

Introduction to Codex

The Wikimedia design system

Roan Kattouw & Bárbara Martínez | Wikimedia Hackathon 2023



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tinyurl.com/codex23

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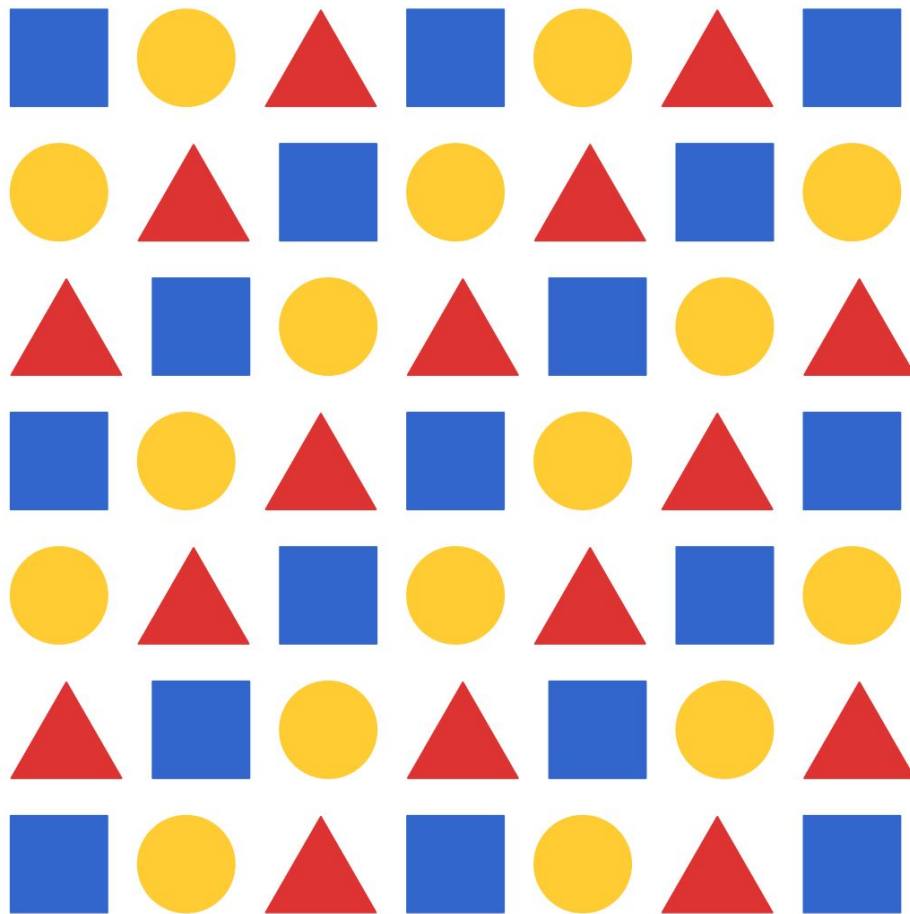
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Introduction to Codex

What is a design system?

A design system is a collection of reusable parts and recommendations that ensure consistent and cohesive designs and user experiences across different product and platforms.



Benefits of using systems



Reduce frustration

More consistency so less user frustration



Decide faster

Premade decisions let users act quickly



Focus on solving complex problems

Users focused on solving complex problems



Scalability and flexibility

Adapted to different abilities, languages, and cultures



Learn only once

Users need to learn only once

Introduction to Codex

What is Codex?

- Codex is the new **design system** for Wikimedia
- Codex is intended to eventually replace other design systems and libraries (e.g. OOUI, jquery.ui)
- Codex is managed by the Design Systems Team and collaboratively developed

Elements of Codex



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Design tokens

[Design tokens](#) are the smallest stylistic pieces of our design system.

We use tokens:

- To ensure consistency across interfaces
- To ensure that only systematic decisions are used to style components and patterns
- To improve the communication between designers and developers



Progressive

color-progressive
color-blue600



Progressive Hover

color-progressive--hover
color-blue500



Progressive Active

color-progressive--active
color-blue700



Progressive Focus

color-progressive--focus
color-blue600



Destructive

color-destructive
color-red600



Destructive Hover

color-destructive--hover
color-red500



Destructive Active

color-destructive--active
color-red700



Destructive Focus

color-destructive--focus
color-red600



Error

color-error
color-red600



Warning

color-warning
color-yellow600



Success

color-success
color-green700



Notice

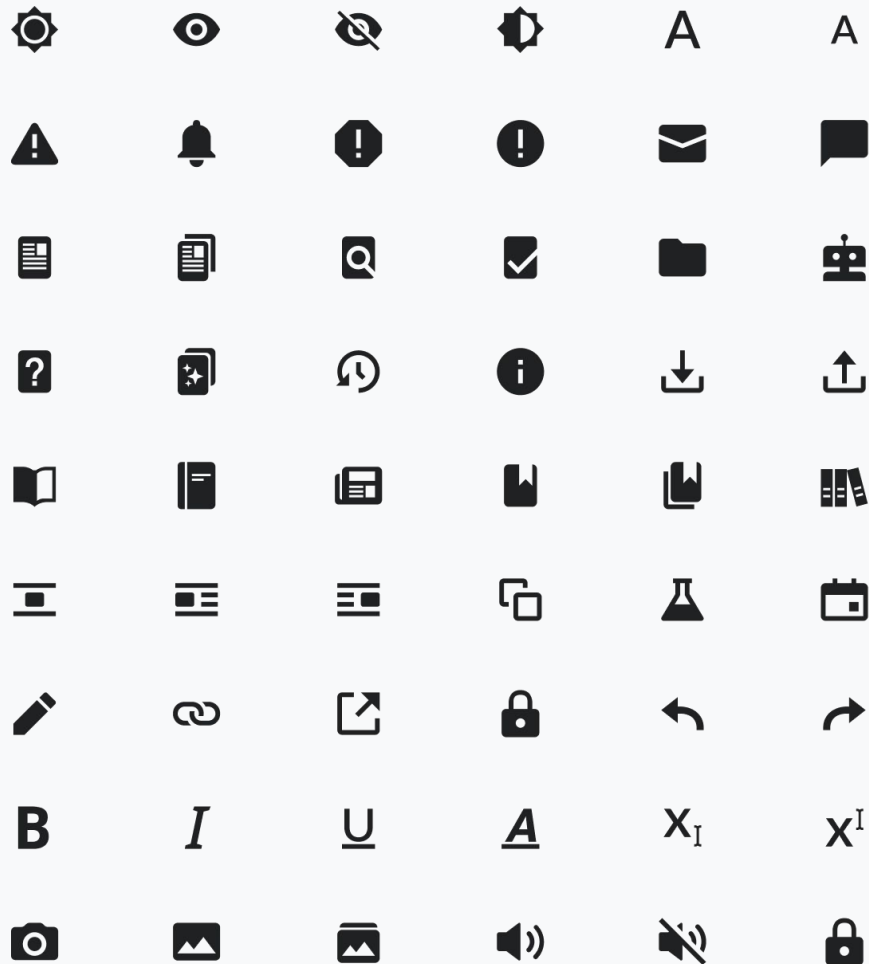
color-notice
color-gray700

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Assets (icons)

[Icons](#) are UI elements (assets) with strong visual meaning, used to reinforce the recognition of text or actions.

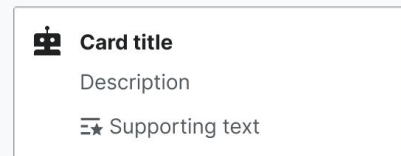
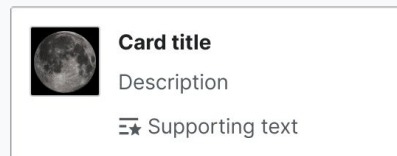
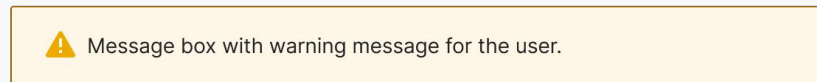
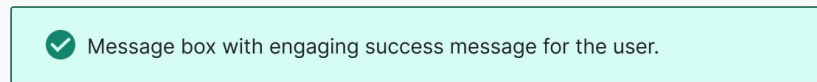
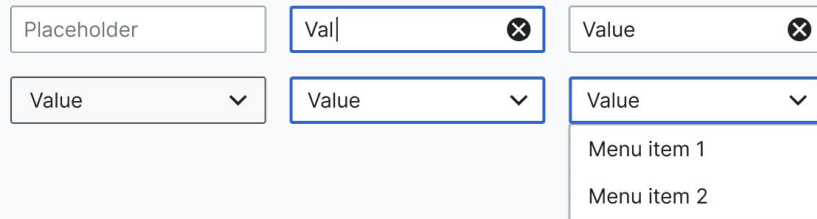
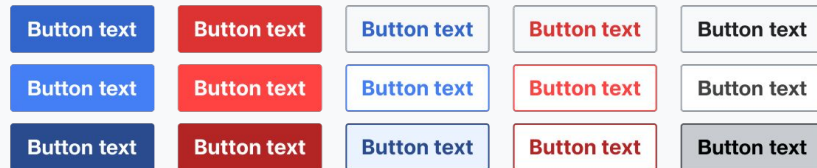
- 237 monochrome (single-color) icons
- Variants for left-to-right/right-to-left languages (LTR / RTL)
- And language/culture specific variants



Components

[Components](#) are the interactive building blocks of our design system, used to create consistent and powerful user interfaces.

- Codex components built with [Vue 3](#)
- Some of them are also available in a CSS-only version
- Each component in Codex has an interactive demo page



Codex is available in



Design

We maintain different Figma libraries for designers: Design Tokens (styles), Assets (icons, illustrations and logos) and Codex (components).

[Figma libraries](#)



Code

Developers can find all design tokens, icons and components in the Code demo site.

[Codex demo](#)

Figma demo



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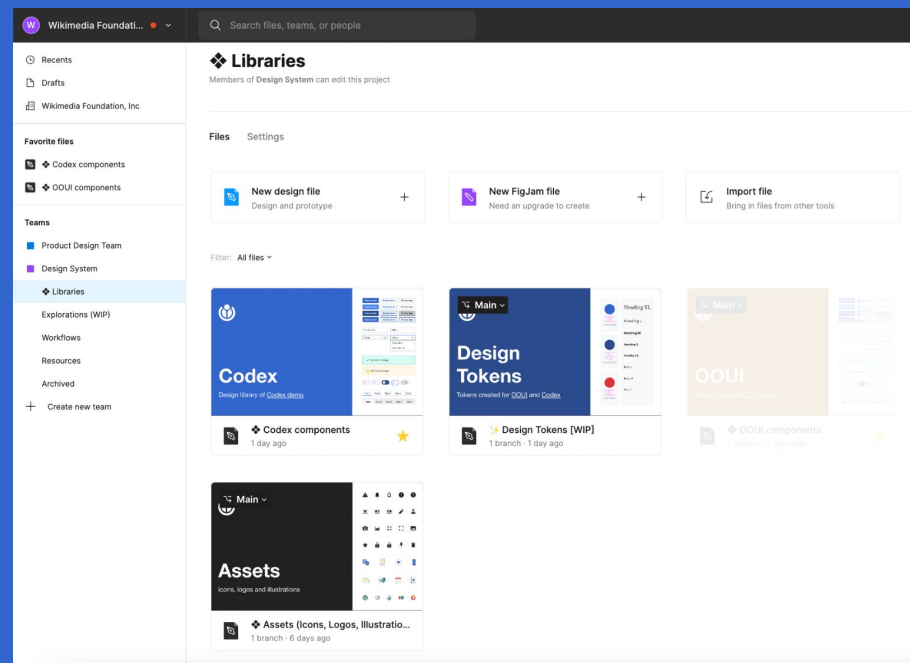
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Figma libraries

We maintain the following Figma libraries:

- Design Tokens library
- Assets library
- Codex components library

[Check our Figma libraries](#)



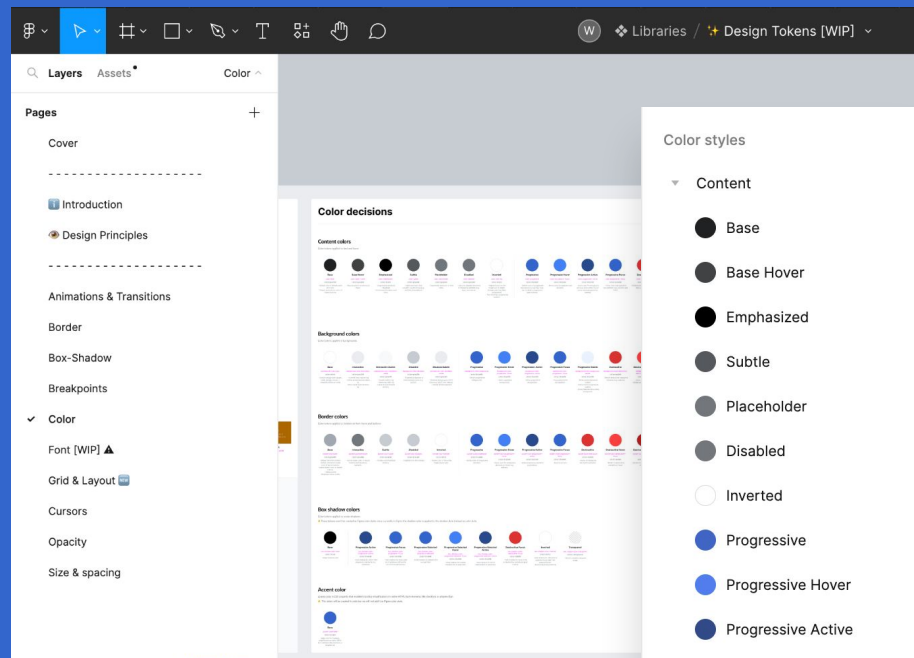
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Design Tokens library

The library where the Design Tokens are documented and translated into Figma styles. It matches with the Design Tokens demo.

These styles/tokens are reused in all our design projects.

[Check the Design Tokens library](#)



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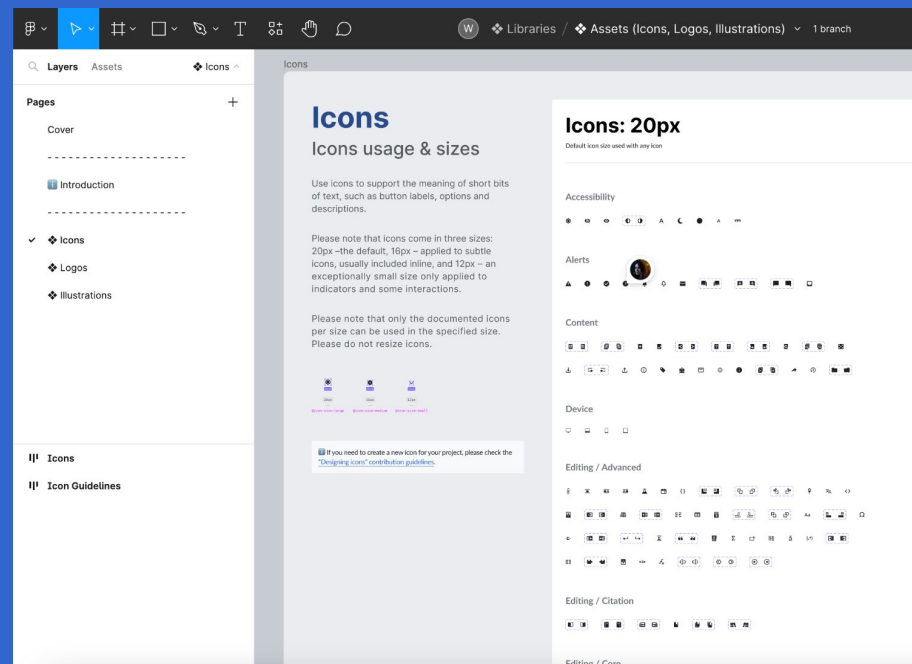
Assets library

This is the library where we maintain the assets for:

- Icons
- Illustrations
- Logos

This assets are reused in all our design projects.

[Check the Assets library](#)

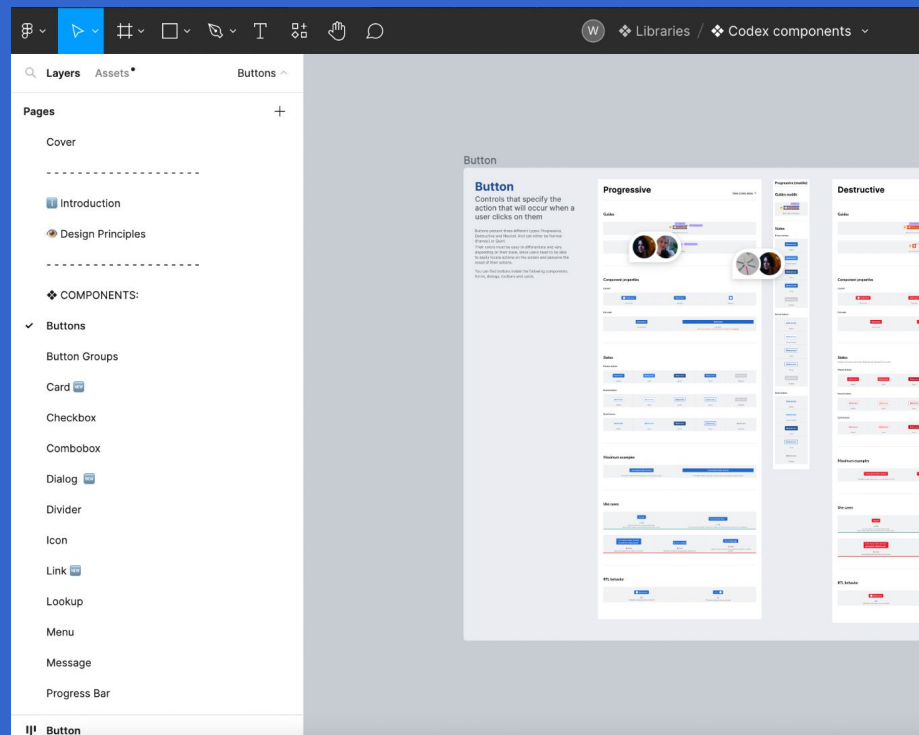


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Codex components library

It's the library where Codex component's are created in Figma. This library is used by designers working for projects that will be developed with Codex.

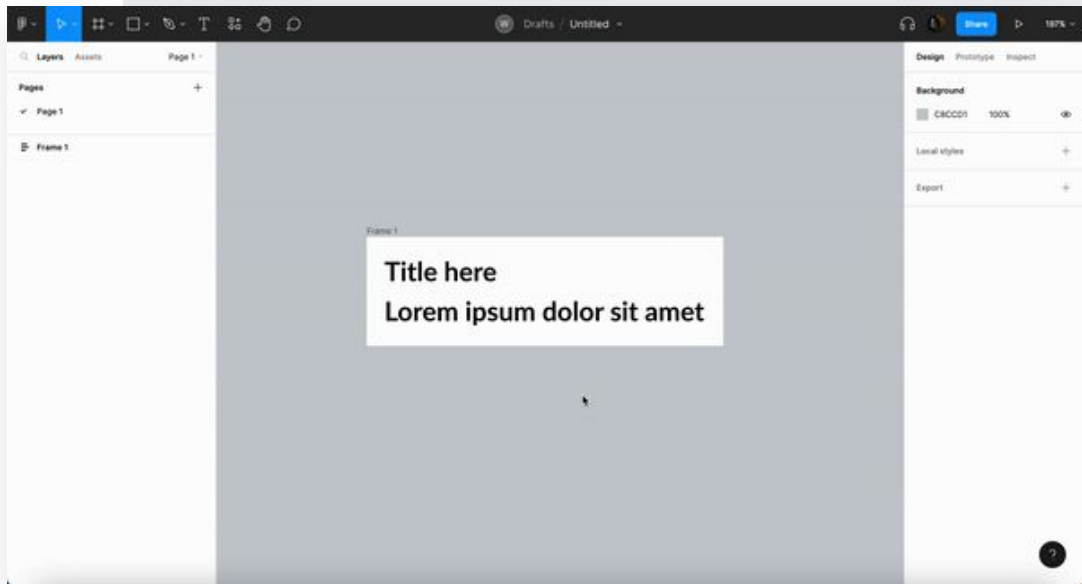
[Check the Codex Figma library](#)



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How designers work with Figma

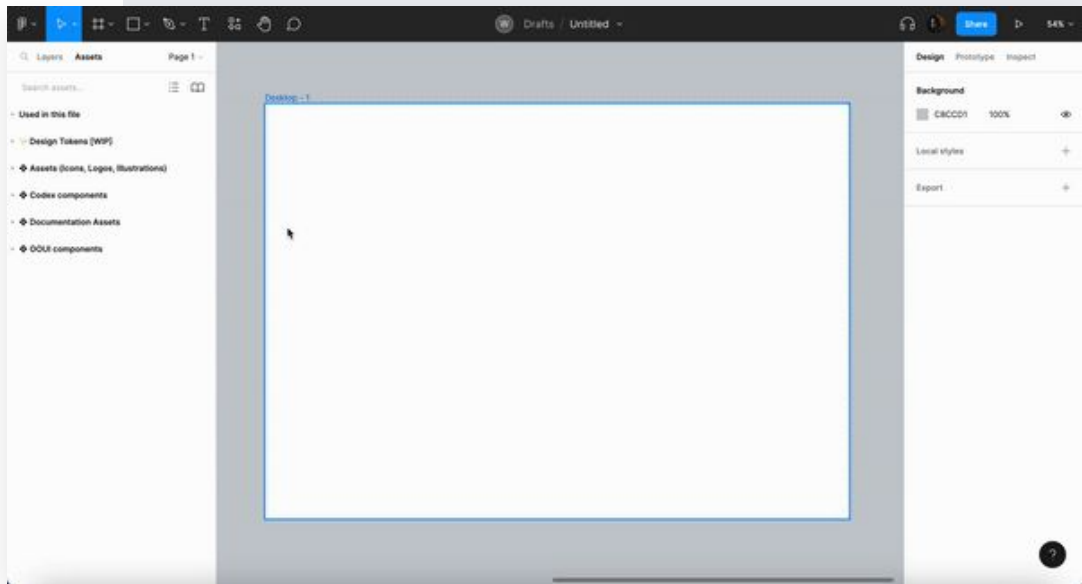
Designers enable the Figma libraries in their projects so they can use the different styles (tokens) and assets.



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How designers work with Figma

Designers can also use the components from the Codex library by dragging and dropping them onto their artboard, then resize or customize them as needed.



How to use Codex in your code



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Vue.js

- To use Codex you have to use **Vue.js**
- Vue.js has good documentation:
<https://vuejs.org/guide>
- Documentation on using Vue.js in
MediaWiki:
<https://www.mediawiki.org/wiki/Vue.js>

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In MediaWiki vs not in MediaWiki

- Codex usage is **different** in MediaWiki than in other environments
- Examples from the documentation **do not work** in MediaWiki directly
- For more info see <https://www.mediawiki.org/wiki/Codex>

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Using design tokens

See also:

- [Codex design tokens docs and demos](#)
- [Using design tokens in MediaWiki](#)

```
@import '@wikimedia/codex-design-tokens/theme-wikimedia-ui.less';  
// In MediaWiki: @import 'mediawiki.skin.variables.less';  
  
.my-thing {  
  color: @color-destructive;  
  box-shadow: @box-shadow-drop-small;  
  
  &:hover {  
    color: @color-destructive--hover;  
  }  
}
```

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Using Vue.js components

Refer to:

- [Codex component demos](#)
- [Using Vue components in MediaWiki](#)



Save changes

```
<cdx-button action="progressive" @click="save">  
  Save changes  
</cdx-button>
```

Using CSS-only components

Refer to:

- [Codex component demos](#) (See the “CSS-only version” section on each page)
- [Using CSS-only components in MediaWiki](#)

Button label

```
// Get an OutputPage object
$out = $this->getOutput();
// Output the HTML
$out->addHTML(
    '<button class="cdx-button
    cdx-button--action-progressive
    cdx-button--weight-primary">' .
    $this->msg( 'message-for-button-label'
    )->escaped() .
    '</button>'
);
// Load the codex-styles module
$out->addModuleStyles( 'codex-styles' );
```



Using CSS-only icons

Refer to:

- [Icon component demo](#)
- [List of all icons](#)
- [Using CSS-only icons in MediaWiki](#)

```
@import 'mediawiki.skin.variables.less';

.mw-special-foo {
  /* ... other styles ... */

  &--icon-tag {
    .cdx-mixin-css-icon( @cdx-icon-tag );
  }
}
```

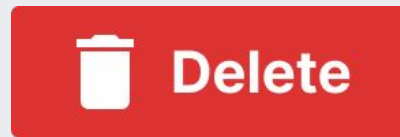
```
<span class="mw-special-foo--icon-tag"></span>
```


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Using Vue.js icons

Refer to:

- [Icon component demo](#)
- [List of all icons](#)
- [Using Vue icons in MediaWiki](#)



```
<cdx-button weight="primary" action="destructive">  
  <cdx-icon :icon="cdxIconTrash"></cdx-icon>  
  Delete  
</cdx-button>
```

When you should use Codex



Codex is good for:

- Client-side user interfaces (JavaScript only)
- Server-side user interfaces (HTML+CSS only, no JS)
- All of your styles! Use design tokens when you can



Codex is not *(yet)* good for:

- Hybrid server/client-side interfaces (HTML+CSS enhanced with JS)
- Things that appear on every page view
- But you can still use design tokens for these things

Introduction to Codex

Ask us for help!



Resources: [T333611](#)

Roan, Bárbara, and **Julia** are around all weekend to help and answer questions.

Send us an email or ping us in the Telegram channel.

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