for the exact amount of data and type it needs

Source: https://www.educative.io/blog/what-are-rest-apis

2. REST API

Not all HTTP APIs are REST APIs. They need to meet the following requirements:

- client-server
- stateless server
- cachable
- **uniform interface**
- layered system

Source: https://www.educative.io/blog/what-are-rest-apis

Method	Resource	Has payload	Desc
GET	/students	NO	Get all students
GET	/students/:studentId	NO	Get one student by id
POST	/students	YES	Add new student
PUT	/students/:studentId	YES	Full update of a student
PATCH	/students/:studentId	YES	Paritial update of a student
DELETE	/students/:studentId	NO	Remove a student by id

Source: https://restfulapi.net/resource-naming/

3. XMLHttpRequest

```javascript
const url = 'http://js-post-api.herokuapp.com/api/students?_page=1'
const xhr = new XMLHttpRequest();

xhr.open('GET', url);
xhr.responseType = 'json';

xhr.addEventListener('load',function() {
    console.log(xhr.response);
});

xhr.addEventListener('error', function() {
    console.log('Something wrong :P')
});

xhr.send();
```

Source: https://developer.mozilla.org/en-US/docs/Web/API/XMLHttpRequest

Tham khảo

- https://www.ibm.com/cloud/learn/rest-apis
- https://www.ibm.com/docs/en/rational-soft-arch/9.6.1?topic=page-asynchronous-javascript-xml-ajax-overview
- https://www.educative.io/blog/what-are-rest-apis
- https://stackoverflow.com/questions/41189842/what-is-difference-between-rest-and-api

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Khoá học Javascript cho người mới bắt đầu 2021🎉

- Tác giả: **Hậu Nguyễn** - Founder Easy Frontend
- Khoá học chỉ được published trên Udemy, không thông qua trung gian.
- Khoá học không bán dạng videos upload trên Google Drive hay bất cứ hình thức nào tương tự.
- Khoá học có nhóm discord để hỗ trợ trong quá trình học tập.

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