# PlayCanvasSceneCreator

Version 1.0.8

Introduction

This tool export Unity scene and present in Playcanvas editor. Tool include two parts. First, in unity editor, tool export record and resource of scene into a folder. Second, after upload export files to Playcanvas editor, tool present scene by create entities and asset files.

We provide a document for querying currently supported components and properties, please see “{Release file}/Document/API/index.html”.

The unity plugin includes the original files from "https://github.com/prefrontalcortex/UnityGLTF" and modifies them to provide additional animation conversion. If your project already uses this package, conflicts may occur.

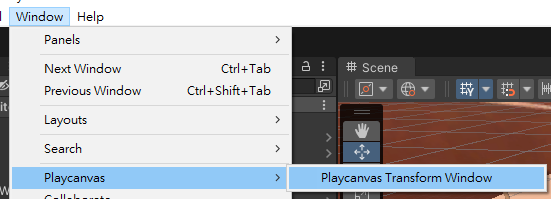
Recommended Unity version: 2021.3+, 2022.3+, 2023.3+

**Export**

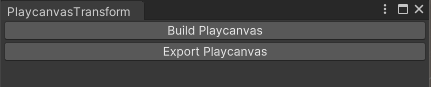
Unity export tool

Tool wrap unity scene into data(json)、resource(image、model…) and export files to a folder.

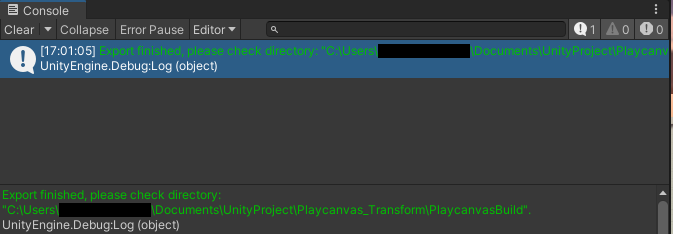
1. Import “PlayCanvasSceneCreator.unitypackage” into unity project.
2. Open the scene for export.
3. Open export tool. (Window -> Playcanvas -> Playcanvas Transform Window)



1. Click “Export Playcanvas”.



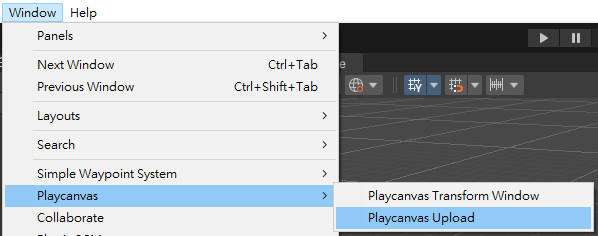
1. Under path “{Unity project's Parent folder}\PlaycanvasBuild\ExportAssets” will generate folder “ExportAssets” with resource files in it.



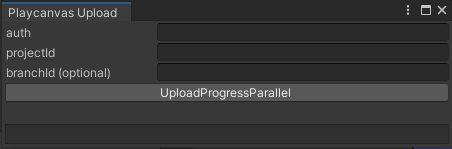
Unity upload tool

Tool wrap unity scene into data(json)、resource(image、model…) and export files to a folder.

1. Open upload tool. (Window -> Playcanvas -> Playcanvas Upload)

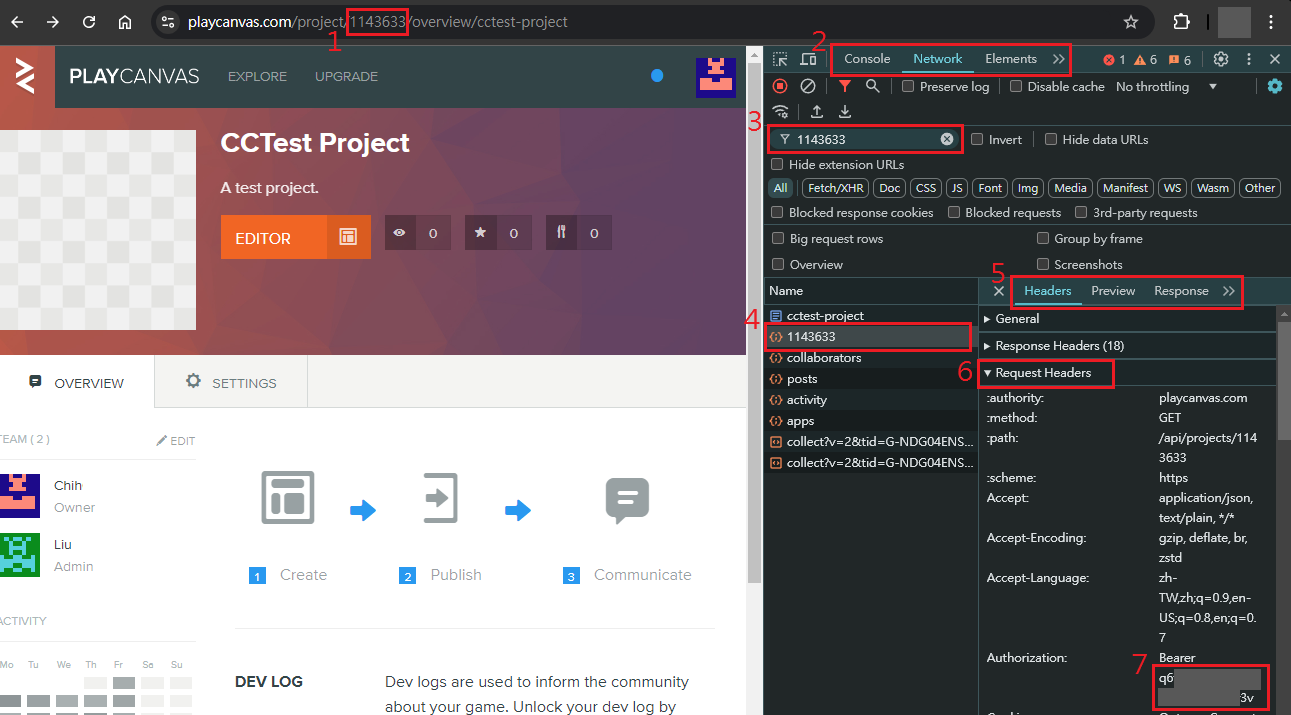


1. Input auth and project id (branch id is optional and default use master branch).
2. Click “UploadProgressParallel” and select folder. Bottom of window will show upload progress.

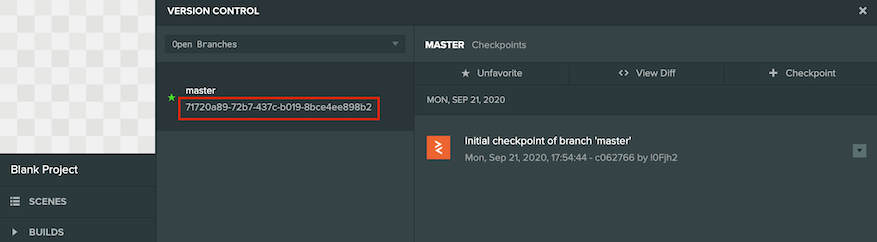


How to get “auth”, “project id” and “branch id”.

1. Open the project overview page. “project id” can be found in url.
2. Press “F12”(chrome) to open develop tool and select “Network” tab.
3. Filter with project id.
4. Found api name same as “project id”(if not, Press “F5” to reload web)
5. Select “Headers” tab.
6. Extend “Request Headers” field.
7. “auth” can be found in “authorization” field. Only need string after “Bearer”.



1. “branch id” can be found in the version control panel in playcanvas editor.



Browser extension

Get extension for Playcanvas plugin tool.

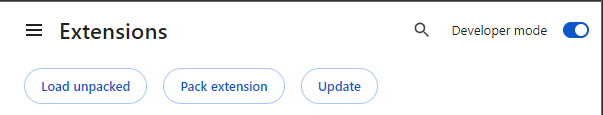
Here are two way to get plugin tool. Choose one and skip another. (important)

First way (chrome only, recommend):

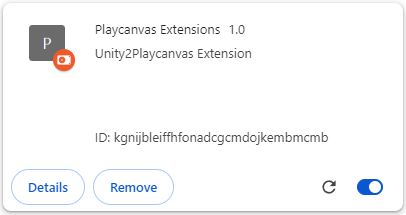
1. Open chrome browser and go to url: chrome://extensions/
2. Enable developer mode.



1. Load unpacked extension. (select folder ‘{Release file}/Extension’)

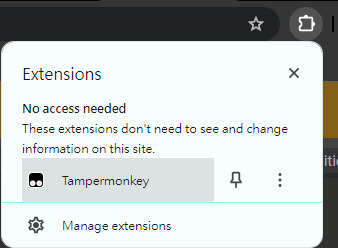


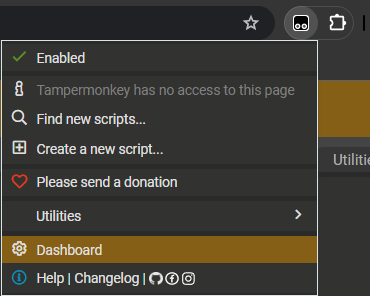
1. Extension will add in All Extensions list with remove and reload button.



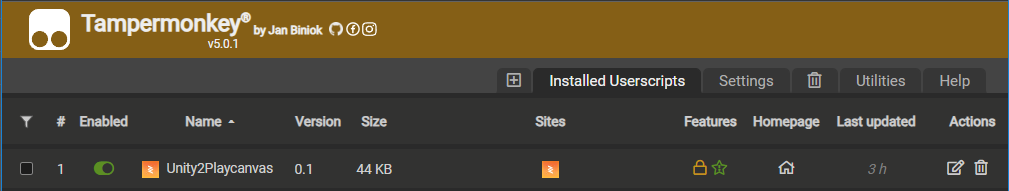
Second way:

1. Get extension Tampermonkey: <https://www.tampermonkey.net>
2. Open plugin dashboard. (example use chrome)





1. Drag “Release file}/Extension/Unity2Playcanvas.user.js”script into dashboard.

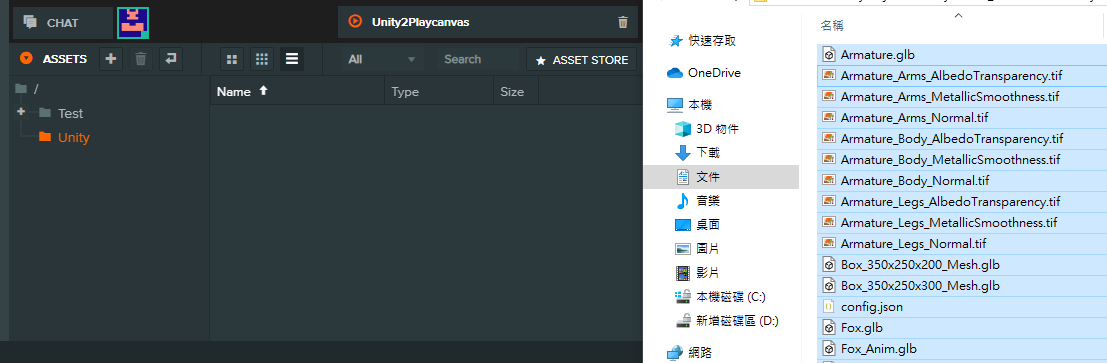


1. Refresh Playcanvas editor after add/update script. (delete old before update)
2. If you want to delete script, click trash can icon.

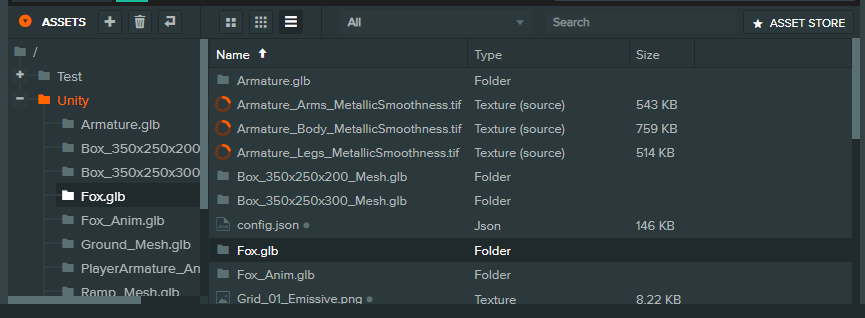
Playcanvas plugin

Plugin present unity scene in Playcanvas editor by creating asset(material、state graph) and entity. (If you use upload tool, skip step 1~3)

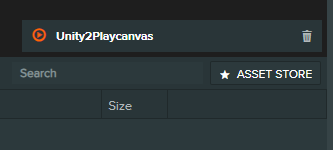
1. In playcanvas editor, create/select an empty folder under root of asset. (important)
2. Under path ‘{Unity project's Parent folder}\PlaycanvasBuild\ExportAssets’, select all files generated by unity tool then drag into the folder in Playcanvas editor.

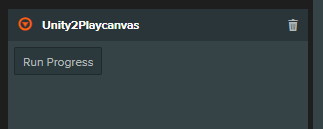


1. Wait for uploading.

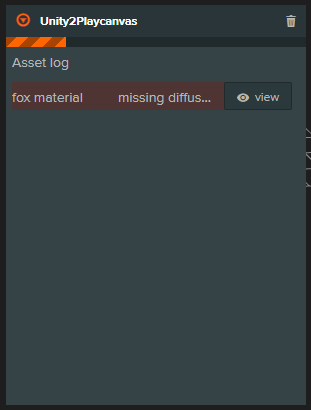


1. Click to open(hide) panel and “Run Progress”.

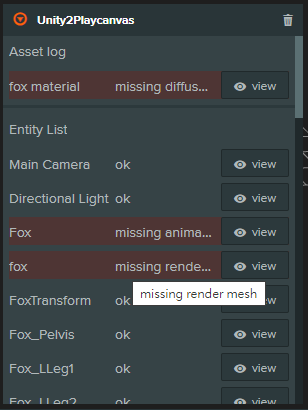




1. Wait for running.



1. Hover and check error message, click “view” to check problem entity or asset.



1. If you want to rerun the progress, scroll panel to bottom and click “clear created” and wait progress to delete all created entity and asset.



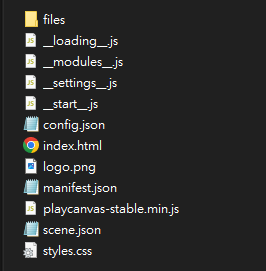
Log table

|  |  |
| --- | --- |
| log | description |
| has unsupport | has unsupported component in unity |
| missing diffuseMap(xxxMap) | material missing map texture file |
| missing render mesh | missing mesh file |
| missing material assets | missing material file |
| missing state graph | missing state graph data |
| missing animation | missing animation file |
| missing template | missing template data |
| missing sound | missing sound file |
| missing atlas | missing atlas texture file |
| missing sprite asset | missing sprite texture file |
| missing clips | missing sprite clips |
| missing element textureAsset (xxxAsset) | missing element asset texture file |
| missing element fontAsset | missing element font file |

**Build (beta feature)**

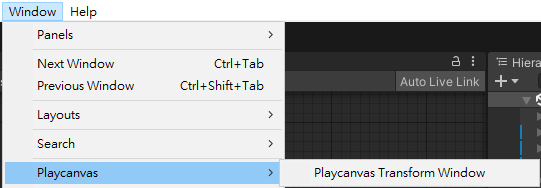
Introduction

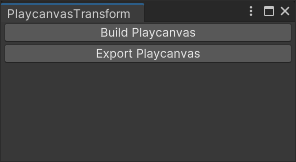
It includes a PlayCanvas execution template, so that it can quickly generate an output similar to PlayCanvas. You can use web services to run the result.

Step

1. Import ‘{Release file}/PlayCanvasSceneCreator.unitypackage’ into Unity project.
2. Open the scene you want to convert.
3. Place the objects you want to convert in the scene and ensure they are visible.
4. Click on Menu "Window/Plancanvas/Playcanvas Transform Window."
5. Click on "Build Playcanvas" If the message "Build finished, please check directory: '{Your Unity project's Parent folder}\PlaycanvasBuild'" appears, the build was successful.





Limitation

3D Animation:

1. To convert a 3D animation, it is necessary to attach an Animator component to the GameObject.
2. Playcanvas not support blend tree.

Shader:

The conversion is currently based on parameters defined by Unity's Standard shader, such as "\_BumpMap" "\_EmissionMap" "\_EmissionColor" etc. If you are using a custom shader, not all effects may be transferred.

2D Animation:

Playcanvas' default 2D animation supports sprites that are sliced from the same texture.

Font:

It use "LiberationSans SDF" for template that from TextMeshPro, on Build PlayCanvas it can only use the template font.

UI:

Can’t render double sided.

Unsupport unity asset (font, image).

Layout (auto layout size/position) work different between unity and playcanvas.

Layout Group:

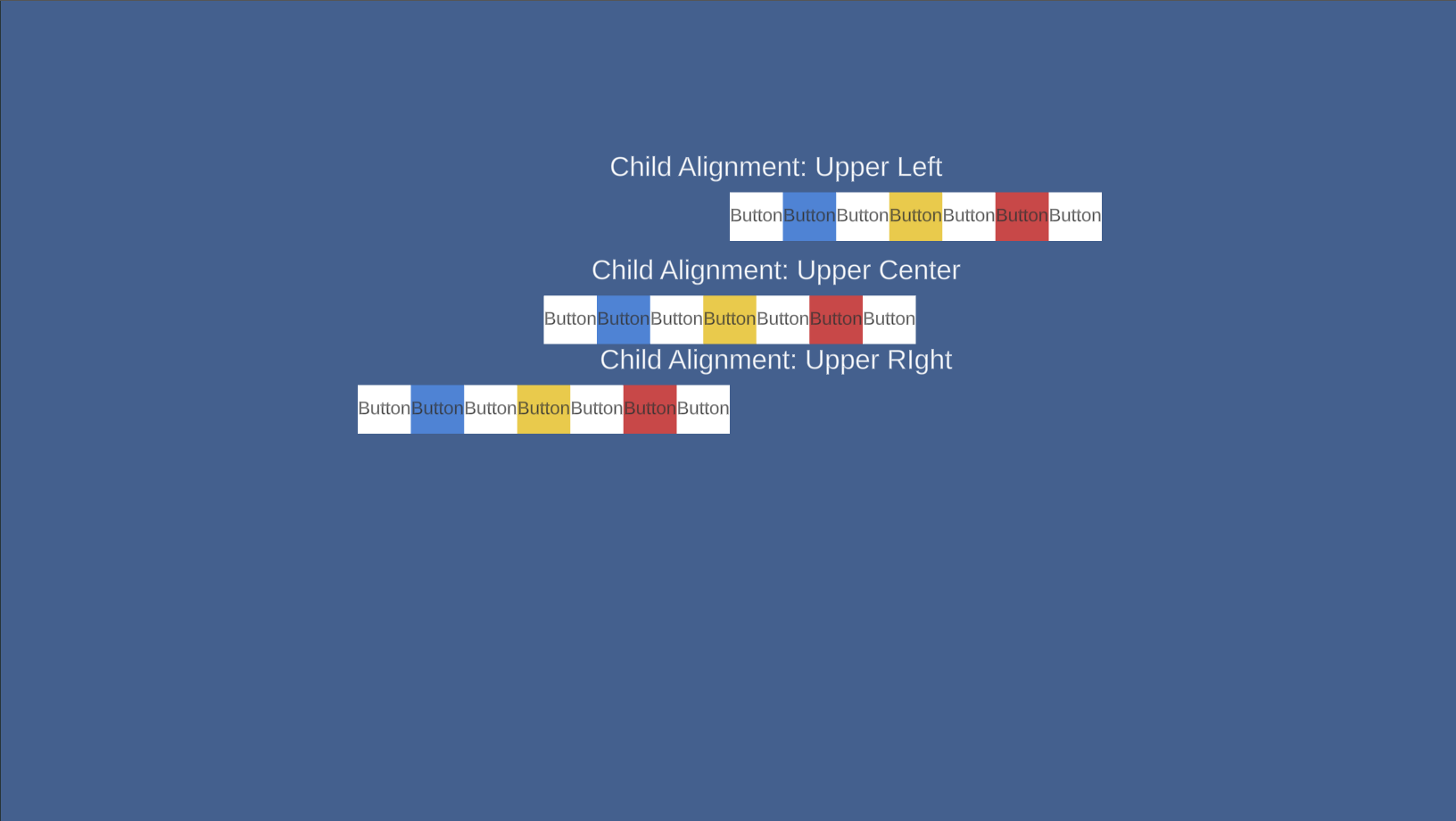
The implementation of the engines on both sides is different, so the results look inconsistent.

Adjusting child alignment when width or height is insufficient will not change in Unity.

Unity:



PlayCanvas:

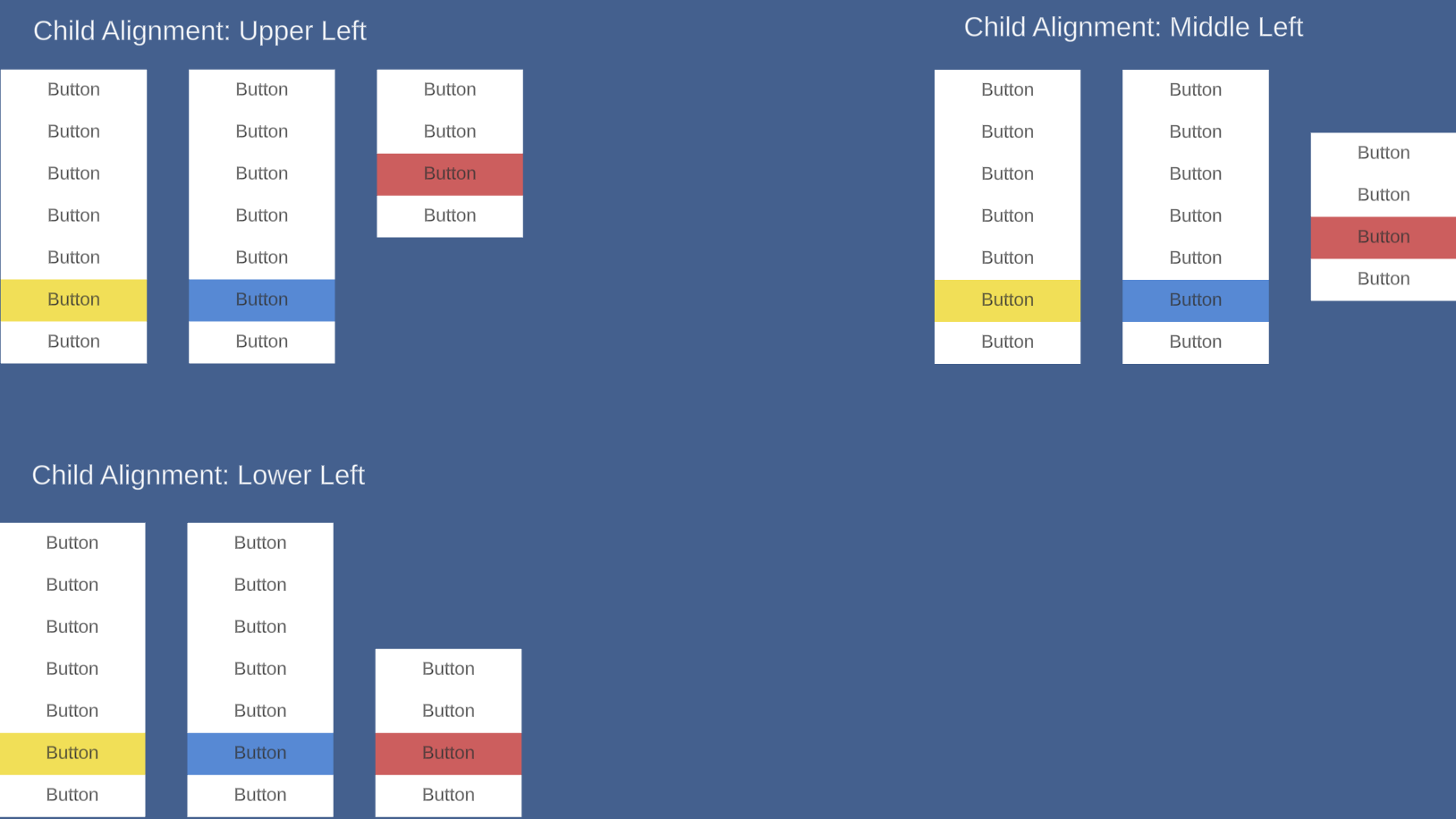


The child alignment of PlayCanvas will affect the alignment position.

Unity:



PlayCanvas:

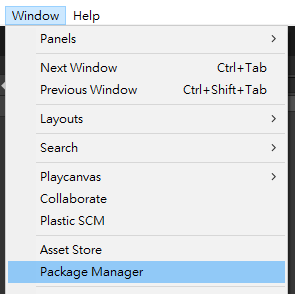
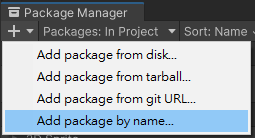
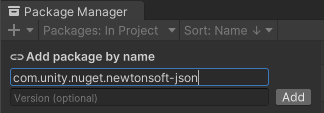
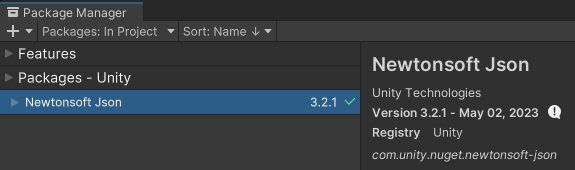


AssetBundle:

If the assets you use are included in an AssetBundle, they will be ignored because they reside in memory rather than in a absolute location.

Troubleshooting

“Newtonsoft” could not be found:

1. Open unity's Package Manager. (Window -> Package Manager)
2. Click "+" and select "Add package by name...".
3. Enter “com.unity.nuget.newtonsoft-json” and click “Add”.
4. The package gets installed.

Release Note

|  |  |  |
| --- | --- | --- |
| Release date | Version | Note |
| 9/6/2024 | 1.0.9 | add auto upload tool  add support   * ui raw image * text elememt wrapLines   fix   * null case of state motion, scrollbar * skip hide game object * scrollview / image / layout on same gameobject * image mask opacity * ui entity add layer ui |
| 8/16/2024 | 1.0.8 | add support   * skybox cubemap   fix   * invalid template name * material opacity adjust * material missing map * export animation on disable gameobject * light type string |
| 8/2/2024 | 1.0.7 | add support   * particle system MainModule   fix   * model without material * remove unuse component when use template |
| 7/19/2024 | 1.0.6 | fix   * assets file name add id * improve animation * improve material reflection |
| 6/28/2024 | 1.0.5 | fix   * Quad * entension fix find render * Asset Null handle |
| 6/7/2024 | 1.0.4 | add components   * text * add support * material opacity map * material skybox reflection   fix   * layout * particles color * mesh renderer active * mesh load fail * shader color property * template id sequence * extension api fail |
| 5/27/2024 | 1.0.3 | add components   * Scroll view * Improve 3d animation file size |
| 5/3/2024 | 1.0.2 | add components   * Layer & tag * Skybox * Layout group * Settings |
| 4/8/2024 | 1.0.1 | add components   * Collider * Rigidbody * Particle system |
| 3/12/2024 | 1.0.0 | first version |