

Modern Web Development (Abstract)

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Modern web development is more than just a simple website. With modern technologies, it is even possible to create installable PWAs (Progressive Web Apps) which combine the advantages of websites and native apps.

Various backend technologies, such as Node JS, ASP.Net and PHP provide a great flexibility in backend development.

Nowadays, more and more people use mobile devices to visit websites. Therefore, it is very important to implement responsive design while developing a website. Media queries allow styles to be adjusted based on display size and orientation.

Frontend JavaScript frameworks, such as React, Angular or VueJS, make it very easy to dynamically fill web pages with content and react to user interactions.

There are many ways to store data in the browser. Local storage is used to permanently store small data as string key-value pairs. The session storage allows you to save this data during a session. Afterwards, it is automatically deleted. Cookies are mainly used to identify the session on the server. If you want to store larger data, it is vital to use Indexed DB. This allows to create an index on attributes of the stored objects to filter them.

The Cache API allows entire web pages to be stored offline, which can be retrieved using Service Worker.

Authentication is very important to assign data stored on the server to users. There are two methods for authentication. The first one is session-cookie based. In this case, the session data is stored on the server and can be retrieved via the so-called session cookie. The second variant is token-based authentication. Here, the data is encoded and checked for manipulation using a hash with a secret.