ShaderlabVSCode

Introduction

ShaderlabVSCode is a Visual Studio Code extension for Unity Shaderlab progamming.

Documents | **Forum** | **Email** |**Asset Store**

Installation

Running On Mac

1. Import ShaderlabVSCode unity package into Unity Editor.
2. [Download Visual Studio Code](#) for macOS.
3. Double-click on the downloaded archive to expand the contents.
4. Drag `Visual Studio Code.app` to the `Applications` folder, making it available in the Launchpad.
5. Launch VS Code, Open the `Command Palette (⇧⌘P)` and type 'install from vsix' and then press `Enter` key on keyboard.
6. Select the vsix file under `ShaderlabVSCode/VSCodePlugin/` folder of Unity Project
7. Restart Visual Studio Code

Running On Windows

1. Import ShaderlabVSCode unity package into Unity Editor.
2. Download the [Visual Studio Code installer](#) for Windows.
3. Once it is downloaded, run the installer (VSCodeSetup-version.exe). This will only take a minute.
4. By default, VS Code is installed under C:\Program Files (x86)\Microsoft VS Code for a 64-bit machine.
5. Launch VS Code, Open the `Command Palette (CTRL+SHIF+P)` and type 'install from vsix' and then press `Enter` key on keyboard.
6. Select the vsix file under `ShaderlabVSCode/VSCodePlugin/` folder of Unity Project
7. Restart Visual Studio Code

> Note: .NET Framework 4.5.2 is required for VS Code. If you are using Windows 7, please make sure .NET Framework 4.5.2 is installed.

Features

Syntax Highlighting

Code Completion and Basic Intellisense

Hover Information

Signature Help

Document Symbols

Press `CTRL + SHIFT + o` on Windows or `CMD + SHIFT + o` on macOS.

Go To Definition

`This feature is available in 1.2.4 +`

Press `F12` to trigger `Go To Definition` command Or Click the `Go To Definition` in right click context menu

```
38          UNITY_INSTANCING_BUFFER_START(Props)
39              // put more per-instance properties here
40          UNITY_INSTANCING_BUFFER_END(Props)
41
42          void surf (Input IN, inout SurfaceOutputStandard o)
43          {
44              // Albedo comes from a texture tinted by color
45              fixed4 c = tex2D (_MainTex, IN.uv_MainTex) * _Color;
46              o.Albedo = c.rgb;
47              // Metallic and smoothness come from slider variables
48              o.Metallic = _Metallic;
49              o.Smoothness = _Glossiness;
50              o.Alpha = c.a;
51          }
52          ENDCG
53      }
54      FallBack "Diffuse"
55  }
56
```

Code Snippets

Below are the snippets:

Snippets	Description
blend1_1	Blend One One
blendsa_1-sa	Blend SrcAlpha OneMinusSrcAlpha
blend1_1-sa	Blend One OneMinusSrcAlpha
blend1-dc_1	Blend OneMinusDstColor One
blenddc_0	Blend DstColor Zero
blenddc_sc	Blend DstColor SrcColor
for	for loop

fallback	Fallback
cgp	CGPROGRAM...ENCG
glp	GLSLPROGRAM...ENCGLSL
hlp	HLSLPROGRAM...ENDHLSL
if	if { ... }
ifelse	if {...} else {...}
inc	#include ""
incpkg	#include "Pakcages
incucg	#include "UnityCG.cginc"
inclight	#include "Lighting.cginc"
incautolight	#include "AutoLight.cginc"
props	Properties
prop2d	`2D` type property
propcube	`Cube` type property
propc	`Color` type property
propv	`Vector` type property
propf	`Float` type property
proprange	`Range` type proprety
region	//#region ... //#endregion
region2	//region ... //endregion
shader	Shader { ... }
subshader	SubShader { ... }
struct	structure
tags	Tags { ... }
tagstt	Tags with both of RenderType and Queue is Transparent

Auto Format

Format Document

Two ways to format document:

1. Right click the editor are and select **Format Document** menu in context menu
2. Open **Command Palette** and type "Format Document", and then press `ENTER` key on keyborad.

Format Selection

Two ways to format selection:

1. Right click the editor area and select **Format Selection** menu in context menu
2. Open **Command Palette** and type "Format Selection", and then press `ENTER` key on keyborad

Place Open Brace On New Line

In Settings, there is an item under `ShaderlabVScode` section named `Formatting: Style`, check or uncheck the `Place open brace on new line` will toggle differnt format style.

Below is not place open brace on new line

```
float test() {


}
```

Below is place open brace on new line

```
float test()
{


}
```

Macros Alignment Modes

In Settings, there is an item under `ShaderlabVScode` section named `Formatting: Style`, change the `Macros alignment modes` to set formatting mode for macros.

Indentation with hierachy

```
Subshader
{
    Pass
    {
        CGPROGRAM
        void MacroTest()
        {
```

```
                float c;
                #if 0
                    c = 0;
                    #if 1
                        c = 1;
                    #endif
                #endif
            }
            ENDCG
        }
    }
```

Indentation without hierachy

```
Subshader
{
    Pass
    {
        CGPROGRAM
        void MacroTest()
        {
            float c;
         #if 0
                c = 0;
         #if 1
                c = 1;
         #endif
         #endif
        }
        ENDCG
    }
}
```

No Indentation but with hierachy

```
Subshader
{
    Pass
    {
        CGPROGRAM
        void MacroTest()
        {
            float c;
#if 0
            c = 0;
    #if 1
            c = 1;
    #endif
```

```
#endif
        }
        ENDCG
    }
}
```

No Indentation and without hierachy

```
Subshader
{
    Pass
    {
        CGPROGRAM
        void MacroTest()
        {
            float c;
#if 0
            c = 0;
#if 1
            c = 1;
#endif
#endif
        }
        ENDCG
    }
}
```

Misc Features

1. Region Mark

There are two ways:

- `//#region` and `//#endregion`
- `//region` and `//#endregion`

Features in Unity Editor

1. Download Visual Studio Code

Jump to url which can download latest version of Visual Studio Code

> Selection: **Tools** -> **ShaderlabVSCode** -> **Download Visual Studio Code**

2. Update Data of ShaderlabVSCode Extension

Update data of completion, hover information or intelisense from web

> Selection: **Tools** -> **ShaderlabVSCode** -> **Update Data of VSCode Extension**

3. Report an Issue

Two ways to report an issue:

1. Send Email to amlovey@qq.com
2. Open a issue on https://github.com/amloveyweb/amloveyweb.github.io/issues

Release Notes

V1.2.7

- Better HLSL Supports that add more keywords and builtin methods
- Better folding strategy that base on syntax instead of base on indentation
- Better macros formatting. We can change different styles in `Macros Alignment Modes` settings
- Add `Format Selection` feature
- Improve syntax highlighting for Monokai pro
- Fix bugs that StructuredBuffer show as Buffer type in hover information

V1.2.6

- Improve syntax highlighting for types and methods
- Add new version notification
- Fix bug that code completion for operation `?:` is not correctly
- Fix bug that F12 cannot jump in included library of SRP

V1.2.5

- Add more code snippets:
    - `hlp` : HLSLPROGRAM...ENDHLSL block
    - `glp` : GLSLPROGRAM...ENCGLSL block
    - `inc` : #include ""
    - `incpkg` : #include "Pakcages"

V1.2.4

- Fix some methods disappear from code completion bug
- Hover on variables or type member can show their type now
- Add `Go To definition` for method/variable/structs [Experimental]

V1.2.3

- Fix code completion for `half2`
- Add formatting option for place open brace on newline or not

V1.2.2

- Support more builtin helper functions
- Fix format bug for condition expression

V1.2.1

- More Keywords or functions intellisense for URP/HDRP

V1.2.0

- SRP supports: Add path intellisense
- Add property drawer attribute keywords

V1.1.6

- Fix format bug

V1.1.5

- Fix format by when line ends with "
- Add Go to definition support for include files

V1.1.4 Support Linux

V1.1.3

- Auto Format
  - use tab or spaces can be configured by `editor.insertSpaces` VSCode settings

V1.1.2

- Add more completions from UnityCG.cginc.
- Fix document symbols show incorrectly in some scenarios.

V1.1.1

- Intellisense
  - Add macros code completion support
  - Add more completion items from UnityCG.cginc, there are:
    - UnityWorldSpaceViewDir
    - UnityWorldToClipPos
    - UnityViewToClipPos
    - UnityWorldToViewPos
    - UnityObjectToWorldDir
    - UnityWorldToObjectDir
    - UnityObjectToWorldNormal
    - UnityWorldSpaceLightDir
  - Fix methods intellisense was broken by ':' in parameters
- Format Document
  - Improve format for marcos
- Syntax Highlighting
  - Add highlight for `#ifdef` and `#ifndef`

- Add document symbols support, press `CTRL + SHIFT + o` on Windows or `CMD + SHIFT + o` on macOS to open it.

V1.1.0

- Intellisense
  - Fix intellisense was broken by "," in structs and fileds in some scenario
- Format Document
  - Fix format for [XX]PROGRAM..END[XX] structure
  - Make #define to match levels
- Experiment:
  - Add .hlsl and .cg file support

V1.0.9

- Intellisense
  - Fix wrong result when there are duplicate name of variables
- Syntax Highlighting
  - Add highlighing for custom functions

V1.0.8

- Format Document
  - Improve format for Operators

V1.0.7

- Intellisense
  - Fix Intellisense broken by '+', '-', '*', '/' in some scenarios
- Format Document
  - Improve format for preprocessor directives
- Syntax Highlighting
  - Improve color of preprocessor directives

V1.0.6

- Format Document:
  - fix colon formation is incorrect in #pragma line
- Intellisense
  - Fix wrong code completion result in #pragma line which is triggered by colon
  - Update description for `clip` and `cos` cg method in code completion item

V1.0.5

- Add region mark support(Required VSCode version 1.17.0 +). ShaderlabVSCode now supports two type markers:
  - //#region and //#endregion, snippet is `region`
  - //region and //endregion, snippet is `region2`

V1.0.4

- Intellisense

  - Add Unity defined Values support, like _Time
  - Fix duplicate members when include same cginc files multiple times

V1.0.3

- Intellisense

  - Fix bug variable broken by semicolon
- Editor

  - Improve compability

V1.0.2b3

- Auto Format:

  - Add format document feature
- Intellisense:

  - supports builtin types, like half, fixed and float
  - supports completion of fields of types
  - supports completion of method return type
- Bug Fixes:

  - Fix bug structure fields are broken by comments

V1.0.1b2

- Add code snippets support
- Update hover infromation for some keywords
- Fix wrong fields data get from struct in some scenarios
- Fix bug that Variable and Properties Info broken by whitespace

v1.0.0b1

- First beta release

For more information

Visit site http://www.amlovey.com