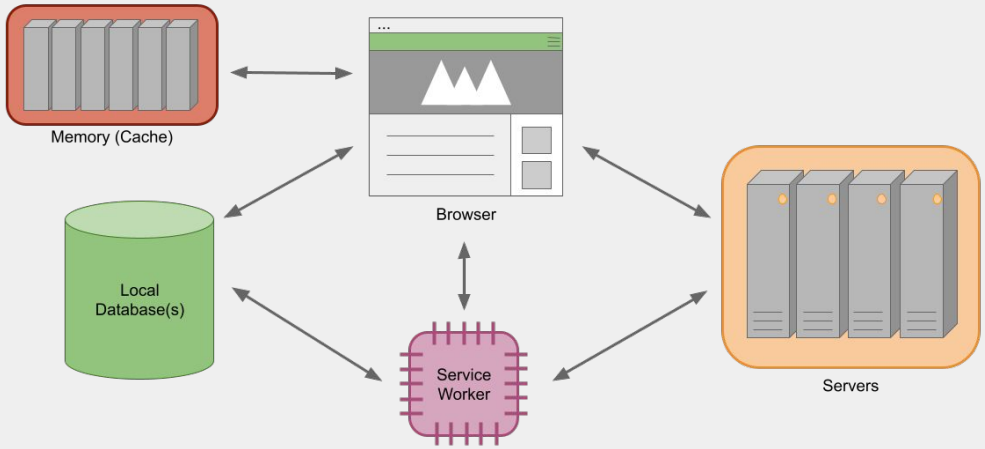
Pumpkin Spice Latte

Introduction to Web Programming

Keywords & Topics

- HTML
- CSS
- JavaScript
- Service Workers
- Local Databases
- Polyfills
- Prefixes
- Lighthouse Audits



HTML

HTML stands for **Hyper Text Markup Language** and it is used to tell your browser how a desired web page layout should be outlined with HTML **tags**. Some common tags are:

- <body>
- <header>
- <footer>
- <nav>
-
- <main> - if people remember to use it

W3Schools is an amazing resource to use to learn more about the other tags and how to use them.

CSS

CSS stands for **Cascading Style Sheets** and it is used to bring designs to life by telling your browser how an HTML outlined layout should display through color, font, size and position **attributes**. Some common attributes are:

- color: dimgray;
- font-size: 16px;
- background-color: #eeeeee;
- padding: 10px;
- margin: 10px;

W3Schools is an amazing resource to use to learn more about the other attributes and how to use them.

JavaScript

JavaScript, or **JS**, is how most of the functionality of a web page is handled in modern day. Some of the functions can be handled directly through HTML with proper definitions, but does not allow developers very much control. Some important functionalities to note:

```
function event_click (event) {
   event.preventDefault();       // prevents HTML behaviors from triggering
   console.log(event);           // tells you what is inside of the event object
   console.log(event.target);    // tells you what HTML element the event belongs to
}
```

MDN - JavaScript is an amazing resource to use to learn more about the latest trends and standards of defined JavaScript APIs that most browser follow and how to use them.

Service Workers

Service Workers, or **SW**, are used to manage the memory on your browser more efficiently as well as help you web page perform without internet access using JavaScript. Some important event listeners to remember:

- Register
- Install
- Activate
- Fetch

Workbox is an amazing resource that helps utilize service workers without the headache of writing your own from scratch.

Local Databases

Believe it or not, browser now have databases built straight into them. Service workers as well as the JavaScript on your web page can access those local databases. Currently, there are 2 types that most browser have:

- IndexedDB - NoSQL
- Web SQL - SQL

MDN - IndexedDB has all of the defined APIs in order to understand how to use it.

Tutorials Point - Web SQL has all of the defined APIs in order to understand how to use it.

Polyfills

Just use TypeScript...end of story.

Just kidding, there are a few ways to add polyfills into your JavaScript to make it browser independent. This means the code on your web page will work across all browsers and not just Chrome.

Some ways to do this are to use the following with a standard UI framework like React, Vue or Angular:

- Bable
- TypeScript
- WebPack

Prefixes

There are a few ways to add prefixes into your CSS to make it browser independent. This means the styles on your web page will work across all browsers instead of just Chrome.

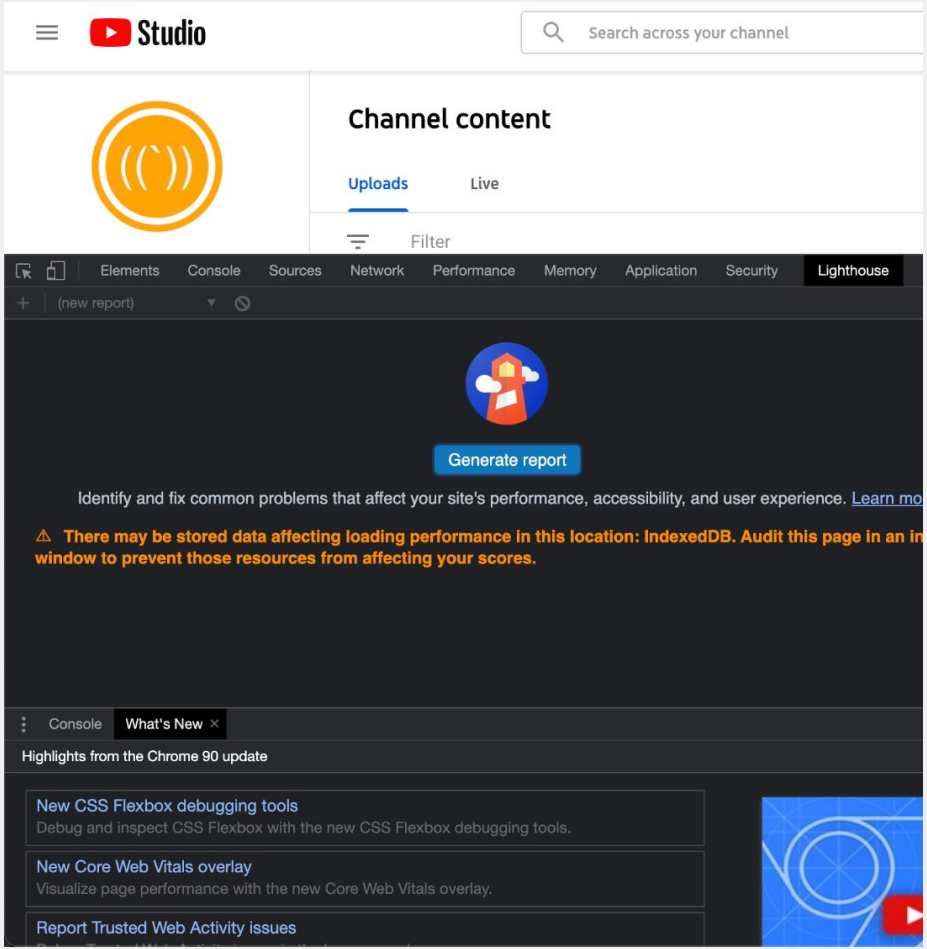
Some ways to do this are to use the following with a standard UI framework like React, Vue or Angular:

- SASS
- LESS
- SCSS

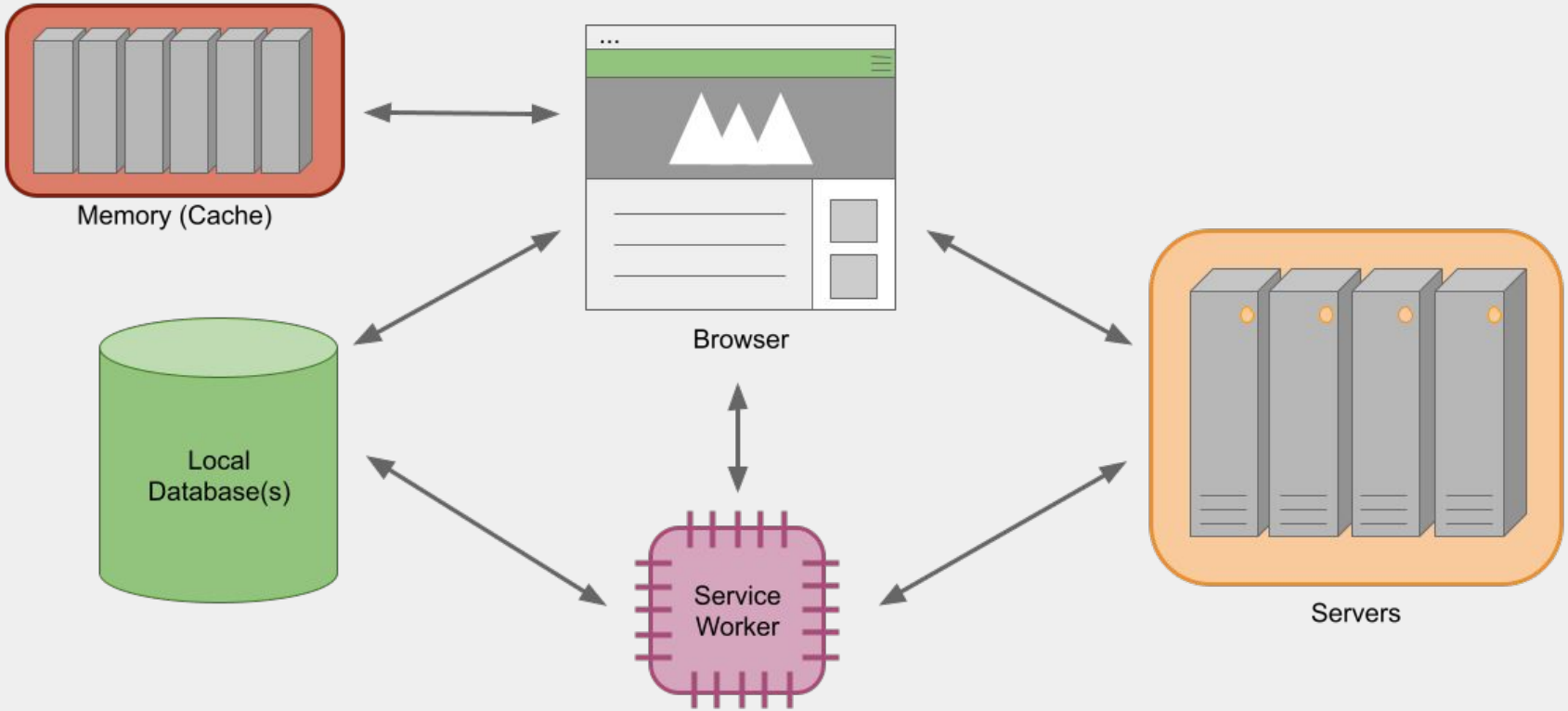
Lighthouse Audits

Research has shown that users are more likely to navigate away from a page if it takes **more than 7 seconds** for any content to load onto the page. If it takes **more than 800 milliseconds** for something to happen once something is clicked, the page is perceived to be **buggy**.

In order to track down those types of bottlenecks, running Lighthouse Audits are a must!



General Architecture



Pumpkin Spice Latte Co.

hello@pumpkinspicelatte.org