

Windows UI Library

Windows UI Library (**WinUI** codenamed "Jupiter",^{[5][6]} and also known as **UWP XAML** and **WinRT XAML**) is a user interface API that is part of the Windows Runtime programming model that forms the backbone of Universal Windows Platform apps (formerly known as *Metro-style* or *Immersive*) for the Windows 8, Windows 8.1, Windows 10 and Windows Phone 8.1 operating systems. It enables declaring user interfaces using Extensible Application Markup Language (XAML) technology.

WinUI is one of the multiple UI frameworks provided built-in for the Windows Runtime; the others being HTML5 (e.g., via WinJS) and DirectX.

WinUI 2 is an extension library for UWP XAML containing controls and styling that match the Windows 11 design language. It is shipped through NuGet and is distinct from the UWP XAML framework, which provides the actual rendering engine; though, they may be treated as synonyms.

WinUI 3 decouples WinRT XAML from the operating system as a separate package to be updated quickly and make new features work on older versions of Windows.^[7] It is part of Windows App SDK (codenamed "Project Reunion"), a Microsoft effort to reconcile the Windows desktop (Win32) and the UWP low IL app model.

Windows Phone

Up to Windows Phone 8.0 WinRT XAML was not supported and XAML applications were based on Silverlight XAML and deployed in XAP format.

In Windows Phone 8.1 WinRT XAML is available along with improved Windows Runtime support. This convergence between platforms enable Universal apps that can target both Windows 8.1 and Windows Phone 8.1 while sharing most of the code, including user interface. The Windows Phone 8.1 is still capable of running Silverlight XAML apps and new features and API were also added to this too (called Silverlight 8.1^[8])

WinUI 3



Other names	Windows UI Library, WinUI, UWP XAML, WinRT XAML, Microsoft.UI.Xaml, Windows.UI.Xaml
Developer	Microsoft
Release	September 2011
Stable release	1.8.4 ^[1] / January 13, 2026
Preview release	2.0-experimental4 ^[2] / January 13, 2026
Written in	C++, C#
Operating system	Microsoft Windows ^[3]
Platform	Intel x86 32-bit, x86-64 and ARM
Type	Application framework
License	MIT License after 2018-12-04; ^[4] Freeware before
Website	aka.ms/windev (https://aka.ms/windev) 
Repository	github.com/microsoft/microsoft-ui-xaml (https://github.com/microsoft/microsoft-ui-xaml)

Related technologies

WinUI is related to [Windows Presentation Foundation \(WPF\)](#) and [Silverlight \(WPF/E\)](#)—similar XAML-based UI frameworks used for desktop applications and portable applications respectively. WinUI uses a lot of the same names for its APIs as both of these older technologies—especially Silverlight, but its use is limited to the Windows (specifically Windows 8 and later) as with WPF. The major difference is that WPF and Silverlight are written in [C#](#) and require using [.NET languages](#) such as [C#](#) or [Visual Basic](#), while WinRT XAML is part of the Windows Runtime, written in [C++](#) and available to [native code](#), and has tools for development, with [C++/CX](#) or [C++/WinRT](#).


See also

- [.NET Multi-platform App UI \(.NET MAUI\)](#)
- [Windows Template Studio \(WinTS\)](#)
- [Uno Platform](#)
- [OpenSilver](#)

References

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External links

- [Official website \(https://aka.ms/windev\)](https://aka.ms/windev) 
 - [WinUI \(https://learn.microsoft.com/en-us/windows/apps/winui/\)](https://learn.microsoft.com/en-us/windows/apps/winui/) on [Microsoft Learn](#)
 - [microsoft-ui-xaml \(https://github.com/microsoft/microsoft-ui-xaml\)](https://github.com/microsoft/microsoft-ui-xaml) on [GitHub](#)
 - [WinUI-Gallery \(https://github.com/microsoft/WinUI-Gallery\)](https://github.com/microsoft/WinUI-Gallery) on [GitHub](#)
 - [Windows.UI.Xaml namespace documentation \(https://learn.microsoft.com/en-us/uwp/api/windows.ui.xaml\)](https://learn.microsoft.com/en-us/uwp/api/windows.ui.xaml) on [Microsoft Learn](#)
 - [XAML presentations \(https://learn.microsoft.com/en-us/shows/build-build2011/?languages=xaml\)](https://learn.microsoft.com/en-us/shows/build-build2011/?languages=xaml) from 2011 [Microsoft Build conference](#) on [Microsoft Learn](#) (originally on [Channel 9](#))
 - [WinRTXamlToolkit \(https://github.com/xyzzzer/WinRTXamlToolkit\)](https://github.com/xyzzzer/WinRTXamlToolkit) on [GitHub](#)
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