# ShaderlabVS Pro

#### **ShaderlabVS Pro**

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## Introduction

ShaderlabVS Pro is a Visual Studio Plugin for Unity Shaderlab programming.

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Toolbox
          □ Shader
                   "Unlit/NewUnlitShader
         2
           {
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                Properties
        4
        5
                    _MainTex("Texture", 2D) = "white" { }
        6
         7
        8 🖹
                SubShader
        9
                    Tags { "RenderType" = "Transparent" "Queue" = "Transparent" }
        10
       11
                    LOD 100
        12
                    Pass
       13 E
       14
       15
                        CGPROGRAM
       16
       17
                        #pragma vertex vert
       18
                        #pragma fragment frag
       19
                        // make fog work
       20
                        #pragma multi_compile_fog
        21
        22
                        #include "UnityCG.cginc"
        23
       24
                        struct appdata
       25
       26
                            float4 vertex: POSITION;
        27
                            float2 uv: TEXCOORD0;
       28
                        };
        29
       30
                        struct v2f
       31
                        {
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  Error List
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```

## Installation

- 1. Get .vsxi file under path Assets/ShaderlabVS/VSPlugin
- 2. Double click the .vsxi file, a Visual Studio extension install window will pop up
- 3. Click Install button on install the window
- 4. After install successfully, restart Visual Studio

## **Main Features**

## 1. Syntax Highlighting

```
File Edit View Git Project Debug
                                            Analyze Tools Extensions
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                                                                                   Solution1
    Window Help
  ▶ Attach... ▼ 👼 🐼 🚅 🔚 🖫 🧏 🦎 🦼 📜
                                                                                                       Solution Explorer Git Changes
  NewUnlitShader.shader 🗢 🗙
         1 ⊟Shader "Unlit/NewUnlitShader"
                    _MainTex("Texture", 2D) = "white" { }
                    Tags { "RenderType" = "Transparent" "Queue" = "Transparent" }
                    LOD 100
                        CGPROGRAM
                        #pragma vertex vert
                        #pragma fragment frag
                        #pragma multi_compile_fog
                        #include "UnityCG.cginc"
                        struct appdata
                            float4 vertex: POSITION;
                            float2 uv: TEXCOORD0;
                            floata IV. TEXCOORDO.
                                                                            Ln: 14 Ch: 4 Col: 10 TABS CRLF
  Error List
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                                                                                                       A
```

## 2. Code Completion and Basic Intellisense

```
UNITY_FOG_CORDS(1)
float4 vertex: SV_POSITION;
};

sampler2D _MainTex;
float4 _MainTex_ST;

v2f vert(appdata v)
{
    v2f o;

    o.vertex = UnityObjectToClipPos(v.);
    o.uv = TRANSFORM_TEX(v.uv, _M float4  vertex
    UNITY_TRANSFER_FOG(o, o.vertex);  vuv
    return o;
}

fixed4 frag(v2f i): SV_TARGET
{
    // sample the texture
    fixed4 col = tex2D(_MainTex, i.vertex);
```

### 3. Hover Information

```
derType" = "Transparent" "Queue" = "Background" }

Determine in which order your objects are drawn using the Queue tag.

AM

Vertex vert
fragment frag
fog work
multi_compile_fog
e "UnityCG.cginc"
appdata
at4 vertex: POSITION;
```

## 4. Signature Help

```
o.vertex = UnityObjectToClipPos(v.vertex);
                       o.uv = TRANSFORM_TEX(v.uv, _MainTex);
                       UNITY_TRANSFER_FOG(o, o.vertex);
46
47
                       return o;
48
49
                  fixed4 frag(v2f i): SV_TARGET
50 Ė
51
52
53
                       fixed4 col = tex2D(;
                              ▲ 1 of 16 ▼ float4 tex2D(sampler2D samp, float2 s)
55
                                         performs a texture lookup in a given 2D sampler and, in some cases, a sha
56
                      UNITY ....
                       return col;
                  ENDCG
```

### 5. Auto Format

### **Format Document**

```
via menu Editor -> Advanced -> Format Document
```

### **Format Selection**

### **Place Open Brace On New Line**

We can set brace formatting style in **Tools** -> **Options** -> **Text Editors** -> **Shaderlab** -> **Formatting** page.

If Place Open Brace On New Line is true, after formatting, open brace will be in new line, like below

```
if (true)
{
}
```

if Place Brace On New Line is fase, after formatting, open brace will not in new line.

```
if (true) {
}
```

### **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 hierarhy**

### **Indentation without hierachy**

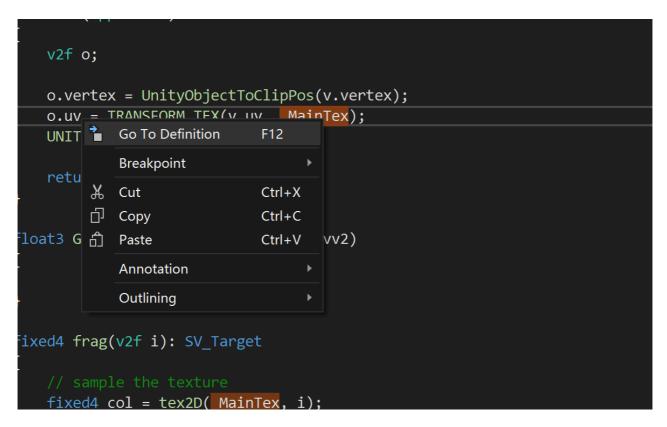
### No Indentation but with hierachy

```
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
    {
```

## 6. Go To Definition



# 7. Support SRP

```
#pragma vertex vert
#pragma fragment frag
// make fog work
#pragma multi_compile_fog
#include "UnityCG.cginc"
#include "Packages/com.unity.render-pipelines.core/"
                                                    CHANGELOG.md
struct appdata
                                                    ♣ LICENSE.md
                                                    🚨 package.json
    float4 vertex: POSITION;
                                                    ValidationConfig.json
    float2 uv: TEXCOORD0;
                                                    Documentation~
};
                                                    Editor
                                                    Runtime
struct v2f
                                                    ShaderLibrary
                                                    Tests
    float2 uv: TEXCOORD0;
    UNITY_FOG_COORDS(1)
    float4 vertex: SV POSITION:
```

# 8. Code Snippets

Below are the snippets:

Snippets	Description
blend1-dc_1	Blend OneMinusDstColor One
blend1_1-sa	Blend One OneMinusSrcAlpha
blend1_1	Blend One One
blenddc_0	Blend DstColor Zero
blenddc_sc	Blend DstColor SrcColor
blendsa_1-sa	Blend SrcAlpha OneMinusSrcAlpha
cgp	CGPROGRAMENCG
for	for loop
forr	Reverse for loop
glp	GLSLPROGRAMENCGLSL
hlp	HLSLPROGRAMENDHLSL
if	if { }
ifelse	if {} else {}
inc	#include ""
incpkg	#include "Packages"

incucg	#include "UnityCG.cginc"
prop2d	2D type property
propc	Color type property
propcube	Cube type property
propf	Float type property
proprange	Range type proprety
props	Properties { }
propv	Vector type property
region	//region //endregion
region2	//#region //#endregion
shader	Shader { }
struct	struct { };
subshader	SubShader { }
tags	Tags { }
tagtt	Tags with both of RenderType and Queue is Transparent

## **CHANGELOG**

#### v1.1.1

- Improve macros formatting in AutoFormat
- Fix exception when place brace in new line is fase in Auto Format
- Fix bug that code completion of struct with method members is not correct

#### v1.1.0

- Add Format Selection feature
- Better HLSL Supports that add more keywords and builtin methods
- Better Outlining that support regions and program blocks
- Better macros formatting. We can change different styles in Macros Alignment Modes settings
- Better Syntax highlighting for types and methods
- Fix bugs that StructuredBuffer show as Buffer type in hover information
- Fix some formatting bugs that breaking shader compile

#### v1.0.5

- Better code completion match
- Add version update notification
- Fix some minor bugs

#### v1.0.4

- Improve highlighting for all occurrences will ignore comment line
- Improve performance for large files
- Fix bug that highlighting is not work for last comment line of code

#### V1.0.3

- Add placing open brace on new line formatting style
- Add type info in hover information
- Fix bug that variables in method cannot found in Go To Definition
- Fix type name is wrong for some variables/members in some scenarios

#### V1.0.2 Beta3

- Add Go To Definition features for methods/variables/types
- Add highlighting for all occurrences for selected word
- Add signature help support for method defined by macros
- Improve brace match marker background color
- Fix bug that method defined by macros are missing in completion
- Fix bug that duplicated completion item in Code Complete
- Fix bug that built-in included shader libraries are missing

#### V1.0.1 beta2

- Improve syntax highlighting
- Add code snippets support

#### v1.0 beta1

init commit

# For more information

Visit site <a href="http://www.amlovey.com/shaderlabvs">http://www.amlovey.com/shaderlabvs</a>