



UTT

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Topic: Manifest

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Group: 10B

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The manifest file of a Progressive Web App (PWA) is an essential component that defines how the web application behaves and appears on both mobile and desktop devices. Essentially, the manifest is a JSON file containing a series of key-value pairs that specify crucial information about the application, such as its name, author, description, icon, and other important settings.

The primary function of the manifest file is to provide users with an experience similar to that of a native application directly from the web browser. This means PWAs can be installed from the device's home screen without the need for an app store. Additionally, the manifest allows the application to be easily discovered and offers additional advantages, such as offline availability and the ability to send push notifications to inform users about relevant changes in the application's content.

A basic manifest typically includes the following members:

- **name:** The full name of the application.
- **short_name:** A short or abbreviated name for the application, displayed in limited spaces such as the app launcher on mobile devices.
- **description:** A brief description explaining the application's functionality.
- **icon:** The URL of the icon representing the application on the device's home screen.

However, the manifest can contain a variety of other fields to further customize the application experience, such as color theme, default screen orientation, start preferences, among others.

```

1 {
2   "name": puede ser utilizado por las app stores o los browsers en las pantallas de startup o prompts.
3   "short-name": es el nombre que el usuario ve junto con el icono. Por ejemplo en la homescreen.
4   "description": provee contexto adicional de la app.
5   "dir": Dirección del texto.
6         Valores: ltr(left to right),
7               rtl(right to left),
8               auto
9   "lang": lenguaje del texto.
10         Ejemplo: en (inglés)
11   "icons": Es un array cuyos elementos son un JSON con diferentes propiedades del icono incluyendo el tamaño y el tipo, de esta manera el browser puede elegir cuál es el icono correspondiente dentro de este conjunto.
12         [{
13           "src": source,
14           "sizes": ejemplo "192x192",
15           "type": ejemplo "image/png",
16           "purpose": el propósito de la imagen en el contexto del sistema operativo.
17                     Valores: badge, maskable, any
18         }]
19   "display": Modo de visualización de preferencia del website
20             Valores: fullscreen,
21                   standalone,
22                   minimal ui,
23                   browser.
24   "scope": representa el conjunto de urls que se puede ver a través del contexto de PWA, si el usuario navega afuera de este scope, las páginas serán abiertas en un modo standard del browser.
25             Ejemplo: "https://example.com/", "/app/"
26   "orientation": se puede forzar la orientación de tu app cuando es conveniente, por ejemplo en algún videojuego sería landscape. Puede omitirse.
27                 Ejemplo: natural (default).
28   "background_color": indica al browser qué color utilizar en la pantalla de inicio que los usuarios verán cuando ejecutan su app.
29                     Ejemplo: "#456BD9"
30   "theme_color": se utiliza en algunos browsers para colorear la barra de estado y otras partes de la interfaz del usuario que pertenecen al browser.
31   "start_url": indica cuál es la url que debe iniciarse cuando el usuario ejecuta la progressive web app.
32   "categories": Se intenta utilizar para categorizar las pwa en algunas app stores.
33                 (example: ["business", "technology", "web"])

```

To create a manifest file, it can be done manually using a text editor with proper JSON formatting. Subsequently, this file should be linked to the web application by adding a `<link>` element in the `<head>` of the application's HTML file, with a reference to the manifest file location:

htmlCopy code

```
<link rel="manifest" href="/appmanifest.webmanifest">
```

It's important to note that while the manifest file is JSON-based, the recommended extension by the W3C is `.webmanifest` so that some web servers recognize and transfer it correctly.

In addition to manually creating the manifest, there are third-party tools such as Microsoft's PWABuilder that simplify this process by guiding you step by step to complete the necessary values of the manifest file, and even help you select the appropriate icon sizes for different devices.

In summary, the manifest file is a fundamental part of PWA development as it defines how the application is presented and enhances the user experience by providing a native-like experience directly from the web browser.