

ShaderlabVSCode

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Introduction

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

[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+SHIFT+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

```

// ...

// ...

// ...

struct Input
{
    float2 uv_MainTex;
    float2 uv_BumpMap;
};

float _WrapAmount;

half4 LightingWrapLambert(SurfaceOutput s, half3 lightDir, half atten)
{
    half NdotL = dot(s.Normal, lightDir);
    half diff = NdotL * _WrapAmount + (1 - _WrapAmount);
    half4 c;
    c.rgb = s.Albedo * _LightColor0.rgb * (diff * atten * 2);
    c.a = s.Alpha;
    return c;
}

```

Syntax Highlighting

Code Completion

```

// ...

// ...

// ...

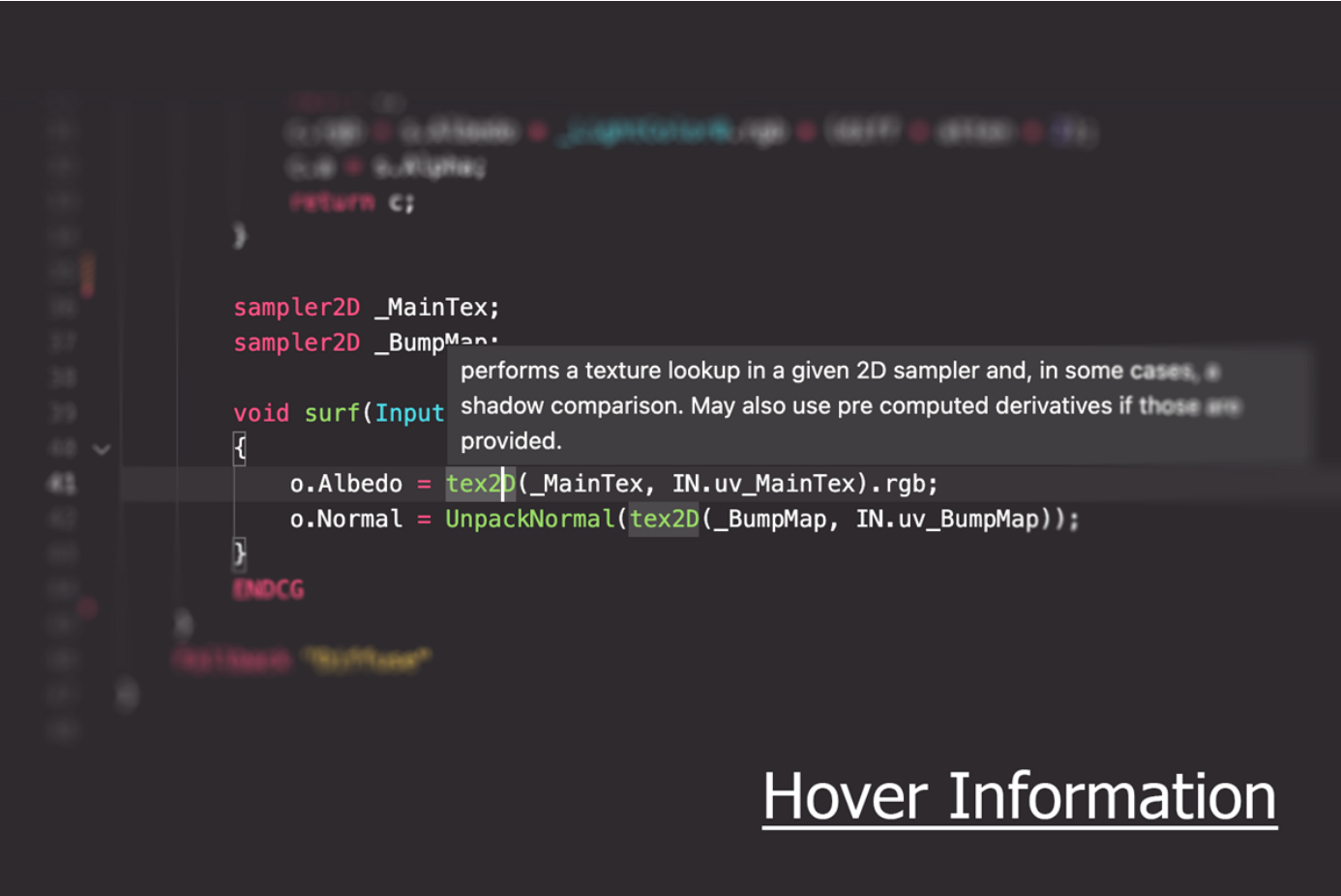
float _WrapAmount;

half4 LightingWrapLambert(SurfaceOutput s, half3 lightDir, half atten)
{
    half NdotL = dot(s, lightDir);
    half diff = NdotL * 
    half4 c;
    c.rgb = s.Albedo * 
    c.a = s.Alpha;
    return c;
}

```

Code Completion

Hover Information



Signature Help



The screenshot shows a code editor with a C# shader. A tooltip is displayed over the `tex2D` function call in the line `e.Albedo = tex2D(_MainTex);`. The tooltip contains the following information:

- Signature:** `float4 tex2D(sampler2D samp, float2 s)`
- Description:** performs a texture lookup in a given 2D sampler and, in some cases, a shadow comparison. May also use pre computed derivatives if those are provided.

The background code includes:

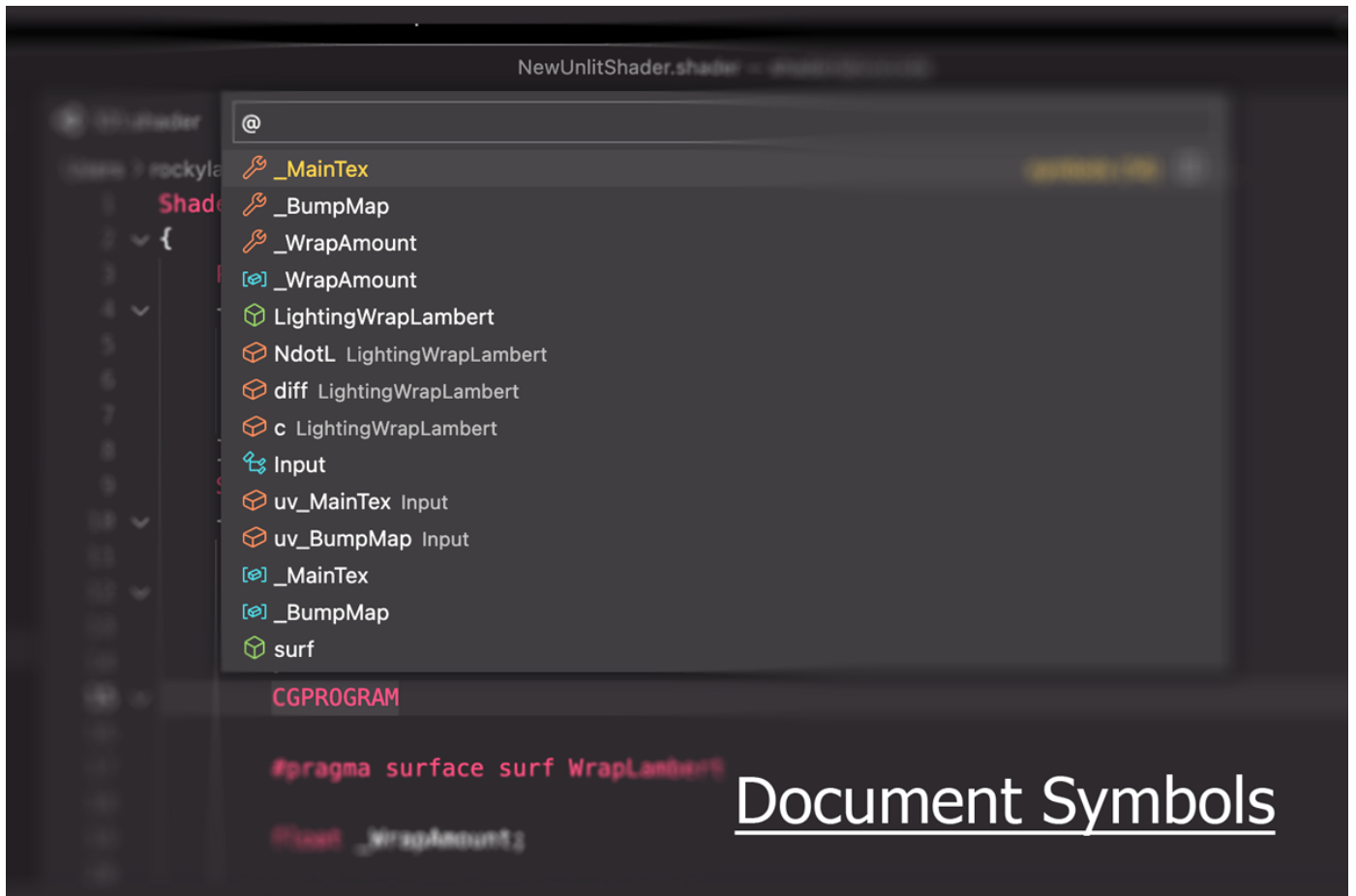
```
shader Graph/Shader/ShaderFX
{
    sampler2D _MainTex;
    sampler2D _BumpMap;

    void surf(Input IN, inout SurfaceOutput o)
    {
        o.Albedo = tex2D(_MainTex, IN.uv_MainTex);
        o.Normal = UnpackNormal(tex2D(_BumpMap, IN.uv_BumpMap));
    }
}
```

[Signature Help](#)

Document Symbols

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



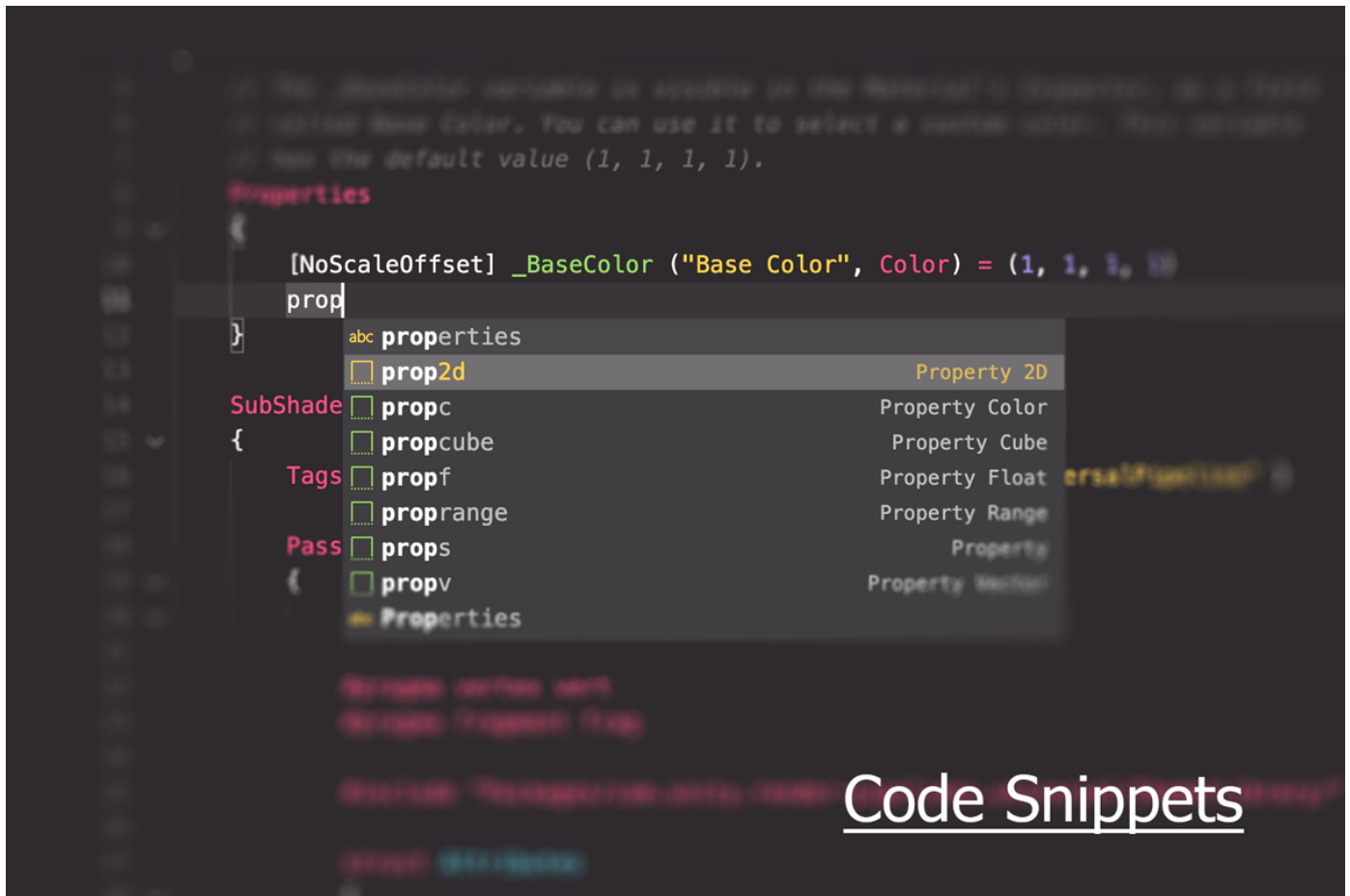
Document Symbols

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

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...ENC
glp	GLSLPROGRAM...ENGLSL
hlp	HLSLPROGRAM...ENDHLSL
if	if { ... }
ifelse	if {...} else {...}

inc	#include ""
incpkg	#include "Pakcages
incucg	#include "UnityCG.cginc"
inlight	#include "Lighting.cginc"
incautolight	#include "AutoLight.cginc"
props	Properties
prop2d	<code>2D</code> type property
propcube	<code>Cube</code> type property
propc	<code>Color</code> type property
propv	<code>Vector</code> type property
propf	<code>Float</code> type property
proprange	<code>Range</code> 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 different 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 hierarchy

```
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;
#endif
    c = 1;
}
ENDCG
}

```

Doc Comment

Doc Comments are the comments start with `///`. for example:

```

/// Return max value of a and b
float Max(float a, float b)
{

}

```

Hover Information and **Signature Help** will display doc comments as documentation.

NOTE: Doc comment supports Markdown

Misc Features

Region Mark

There are two ways:

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

Features in Unity Editor

Download Visual Studio Code

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

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

Update Data of ShaderlabVSCode Extension

Update data of completion, hover information or intelisense from web

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

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>

For more information

Visit site <http://www.amlovey.com/shaderlabvscode/#/>