

# IndexedDB

## INTRODUCTION

IndexedDB is presented as an alternative to the WebSQL Database, which the W3C deprecated on November 18, 2010 (while still available in some browsers, it is no longer in the HTML5 specification). Both are solutions for storage, but they do not offer the same functionalities.

WebSQL Database is *a relational database access system*, whereas **IndexedDB is *an indexed table system***.



From [the W3C specification about IndexedDB](#): "User agents (apps running in browsers) may need to store large numbers of objects locally in order to satisfy off-line data requirements of Web applications. Where WebStorage (as seen in the HTML5 part 1 course -localStorage and sessionStorage) is useful for storing pairs of keys and their corresponding values, IndexedDB provides in-order retrieval of keys, efficient searching of values, and the storage of duplicate values for a key".

The W3C specification provides a concrete API to perform advanced key-value data management that is at the heart of most sophisticated query processors. It does so by using *transactional databases* to store keys and their corresponding values (one or more per key), and providing a means of traversing keys in a deterministic order. This is often implemented through the use of persistent B-tree data structures that are considered efficient for insertion and deletion, as well as in-order traversal of very large numbers of data records.

### To sum up:

1. **IndexedDB is a transactional Object Store in which you will be able to store JavaScript objects.**
2. **Put indexes on some properties of these objects for faster retrieval**

and search.

3. **Applications that use IndexedDB can work both online and offline.**
4. **IndexedDB is transactional: it manages concurrent access to data.**

## Examples of applications where IndexedDB should be considered:

- A catalog of DVDs in a lending library.
- Mail clients, to-do lists, notepads.
- Data for games: hi scores, level definitions, etc.
- Google Drive uses IndexedDB extensively...

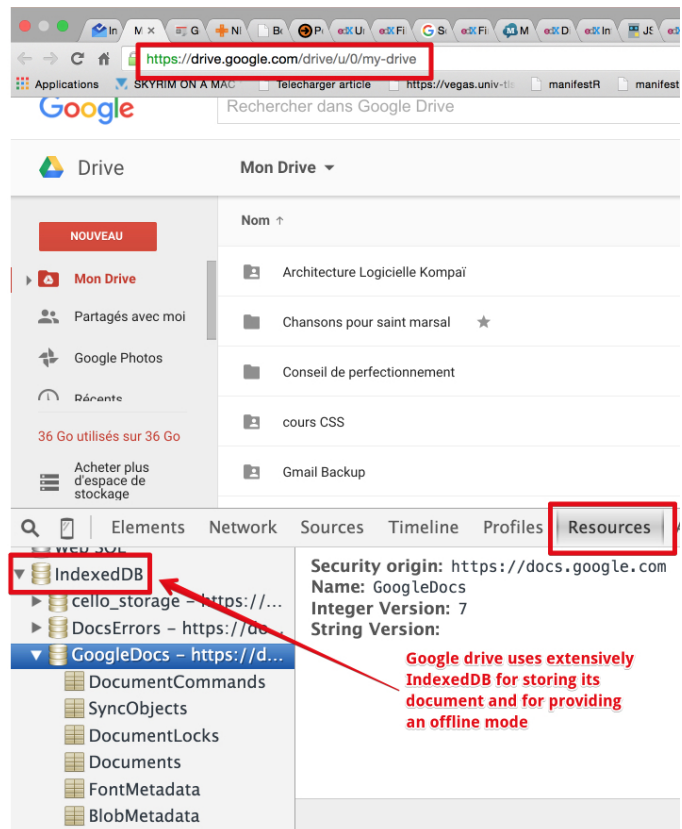
## EXTERNAL RESOURCES

Much of this chapter either builds on or is an adaptation of the content of the following articles posted on the Mozilla Developer Network site (articles are: [IndexedDB](#), [Basic Concepts of IndexedDB](#) and [Using IndexedDB](#)).

- [W3C specification about IndexedDB](#)
- [Mozilla developer's page about IndexedDB](#)
- [Getting started with IndexedDB article from codeproject.com](#)
- [Example that runs using the new version of the specification, \(read the explanations\)](#)

## CURRENT SUPPORT

Current support is excellent both on mobile and desktop browsers.



Current aligned	Usage relative	Show all							
IE	Edge <sup>*</sup>	Firefox	Chrome	Safari	Opera	iOS Safari <sup>*</sup>	Opera Mini <sup>*</sup>	Android Browser <sup>*</sup>	Chrome for Android
								4.1	
8		38	31					4.3	
9		39	43					4.4	
<sup>1</sup> 10		40	44	<sup>2</sup> 8		<sup>2</sup> 8.4		4.4.4	
<sup>1</sup> 11	<sup>1</sup> 12	41	45	<sup>2</sup> 9	32	<sup>2</sup> 9	8	44	45
	<sup>1</sup> 13	42	46		33				
		43	47		34				
		44	48						

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