Welcome to the Lightning game engine!

Lightning is an SDL-based 2D game engine that is designed to be small, effortlessly modular, and simultaneously powerful and easy to use for developers. Development began at the start of 2022, with the first release on August 31st, 2022. Many new features have been, are being, and will be added in the future.

The engine is designed to let you program the way you want (and not be overbearing on the developer, unlike certain other game engines) and uses ordinary Visual Studio as its IDE with many native integrations, and, unlike Unity, is powered by regular .NET; you can interface with any .NET language, use any .NET library, and use any Visual Studio, JetBrains, or similar extension; no hacks or workarounds required! It also uses and takes advantage of the latest version of .NET, .NET 6.0, and is designed to be crossplatform and compatible with NativeAOT when it releases in .NET 7.0. It is also designed to use the standard library of .NET when possible, and to have minimum external dependencies (currently, the only external dependencies are SDL, FreeType2, and the extremely well tested Newtonsoft.Json) in order to facilitate multi-platform support, although currently only Windows binaries are available.

**Feature requests are always welcome!**

Incompatibility Warning for Lightning Version 1.x Projects

Lightning projects targeted at version 1.1.x are not compatible in **any way** with Lightning version 2.0. **100% of API calls have changed**, even the **basic initialisation call**, and some of the basic facets of the engine’s design have already diverged from version 1.x, and there is a possibility more will diverge before the final release of version 2.0.

**There is no point porting your projects. They are incompatible.** If you are currently developing a project using Lightning 1.1.0, look out for the **1.1.4 patch**, which will fix many of the outstanding issues with the 1.1 series. Once this patch is released, **no non-security patches** will be released for version 1.x.

**Lightning 1.0.5** is the **final** 1.0.x version, and **no** support will be provided for version 1.0.x in **any capacity** after **October 29, 2022**.

Prerequisites for Running Lightning Games  
Windows 7 SP1, Windows 8.1, Windows 10 1607+, or any version of Windows 11  
.NET 6.0 Runtime installed

Prerequisites for Development  
Windows 7 SP1, Windows 8.1, Windows 10 1607+, or any version of Windows 11 (user-configurable)  
.NET **7**.0 SDK installed  
Visual Studio 2022 (17.**4**.0+)

Documents in this package  
**Welcome.docx:** This document  
**Quickstart.docx:** How to get up and go!  
**API.docx:** Documentation for the Lightning API  
**NetworkAPI.docx:**  **NEW!** Lightning Network API!  
**KnownIssues.docx:** Known issues and unimplemented functionality for this release  
**ReleaseNotes.docx:** Lightning release notes.  
**Support.docx:** How to get support when things go wrong  
**Examples.docx:** Descriptions of example applications that use Lightning.