Experiment 9	
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Aim: To implement Service worker events like fetch, sync and push for PWA

Theory:

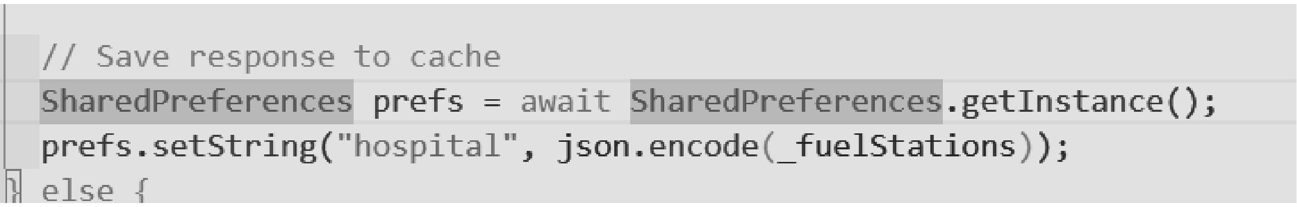
A Service Worker is a JavaScript file that runs in the background of a Progressive Web App (PWA).

It acts as a proxy between the web app and the network, enabling features like:
- Caching content for offline use (fetch event)
- Syncing data in the background (sync event)
- Receiving and displaying push notifications (push event)

These service worker events significantly improve user experience by ensuring fast loading, real-time updates, and engagement, even in low or no internet connectivity.

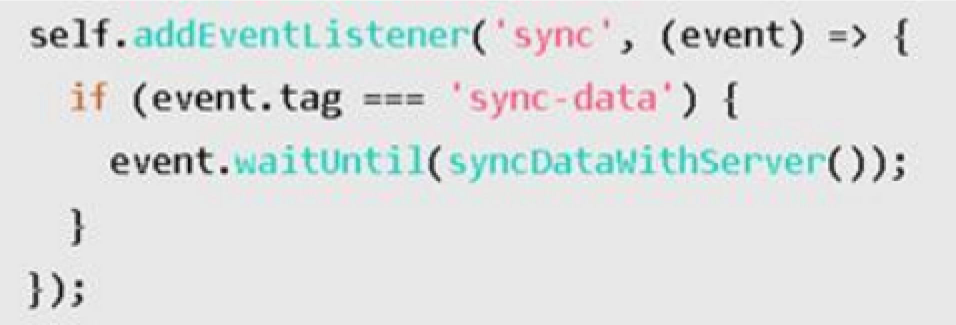
Output:

1. fetch event :-



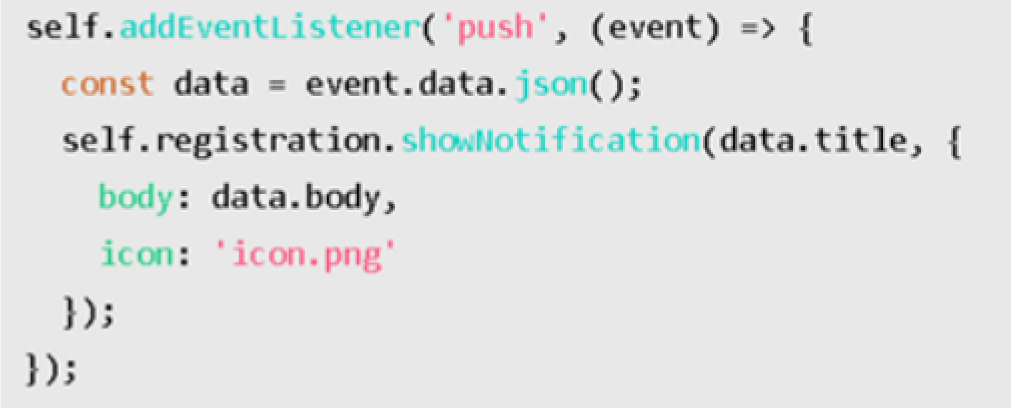
```
// Save response to cache
SharedPreferences prefs = await SharedPreferences.getInstance();
prefs.setString("hospital", json.encode(_fuelStations));
} else {
```

2. sync event :-

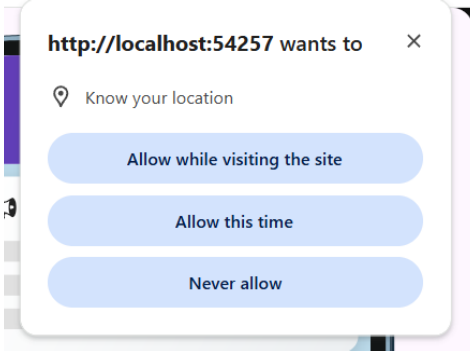


```
self.addEventListener('sync', (event) => {
  if (event.tag === 'sync-data') {
    event.waitUntil(syncDataWithServer());
  }
});
```

3. Push Event : -

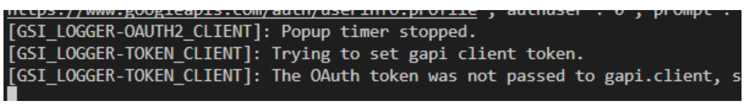


```
self.addEventListener('push', (event) => {
  const data = event.data.json();
  self.registration.showNotification(data.title, {
    body: data.body,
    icon: 'icon.png'
  });
});
```



http://localhost:54257 wants to

Know your location



```
https://www.googleapis.com/auth/userinfo.profile', authuser: '0', prompt: '
[GSI_LOGGER-OAUTH2_CLIENT]: Popup timer stopped.
[GSI_LOGGER-TOKEN_CLIENT]: Trying to set gapi client token.
[GSI_LOGGER-TOKEN_CLIENT]: The OAuth token was not passed to gapi.client, s
```

Conclusion:

In this experiment, we successfully implemented the core Service Worker events (fetch, sync, and push) in the railway PWA. This enhanced the app's ability to:

- Work offline using cache (fetch)
- Automatically sync data in the background (sync)
- Engage users with notifications (push)

These features are crucial for improving reliability, performance, and user engagement in modern web applications.