

# LiteDB per l'accesso ai dati client-side

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Blazor  
Conference  
2021

# Agenda

- Accesso ai dati da WebAssembly
  - LocalStorage
  - SessionStorage
- PWA
  - IndexedDB
- Blazor
  - LiteDB (experimental)

# Browser Storages

- Storage
- ▶  Local Storage
  - ▶  Session Storage
  - ▶  IndexedDB
  - ▶  Web SQL
  - ▶  Cookies

	MAC				WIN								
													
	CHROME	FIREFOX	OPERA	SAFARI	CHROME	FIREFOX	OPERA	SAFARI	IE				
	5	3.6	10.6	5 4	5 6	3.6 4.02	10.6	5	6	7	8	9	
Local Storage	✓	✓	✓	✓ ✓	✓ ✓	✓ ✓	✓	✓	✗	✗	✓	✓	91%
Session Storage	✓	✓	✓	✓ ✓	✓ ✓	✓ ✓	✓	✓	✗	✗	✓	✓	92%

# Local Storage

- Key-value storage that stores values as strings
- Does not have expiration date (persistent storage) unless explicitly clear the browser using settings or Javascript
- Up to **10MB** data can be stored
- Follow the same-origin policy, which means the Protocol(Http/Https), port and the host are the same. Only scripts of the same origin can access LocalStorage data
- Do not send to server, for client-side usage only

Can be use to store user-related data



# Session Storage

- Key-value storage that stores values as strings
- Data stored does not survive after the table/window is closed
- Up to **10MB** data can be stored
- Follow the same-origin policy and is bound to a tab
- Do not send to server, for client-side usage only

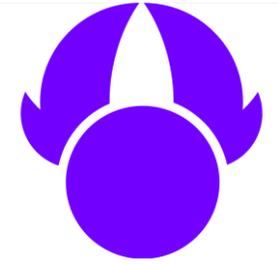
Store user-related data for one session only like language selection

# Cookies

- Key-value storage that stores values as string
- Have expiration time, if no expiration time is given then the cookie will get expired at the end of the browser session.
- Up to **4KB** data can be stored
- Send to server for every request and follow same-origin policy

Server can get data from cookie to track session status.

# Indexed DB



- Can store both objects and key-value pairs
- Up to **250MB** for IE
- IndexedDB API is asynchronous, unlike local storage and session storage. IndexedDB operations are event-driven by various events like `onsuccess`, `onerror`, `oncomplete` etc.
- Follow the same-origin policy
- Do not have expiration time (persistent storage) unless explicit deletion

When need to store a large number of objects which is time-consuming and a lag on performance to convert to string for Local Storage every time.

# WebSQL

- Deprecated by W3C
- Can be accessed using SQL statements.
- Follow same-origin policy
- Persistent storage unless explicit deletion
- **Not supported from firefox**

# Demo

IndexedDB Demo

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# LiteDB



- LiteDB.WebAssembly forks LiteDB v5.1 branch with master updates to start a smaller and focused version for wasm. Some LiteDB was removed in this version (maybe can back in future).
- Blazor runs in browser using WebAssembly. There is no disk access in browsers so all your data will be stored into IndexedDB and/or LocalStorage. Works with a single database per domain and async read/write operations only. All locks will be removed and there is no support for concurrency or transactions (exclusive lock only).

# LiteDB

## Removed features

- Encryption
- Transactions
- Shared Connection
- FileStorage
- SortDisk



# Demo

LiteDB Demo

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Slide e materiale su  
<https://aspit.co/BlazorConf-21>

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