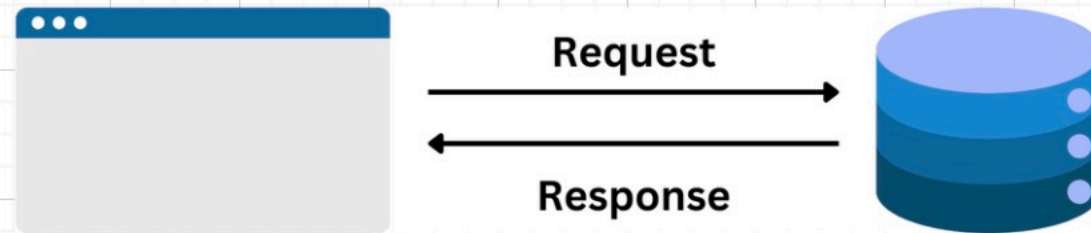# Offline Mode Understanding

A service worker is a special script that runs in the background of your web browser, even when you're not actively using the website. It acts as a middleman between your browser and the internet, intercepting network requests and caching data to improve the performance and reliability of your web experience.

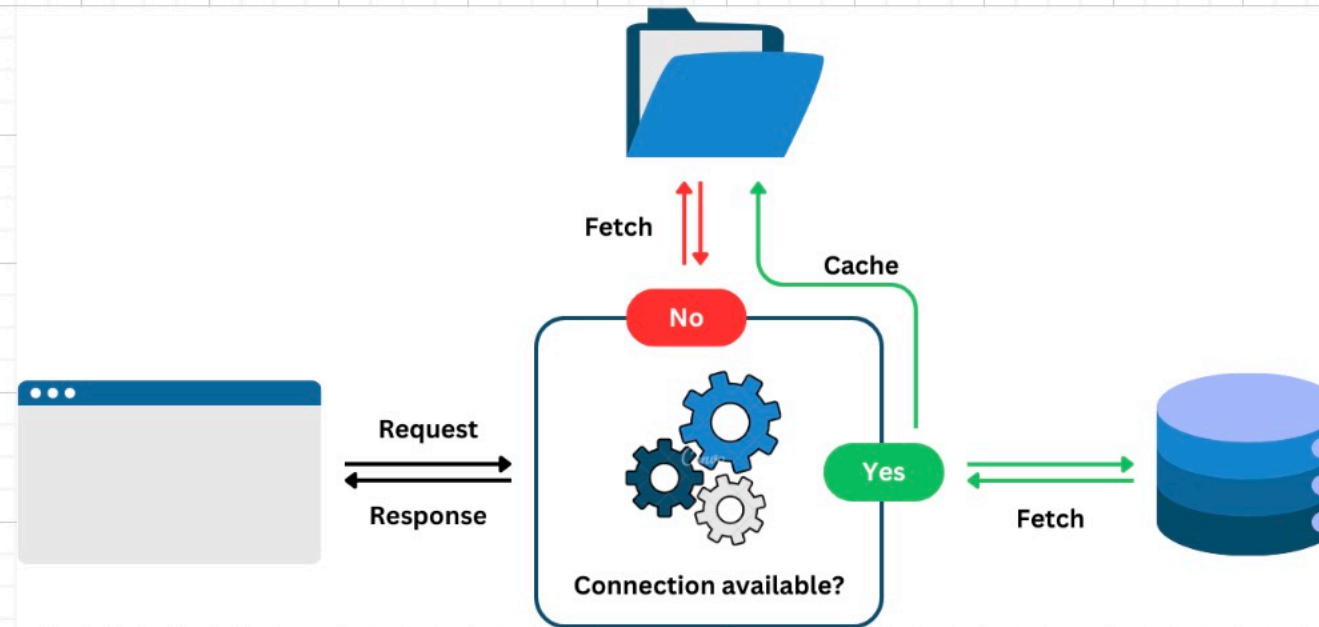As we know, with the help of servic worker, we can able to achieve, but
how ?
They can store static website assets like HTML, CSS, and JavaScript files locally, so you can still access the basic functionality of the website even when you're offline.

How Service Worker works

Request

Response

This is the normal flow, when we are not using service worker

But when using Service Worker it works as a middle layer between the browser and the server where it will cache the fetched data according to the instructions for the first time and after that, if the connection is lost Service Worker will serve the fetched data from the cache without giving a connection lost error.

Fetch

Cache

No

Request

Response

Yes

Fetch

Connection available?

Service worker LifeCycle

1. Regsiter

To initiate the Service Worker lifecycle, we first need to **register** our service worker script (*serviceWorker.js)* in the JavaScript(*main.js*) which is linked to the landing page(*index.html*) of your application.

2. Install Event

This is the first event the Service Worker gets and is called once per service worker. It means, once a new or updated service worker is registered, it will be treated as a new service worker and it will get its own Install event.

In the Install step, we can cache the static assets. Static files such as media assets (images, audio files), CSS files, static HTML pages can be cached after creating cache storage

3. Activate event

After the Install event, the Activate Event **must** be called to have the Service Worker intercept the requests from that point of time. The current page which registers the service worker script won't be controlled by the Service Worker installed. We need to reload the page to get it under the service worker's control.