



Développer des applications bureau **sans code natif**

Patrick Brosset - SnowCamp 2023



Patrick Brosset

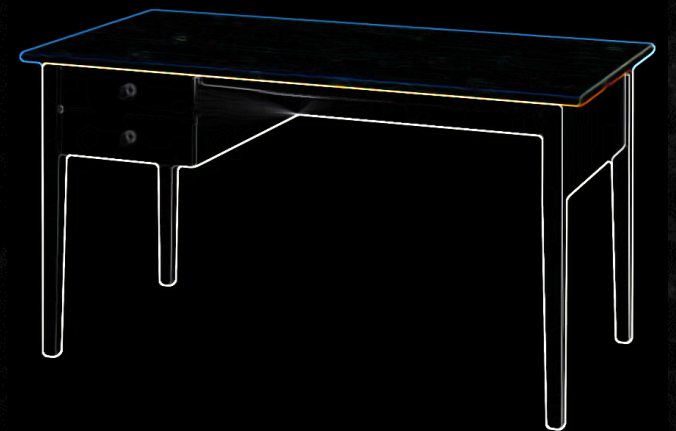
Twitter: [@patrickbrosset](https://twitter.com/patrickbrosset)

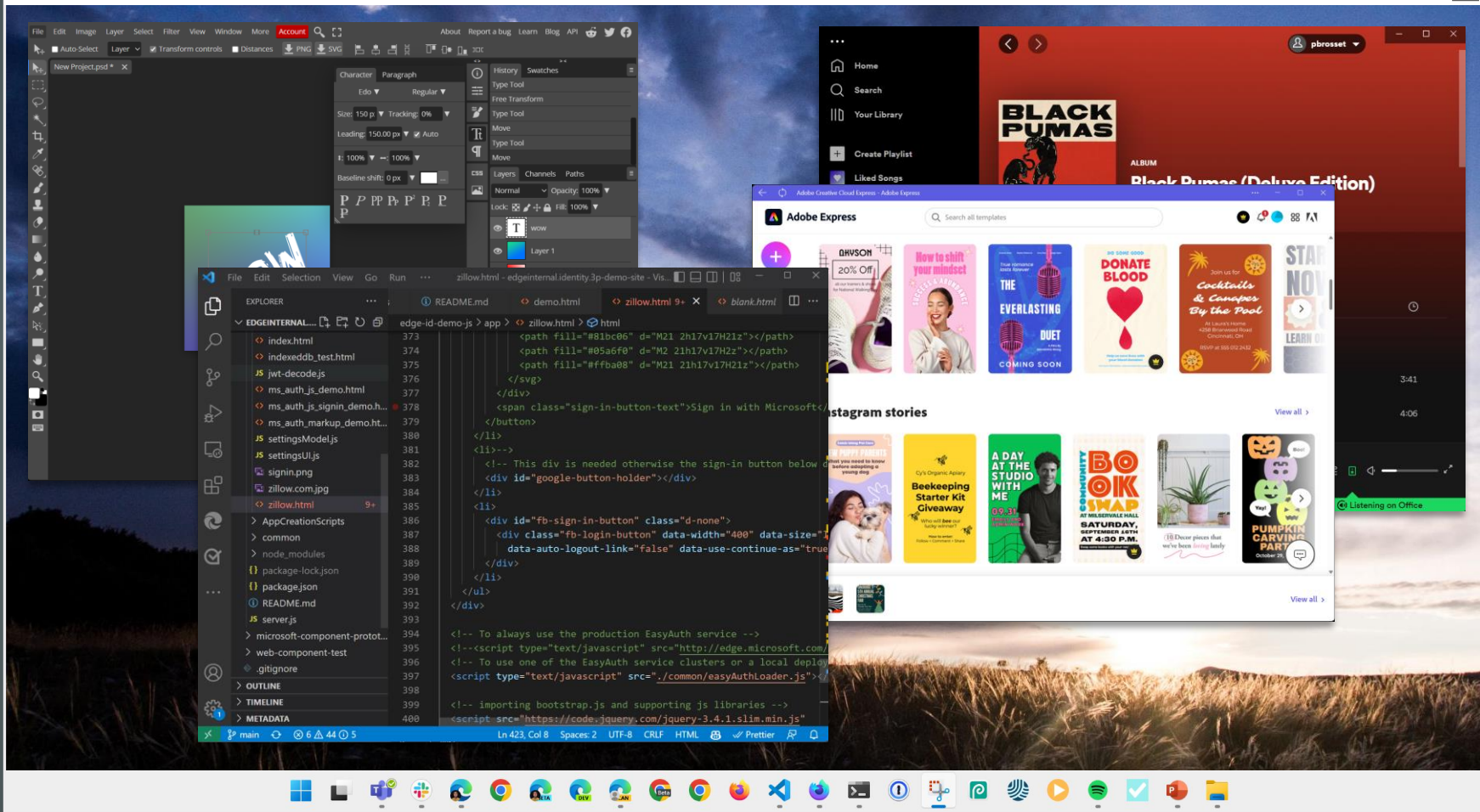
Mastodon: [@patrickbrosset@mas.to](https://mastodon.social/@patrickbrosset)

Web: <https://patrickbrosset.com>

Demos: <https://github.com/microsoftEdge/demos>

Des applications de bureau?





En quoi sont-elles différentes et nécessaires?

- Elles sont installées
- Elles marchent, même sans le réseau
- Elles savent ouvrir des fichiers locaux
 - Elles ont leurs propres fenêtres
 - Elles sont intégrées à l'OS

SwiftUI, WinUI3, C, C+, Java,
Electron, React Native, ...





Et le web alors?

PWA

Démystifions les PWAs

“Eh non?” **WRONG**

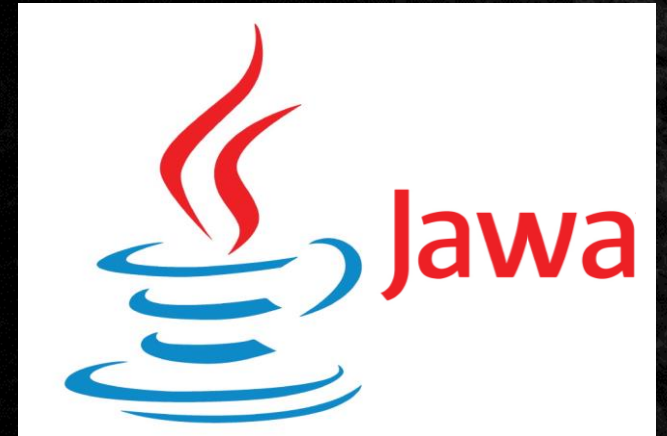
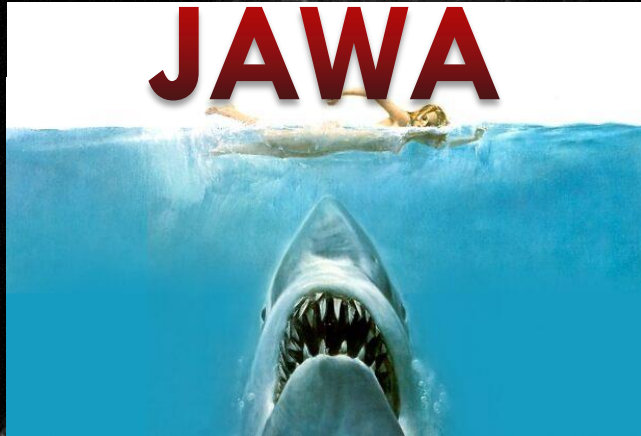
“C’est pas juste par hasard?” **WRONG**

“Mais c’est mobile!” **WRONG**

An aerial, high-contrast black and white photograph of a coastline. The image shows the intricate patterns of waves crashing against a dark, rugged shore. The water's surface is covered in white foam and swirling eddies, creating a complex, organic texture. The shoreline is a dark, jagged line that separates the turbulent water from the land. The overall mood is dramatic and powerful.

Affaire classée?

JAWA



A dark, high-contrast, black and white photograph of a rocky coastline. The image shows waves crashing against a dark, craggy shore. The water is dark, and the rocks are even darker, with some white foam from the waves providing contrast. The overall mood is dramatic and moody.

Just A Web App

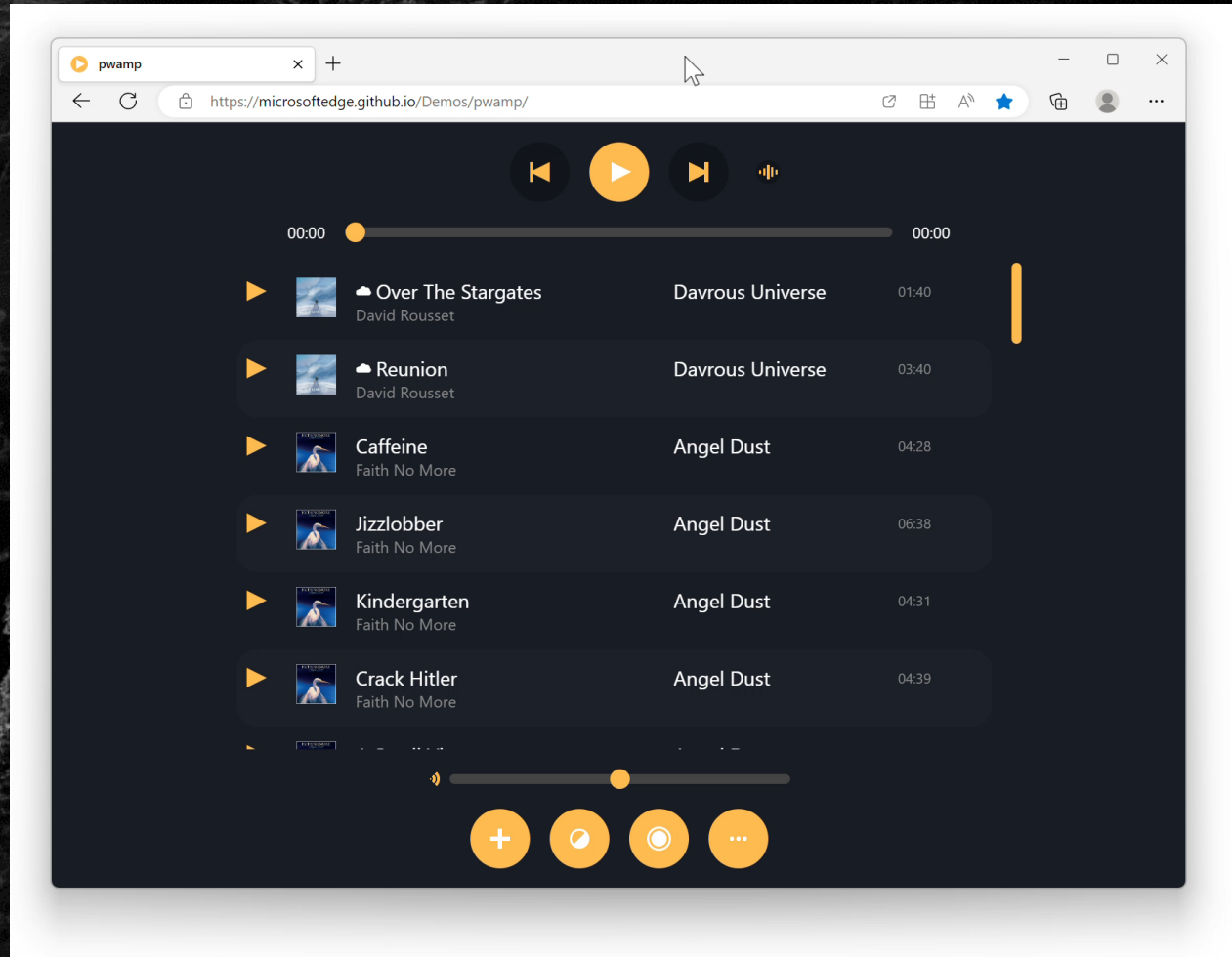
Mais pourquoi??

- Site web + manifest + SW = Application. Vraiment?
- Manque de connaissances et de confiance
 - Petites differences

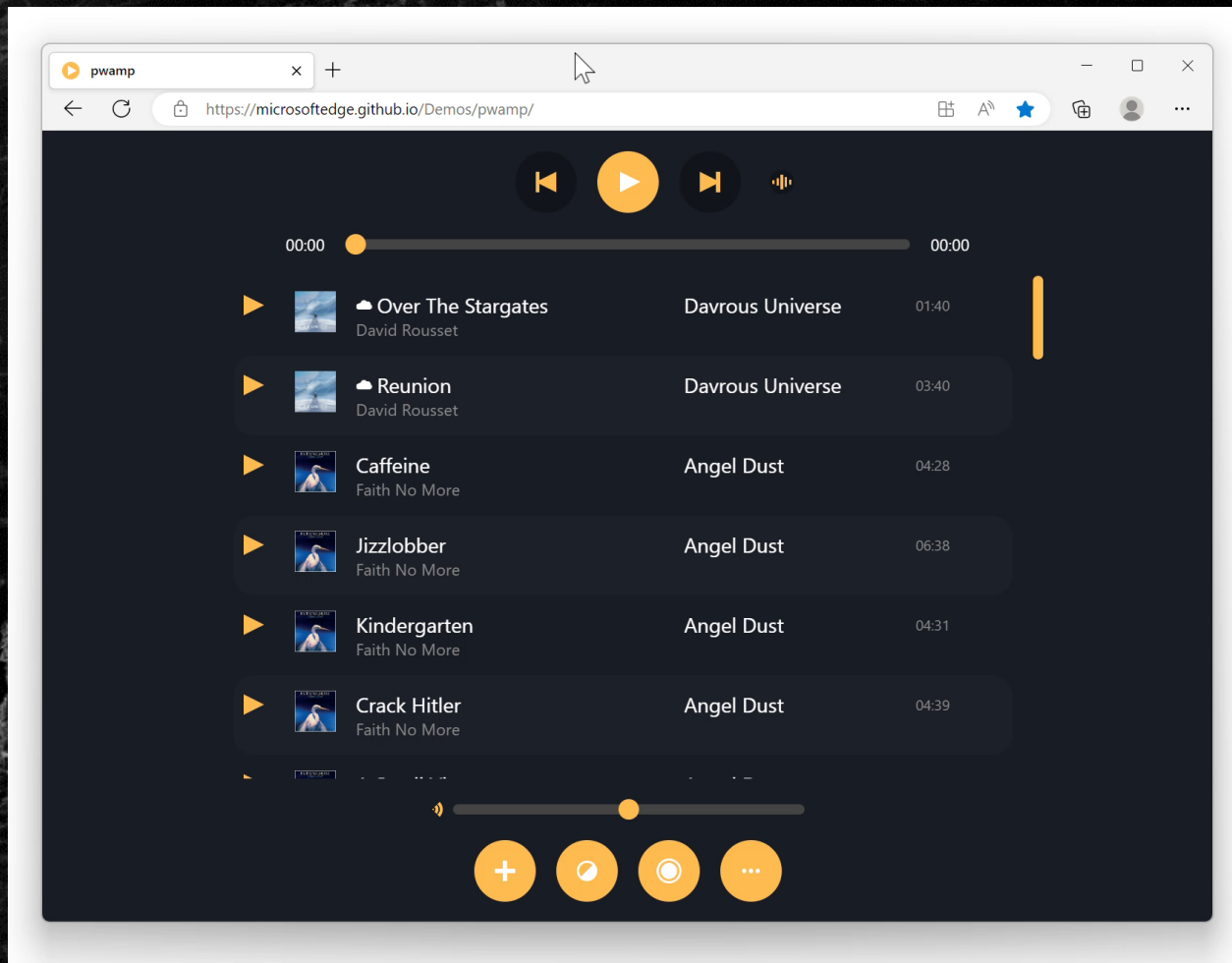
An aerial, high-contrast black and white photograph of a coastline. The image shows the intricate patterns of waves breaking against a dark, rugged shore. The water's surface is textured with white foam and dark patches, creating a complex, organic shape that dominates the left and center of the frame. The right side of the image is mostly dark, suggesting the deep water or the shadowed land.

Les bonnes pratiques

Installation



Installation



App stores



[Docs](#) [Community](#)

Helping developers build and publish PWAs

[Start a new PWA](#) →

Looking to build a new Progressive Web App? Checkout all the documentation here.

[Use dev tools](#) →

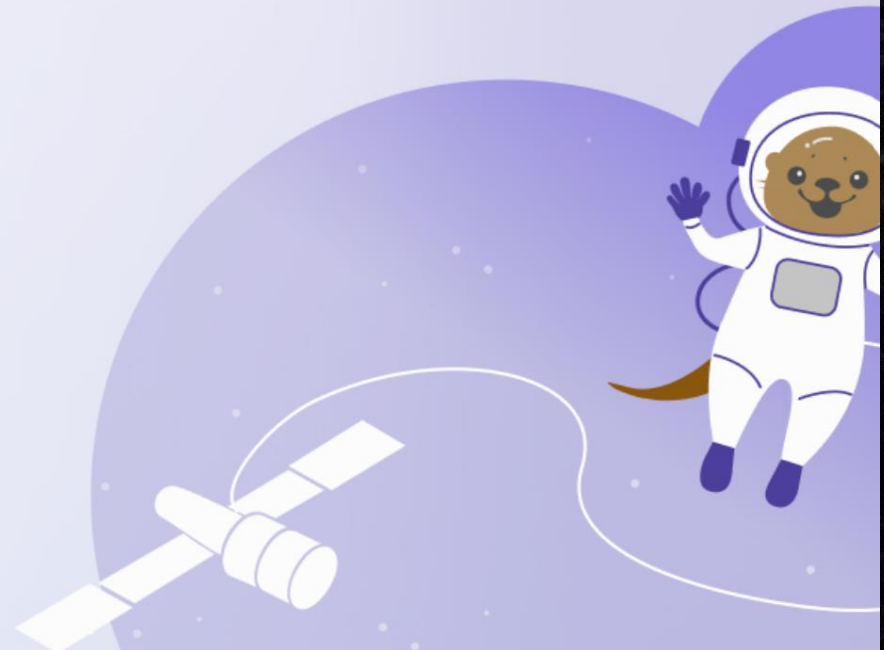
Use our VS Code extension to create, improve, and package your PWA directly in your code editor.

[Ship your PWA to app stores](#)

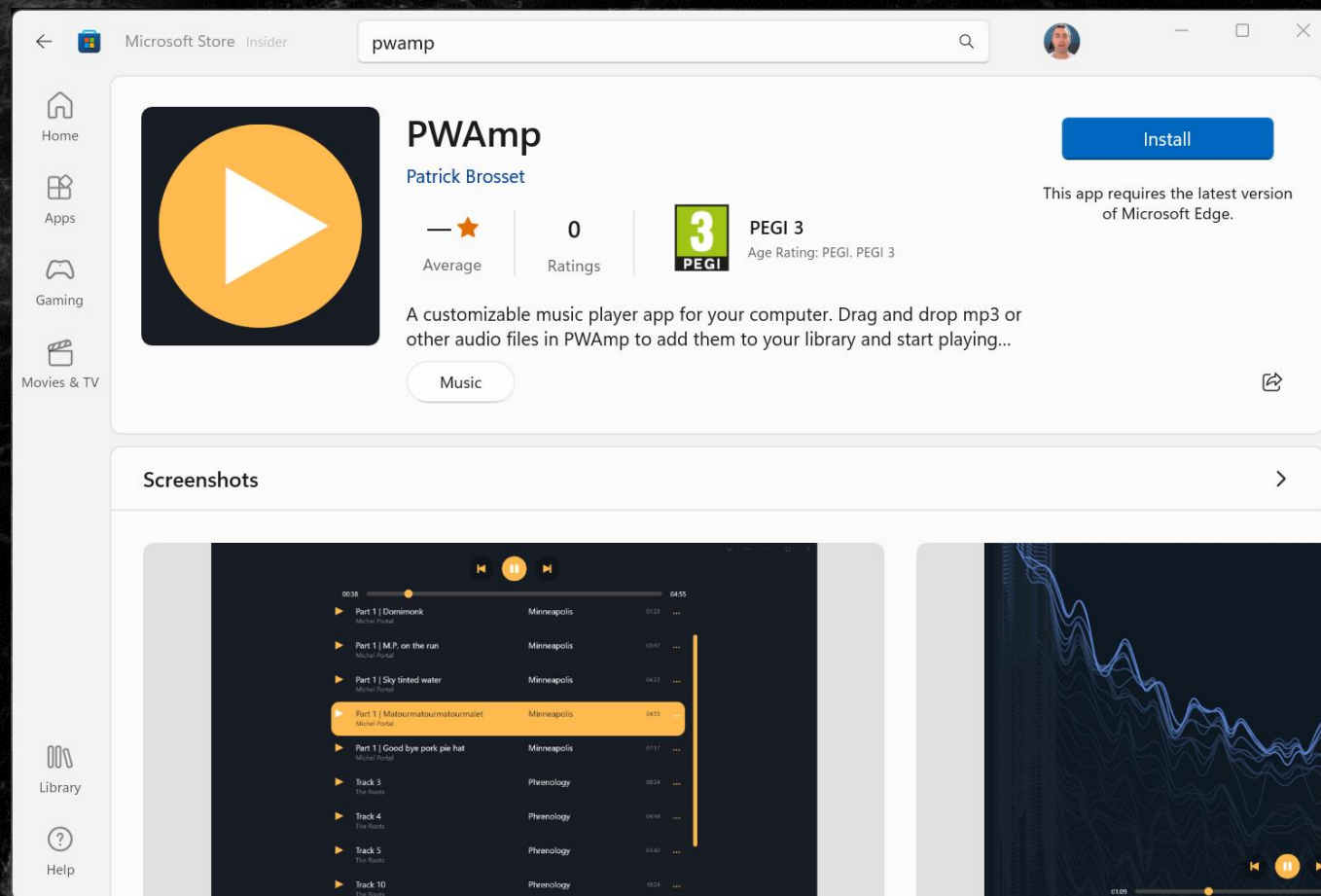


Start

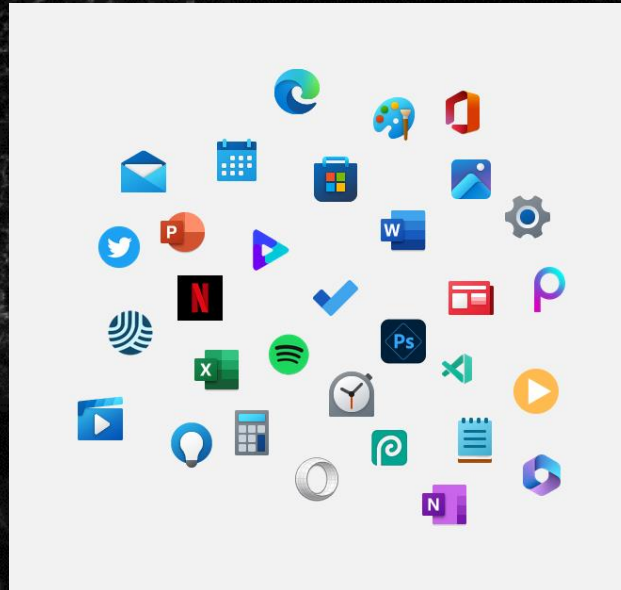
Try a [demo url](#)



App stores

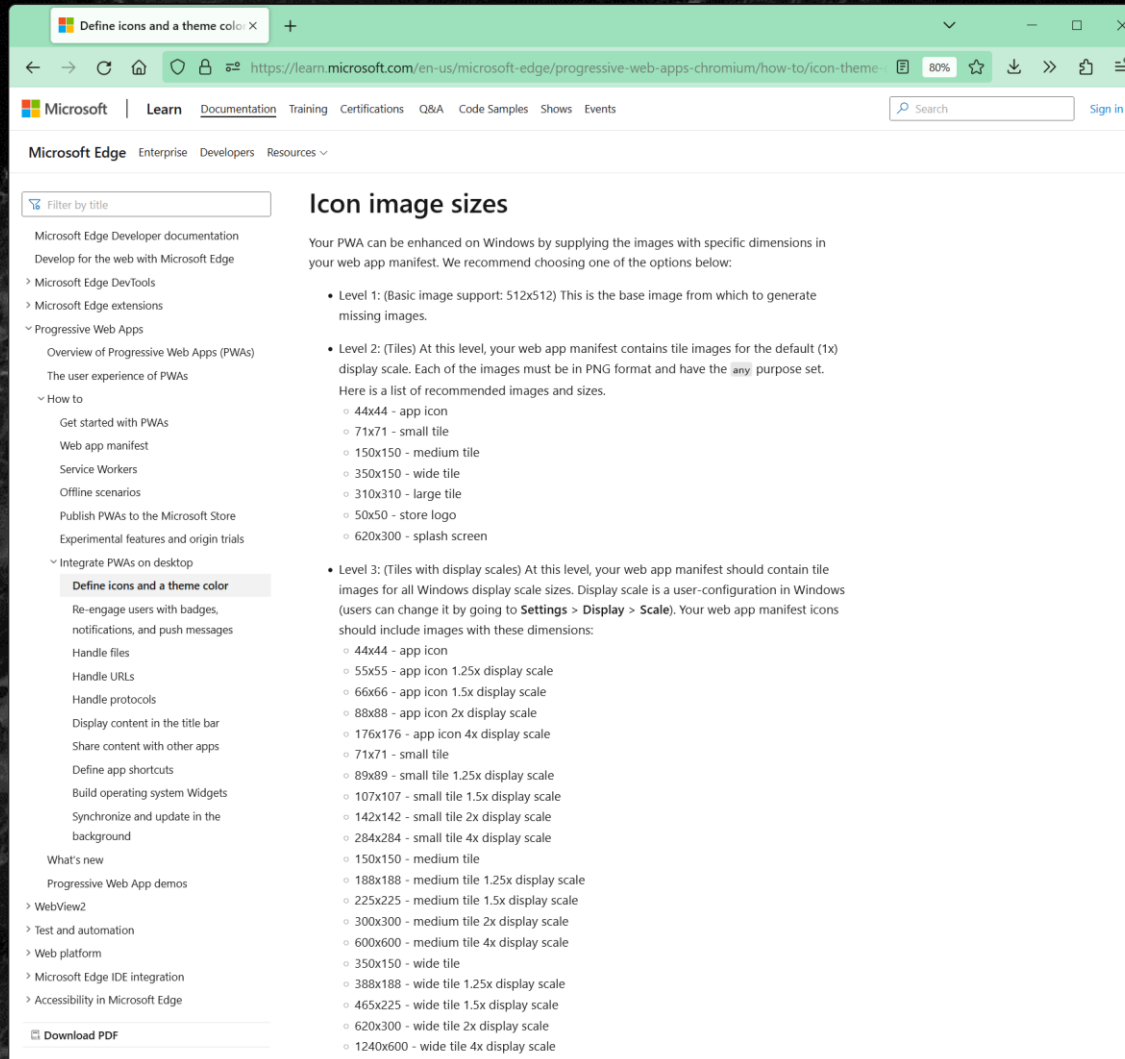


Ícônes



Soyez reconnaissable!
Connaissez les différents formats.

Ícônes



learn.microsoft.com/microsoft-edge/progressive-web-apps-chromium/how-to/icon-theme-color



Ícônes

PWABuilder

https://www.pwabuilder.com/imageGenerator

Docs Community

Image Generator

Quickly and easily create app icons for various platforms in the right size and format

Choose your base image

You should choose a 512x512 or larger square PNG image. This image will be used to generate all the images for your chosen platforms.

Choose File

Padding

0.3

0 is no padding, 1 is 100% of the source image. 0.3 is a typical value for most icons. For Windows 11 platform, this value is overridden on individual images based on UX guidelines.

Background Color

☐ Best guess

☒ Transparent

☐ Custom color

Platforms

Select the platforms to generate images for.

☒ Windows 11 ☒ Android ☒ iOS

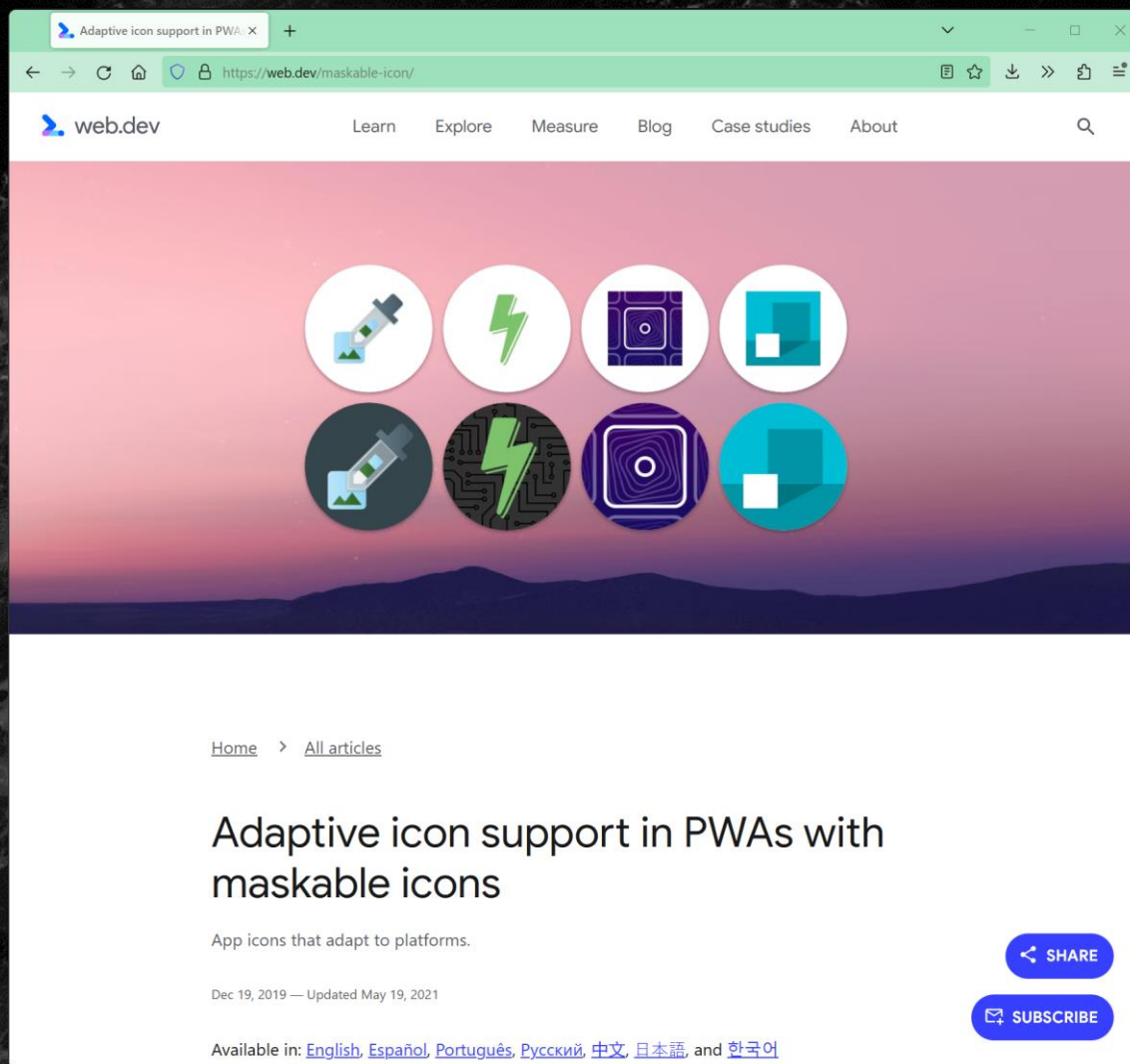
Generate

Want to chat? Join us on [Discord](#)

www.pwabuilder.com/imageGenerator



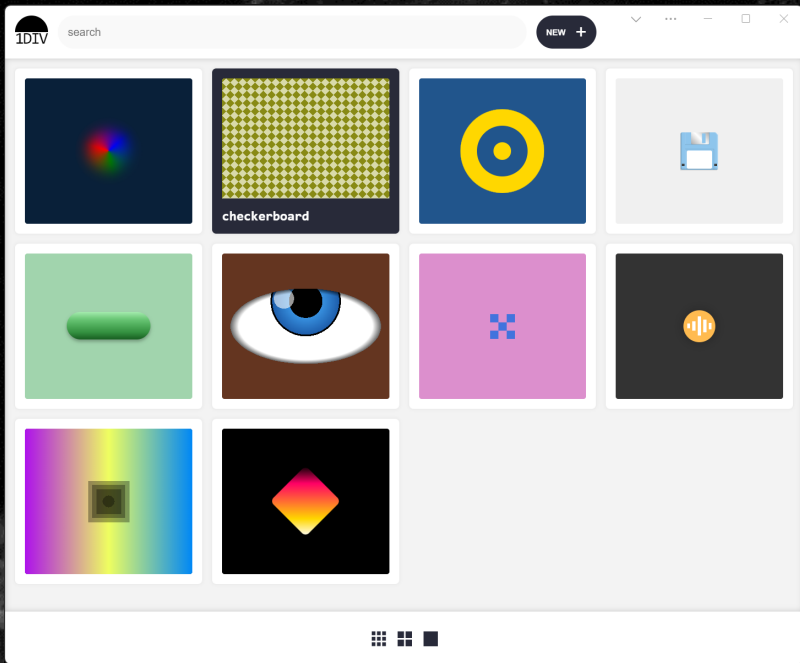
Ícônes



web.dev/maskable-icon/

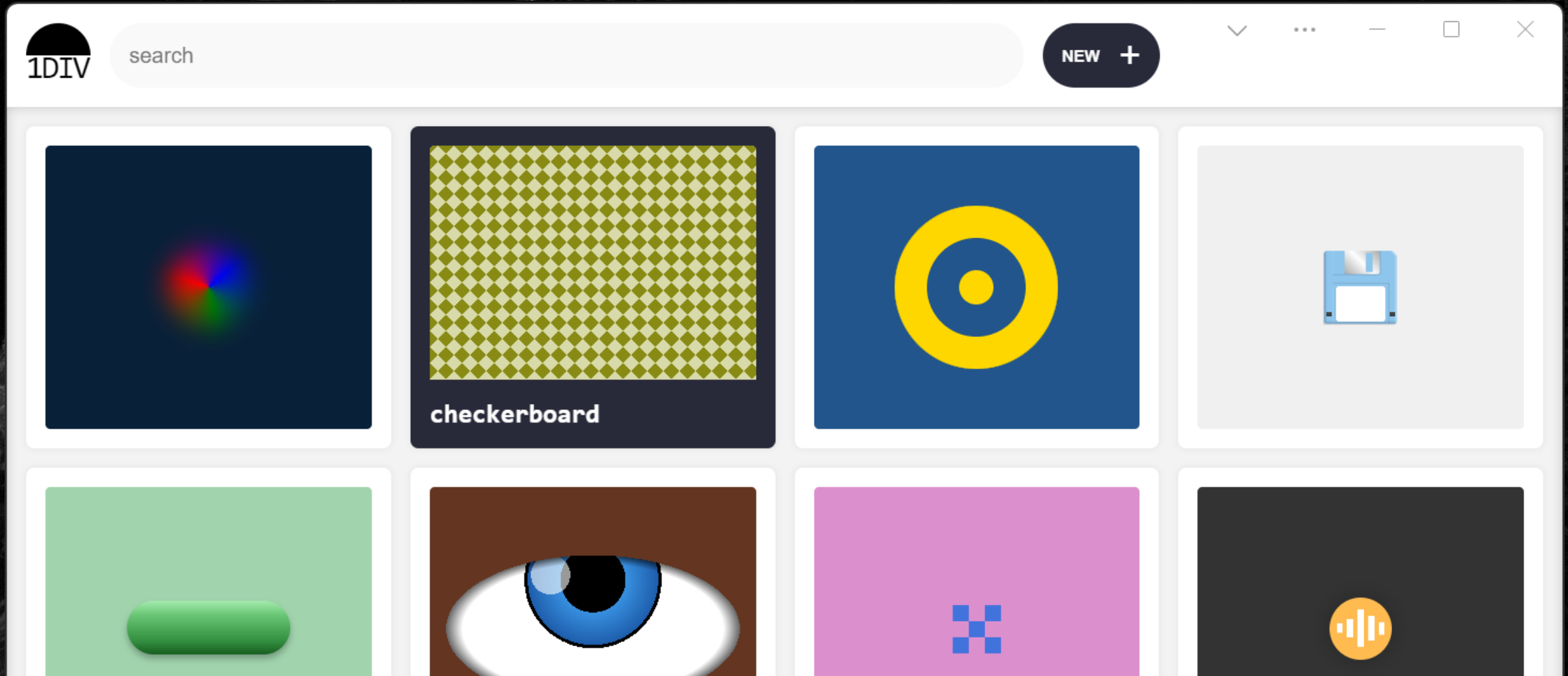


Fenêtre

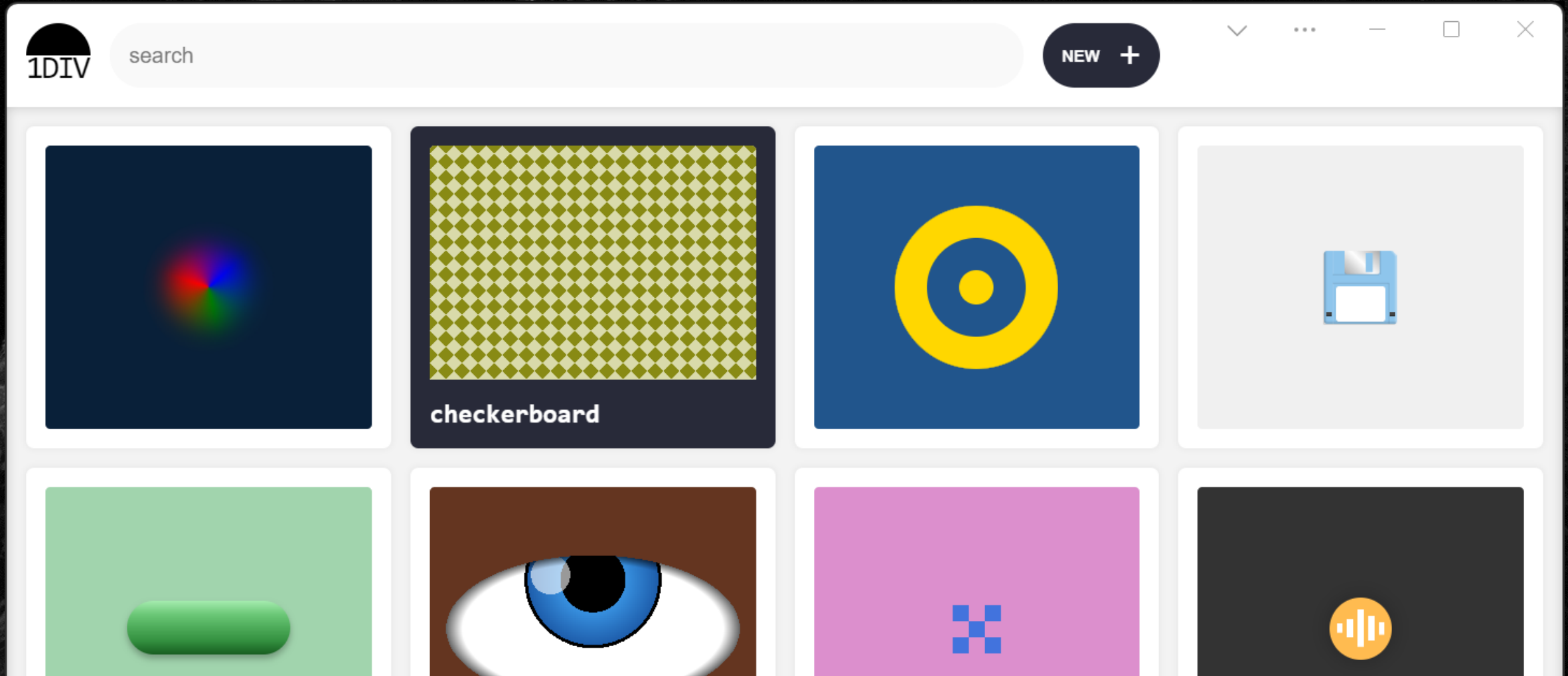


- Utiliser un mode de display: standalone
 - Customiser la barre de titre
 - Gérer les instances multiples

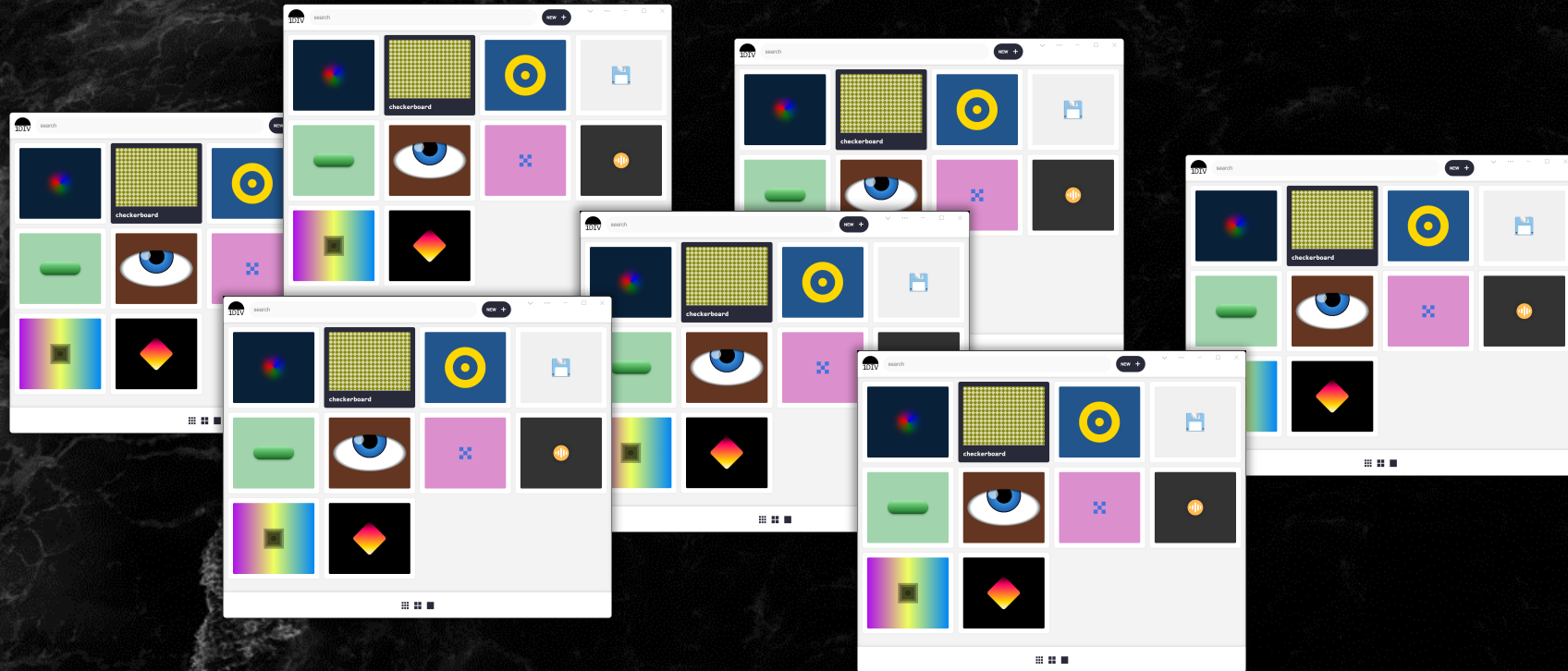
{ "display": "standalone" }




```
{ "display_override": ["window-controls-overlay"] }
```



Fenêtre(s)

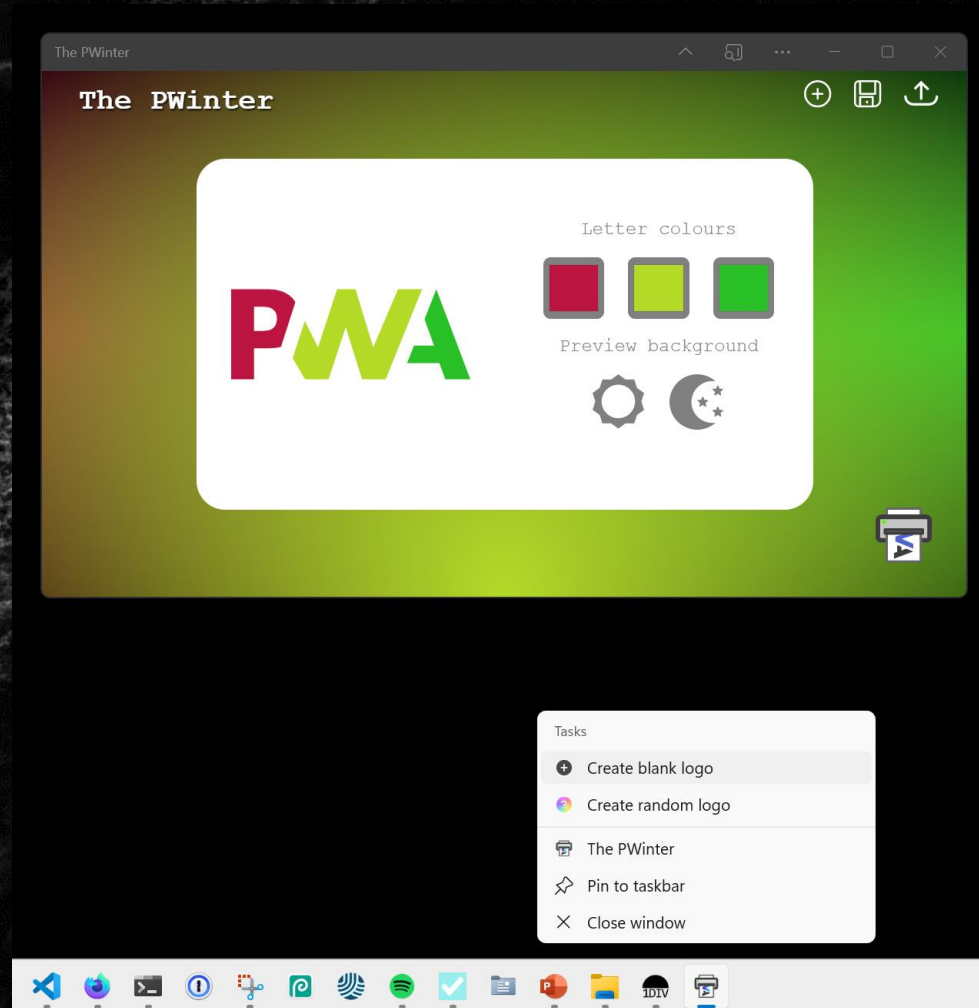


```
{ "launch_handler": { "client_mode": "navigate-existing" } }
```

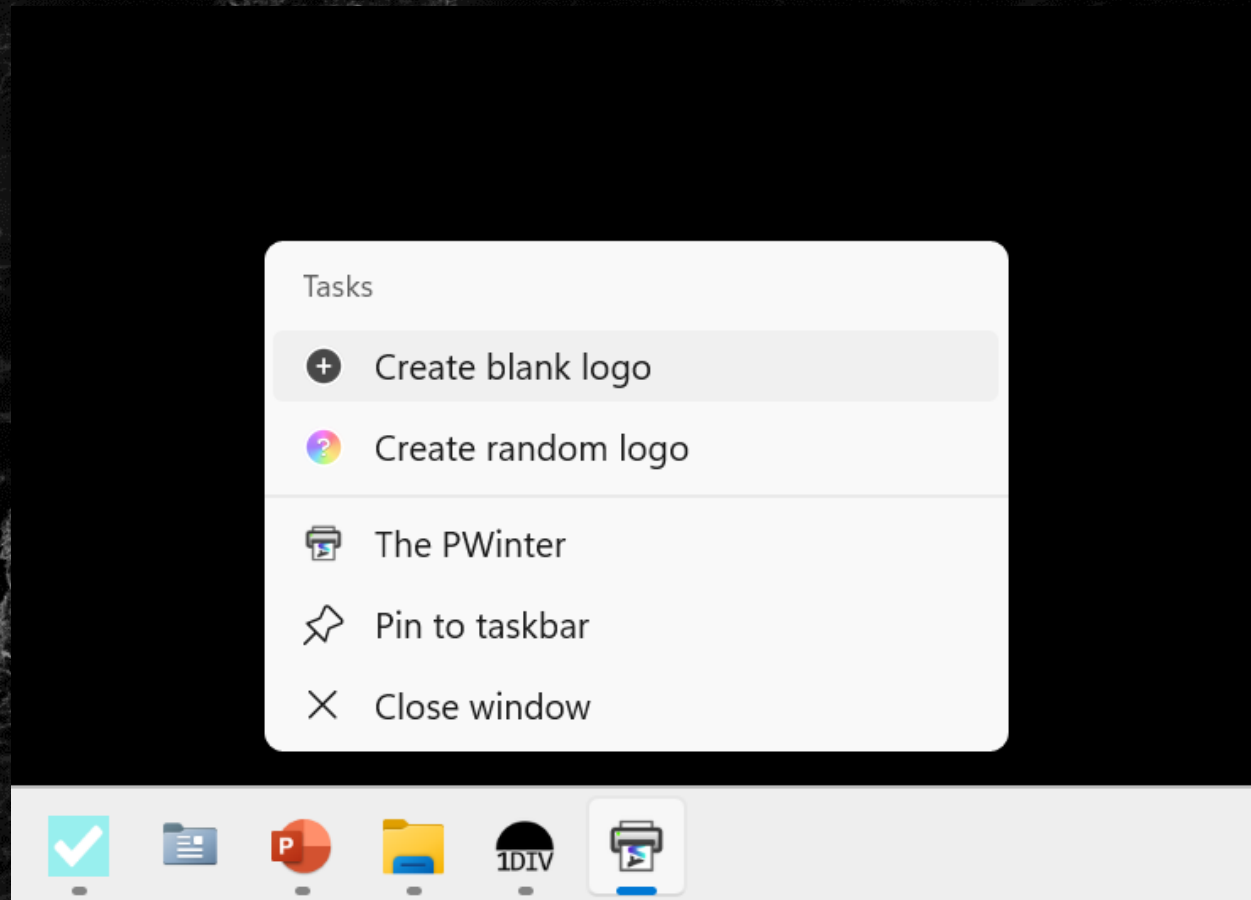

Intégration à l'OS

- Raccourcis
- Partage de données entre applis
 - Badges
 - Gestion de fichiers
- Gestion de liens et protocols
 - Widgets

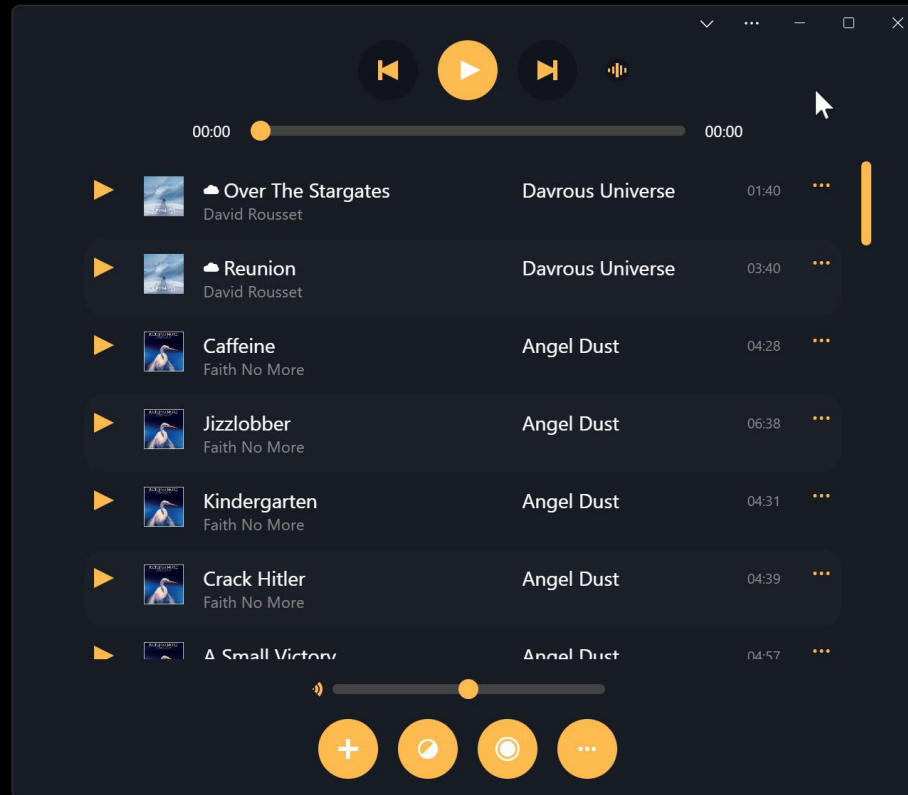
Intégration OS: Raccourcis



Intégration OS: Raccourcis

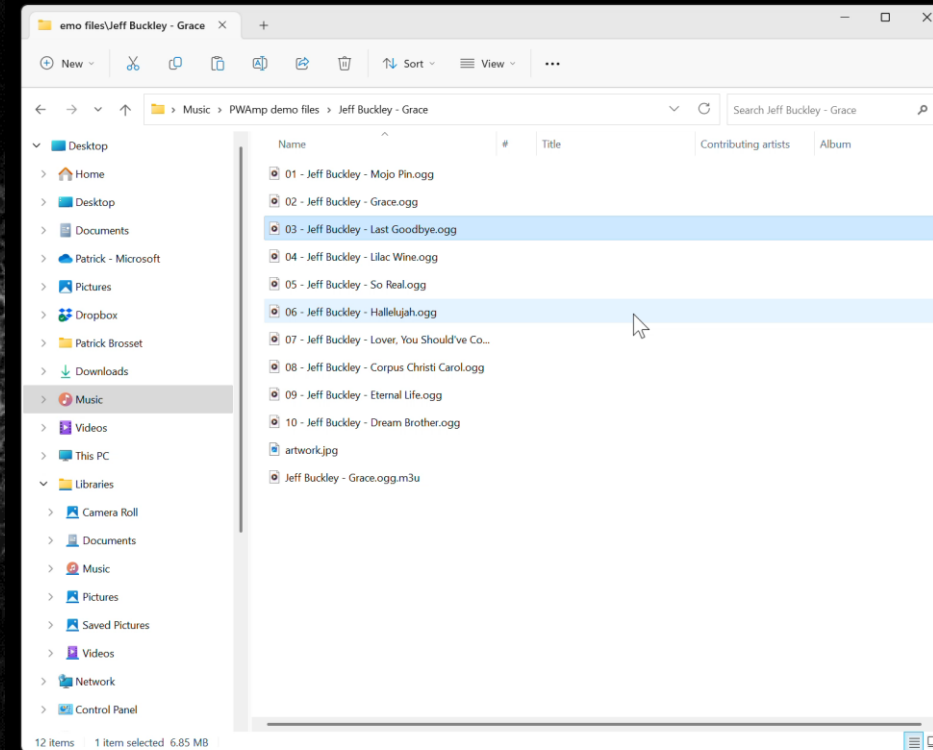


Intégration OS: Partage



```
navigator.share(data);
```


Intégration OS: Partage



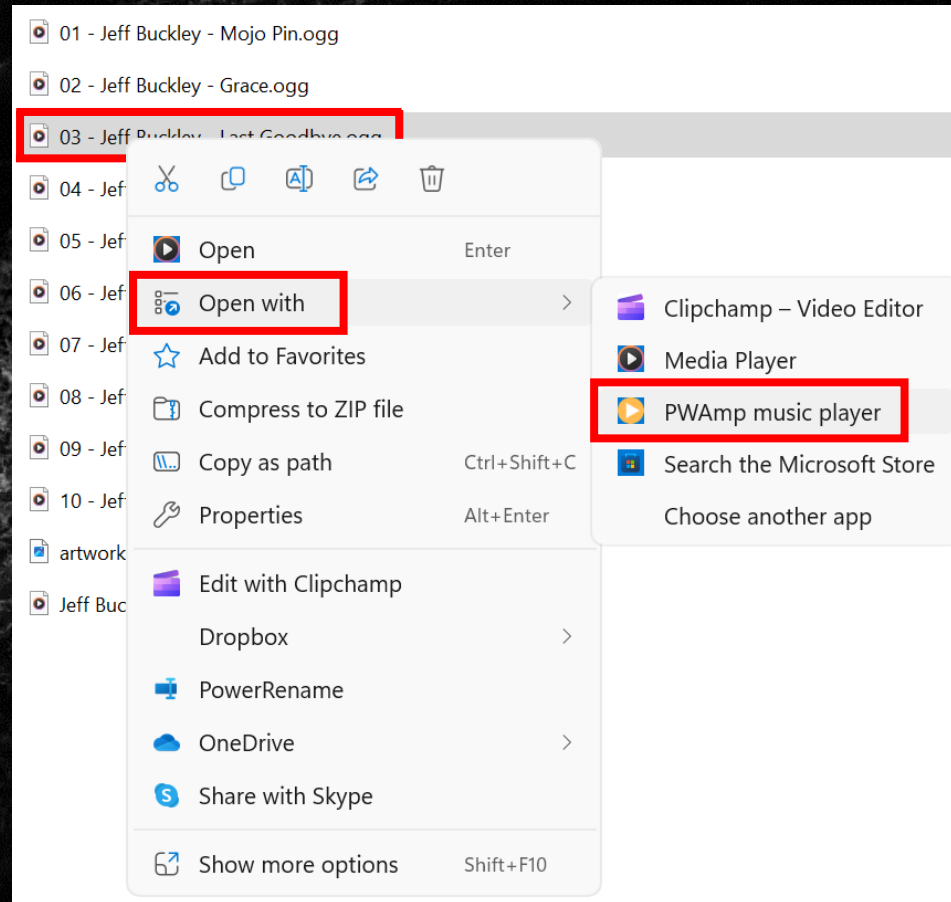
{ “share_target”: { action, method, params } }

Intégration OS: Badges



```
navigator.setAppBadge(2);  
navigator.clearAppBadge();
```


Intégration OS: Fichiers



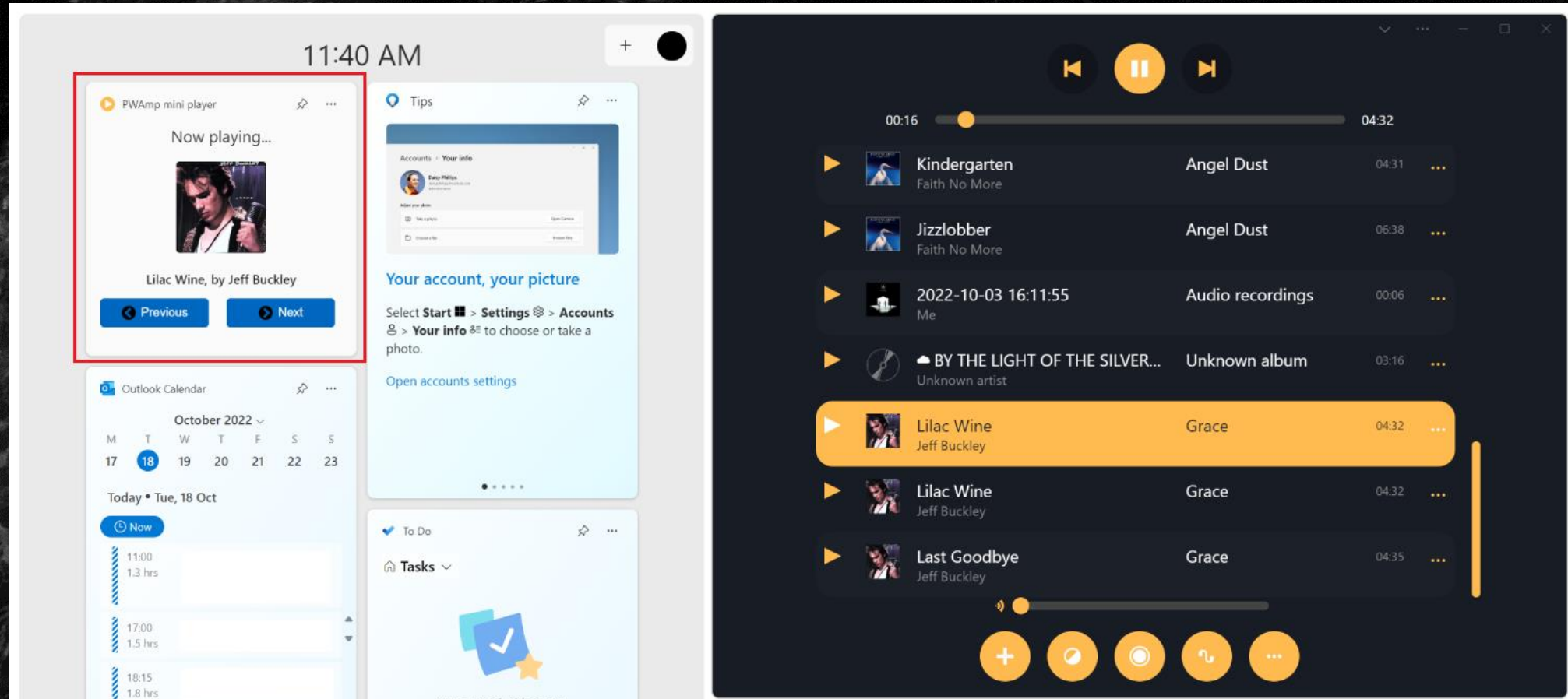
```
{ "file_handlers": [ { action, accept } ] }
```

Intégration OS: Liens et protocols



`scope_extensions, protocol_handlers`

Intégration OS: Widgets



Hors ligne

Fetch et Cache 

Hors ligne

4 niveaux de support:

1. Mise en cache des ressources statiques
2. Redirection vers une page offline dédiée
3. Possibilité d'utiliser les actions communes
4. Scénarios avancés: téléchargement de données

Stockage de données

- local/session storage
 - IndexedDB
 - Cache
 - File System Access
- **5MB** pour local/session.
- **60%** de l'espace disque pour le reste.
- **Ca persiste vraiment!**
- Et si il n'y a plus d'espace?

Fonctionnalités avancées

- Web Bluetooth
 - Web USB
 - Web NFC
- Clipboard API
- Contact Picker
- Canvas, WebGL
 - WebAudio
 - WebAuthn
- Payment Request
- WebAssembly



Fonctionnalités avancées

The screenshot displays the Wami workflow editor interface. On the left is a dark blue sidebar with the 'wami' logo and a '+ Create a flow' button. Below this, three workflow templates are listed: 'Resize to 1300px wide max' (1 step: resize width if larger than), 'Pixelate' (2 steps: scale, scale), and 'make a poster' (5 steps: crop, negate, posterize...). The 'Pixelate' workflow is currently selected and highlighted in light blue. The main workspace is divided into two panels. The left panel shows the 'Pixelate' workflow configuration, which includes a 'Scale' step with a 'ratio' input field set to '10'. A description below the step reads: 'Minify or magnify the image with pixel block averaging and pixel replication, respectively.' At the bottom of this panel is a '+ Add a step' button. The right panel shows the workflow's inputs, which are three image thumbnails labeled 'random-1.jpg' (995 x 561), 'random-2.jpg' (1113 x 1168), and 'random-3.jpg' (1350 x 493). Below the inputs are two buttons: 'Remove input' and 'Run flow'. At the bottom of the right panel is a row of four buttons: 'Download', 'Save', 'Use as input', and 'View images'.

wami

+ Create a flow

Resize to 1300px wide max
1 step: resize width if larger than

Pixelate
2 steps: scale, scale

make a poster
5 steps: crop, negate, posterize...

me
5 steps: crop, brightness/contr...

Pixelate
2 steps: scale, scale

Scale
ratio 10
Minify or magnify the image with pixel block averaging and pixel replication, respectively.

Scale
ratio 1000
Minify or magnify the image with pixel block averaging and pixel replication, respectively.

+ Add a step

random-1.jpg
995 x 561

random-2.jpg
1113 x 1168

random-3.jpg
1350 x 493

Remove input Run flow

Download Save Use as input View images

Look & feel d'une app

Quelques pistes:

- Evitez les headers et footers gigantesques.
 - Simplifiez la UI, enlevez du contenu.
 - Utilisez une font système.
 - Utilisez des boutons, pas des liens.
- Gérez les thèmes clair et sombre de l'OS.
- Adaptez votre UI suivant la taille de l'écran.
- Créez une UI qui répond immédiatement.

Et vous?

Quels sont vos besoins?



Twitter: [@patrickbrosset](https://twitter.com/patrickbrosset)

Mastodon: [@patrickbrosset@mas.to](https://mastodon.social/@patrickbrosset)

Web: <https://patrickbrosset.com>

Demos: <https://github.com/microsoftEdge/demos>



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