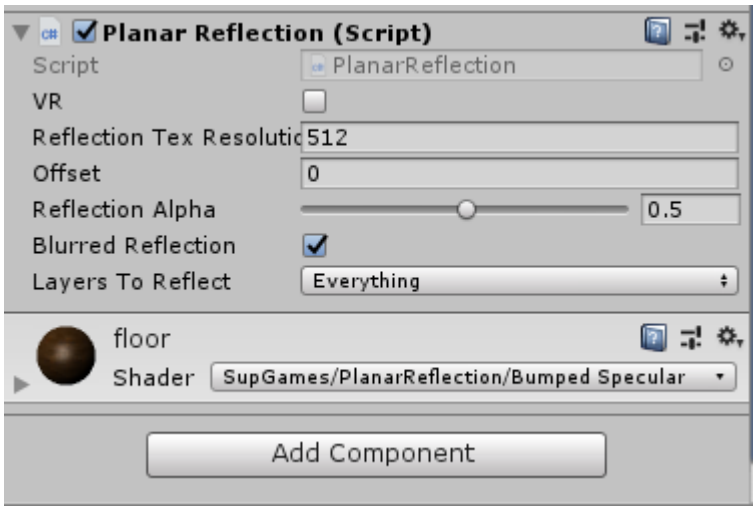
FAST MOBILE PLANAR REFLECTION

The custom shaders in this asset are the prototypes of Built in moble shader, which were additionally optimized and complemented in order to support planar reflection.

Note that this effect should be applied to plane object, as it follows from the name.

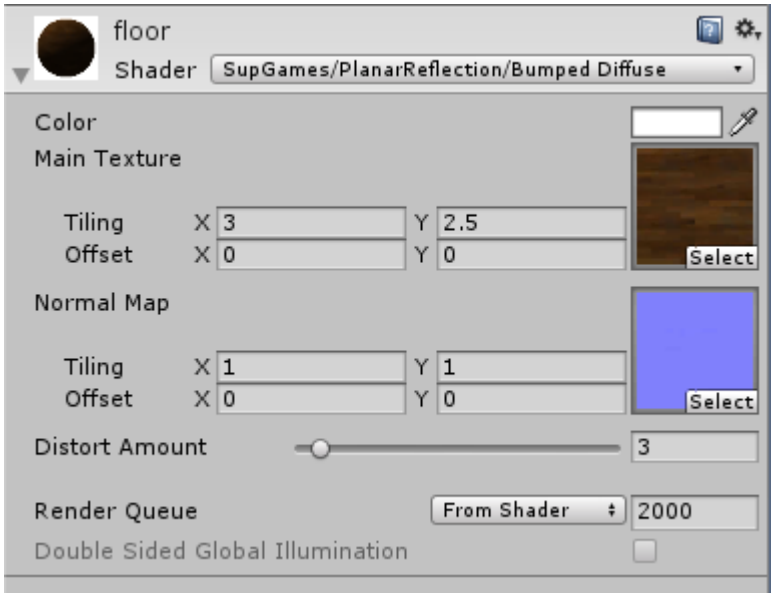
How to apply:

1. **Firstly you need to add PlanarReflection.cs script to your plane object**



   a. **Reflection Tex Resolution –** the resolution of the reflection texture on the plane. Try to keep this value low and as squeare of 4(256,512,1024 etc.)
   b. **Offset –** the value of distance between the plane surcafe and the reflected surface
   c. **Reflection Alpha –** the value refers to reflectivity of the object
   d. **Blurred Reflection –** blurrs the reflection (single pass)
   e. **Layers to reflect –** as follows from the name, the layers which will be reflected.

2. **Apply one of the shaders below in the material of the plane object**

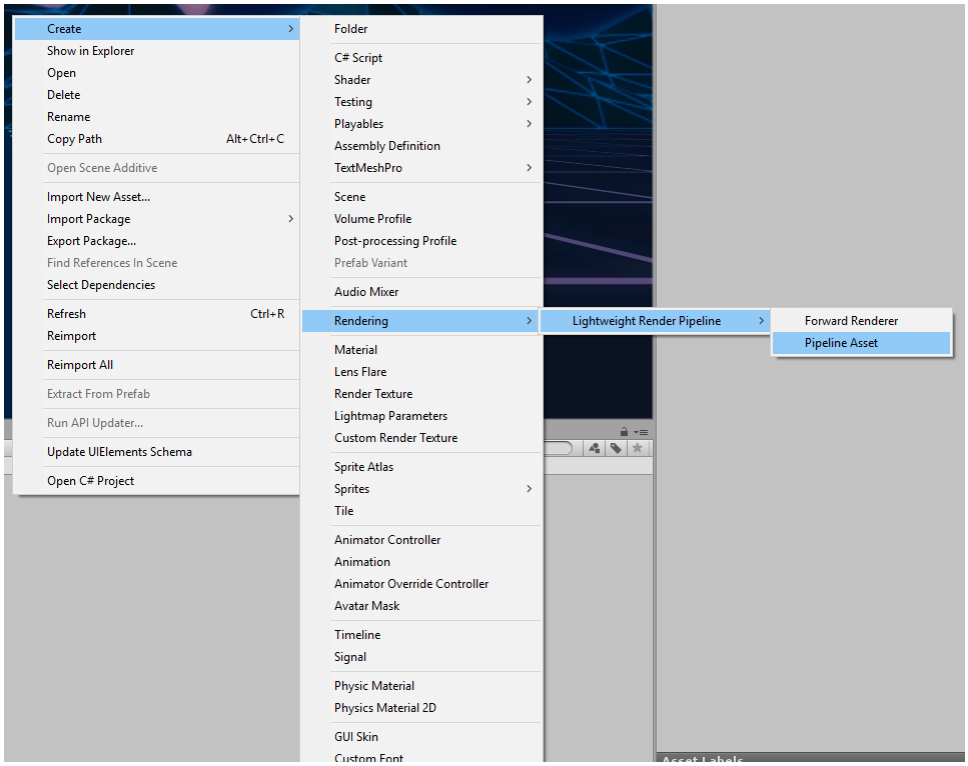


a. **SupGames/PlanarReflection/Unlit**
b. **SupGames/PlanarReflection/Diffuse Vertex Lit**
c. **SupGames/PlanarReflection/Diffuse Pixel Lit**
d. **SupGames/PlanarReflection/Specular Vertex Lit**
e. **SupGames/PlanarReflection/Specular Pixel Lit**
f. **SupGames/PlanarReflection/Bumped Diffuse**
g. **SupGames/PlanarReflection/Bumped Specular**

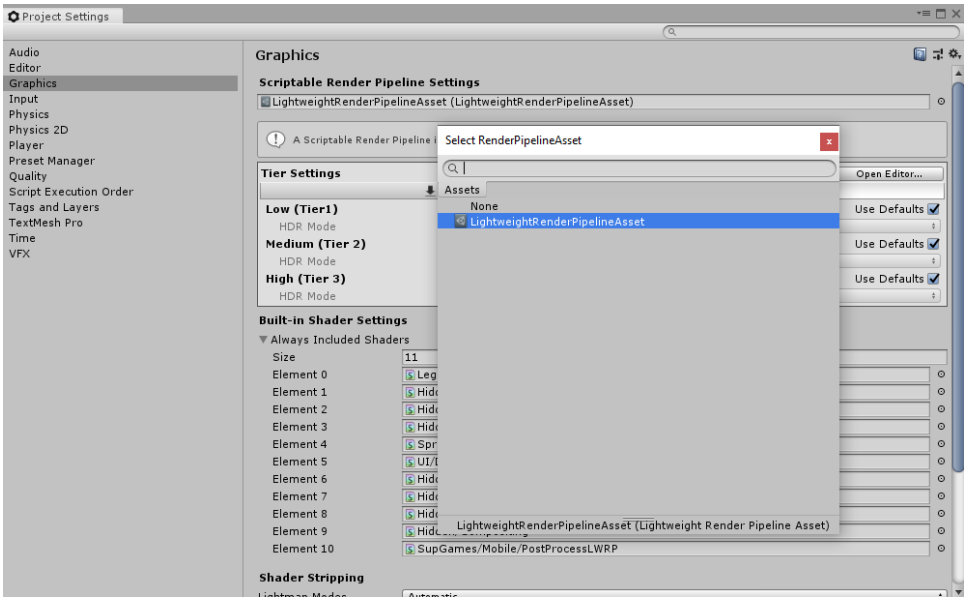
3. **The effect works only on runtime, not in Editor mode.**

How to setup LWRP(if you have already configured LWRP for your scene skip this part):

1. Firstly install the LWRP package to your project. Go to **Windows->Package Manager.** In the list find the LightweightRP and install it.
2. Firstly we need to create the Pipeline Asset. For that press **RightClick->Create->Rendering->LightWeightRenderPipeline->PipelineAsset**

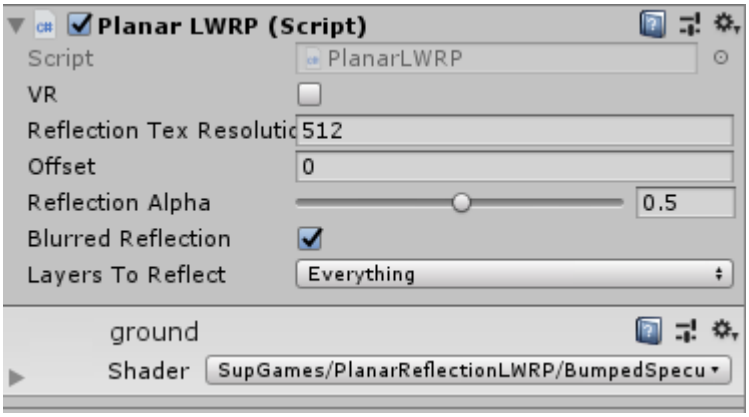


3. Go to **Edit->ProjectSettings->Graphics.** In the Scriptable Render Pipeline Settings, drag and drop the pipeline asset that we created in previous section



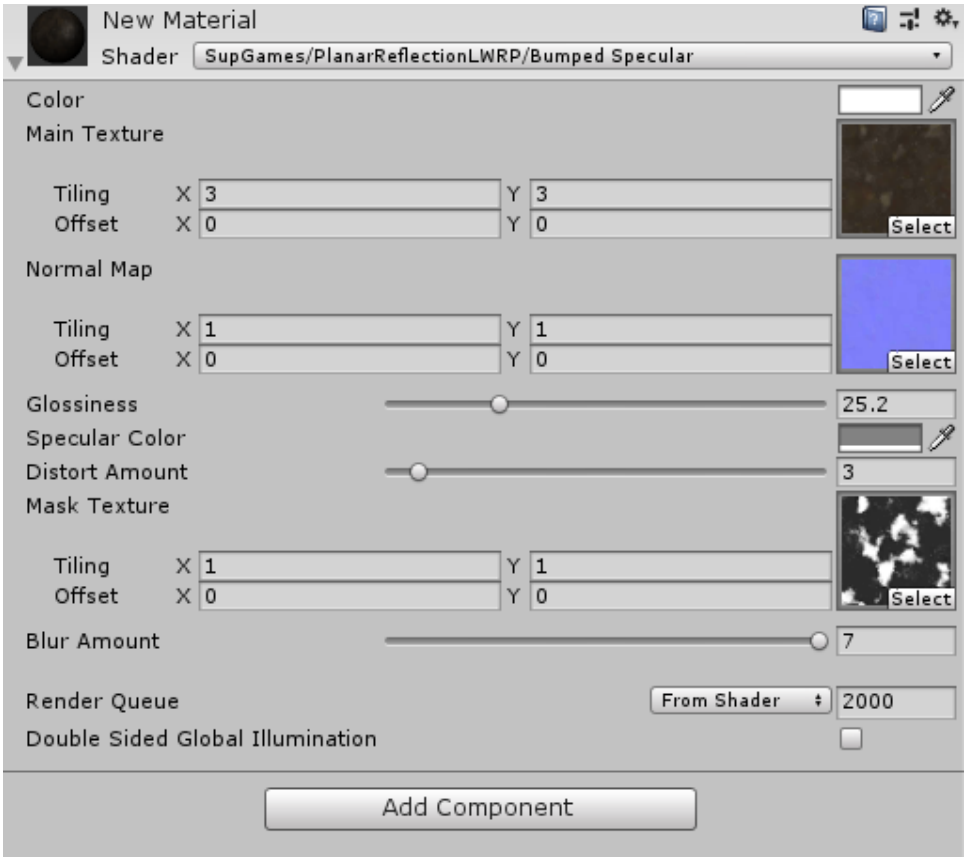
How to setup LWRP Planar Reflection

1. **Firstly you need to add PlanarLWRP.cs script to your plane object**



   a. **Reflection Tex Resolution –** the resolution of the reflection texture on the plane. Try to keep this value low and as squeare of 4(256,512,1024 etc.)
   b. **Offset –** the value of distance between the plane surcafe and the reflected surface
   c. **Reflection Alpha –** the value refers to reflectivity of the object
   d. **Blurred Reflection –** blurrs the reflection (single pass)
   e. **Layers to reflect –** as follows from the name, the layers which will be reflected.

2. **Apply one of the shaders below in the material of the plane object**

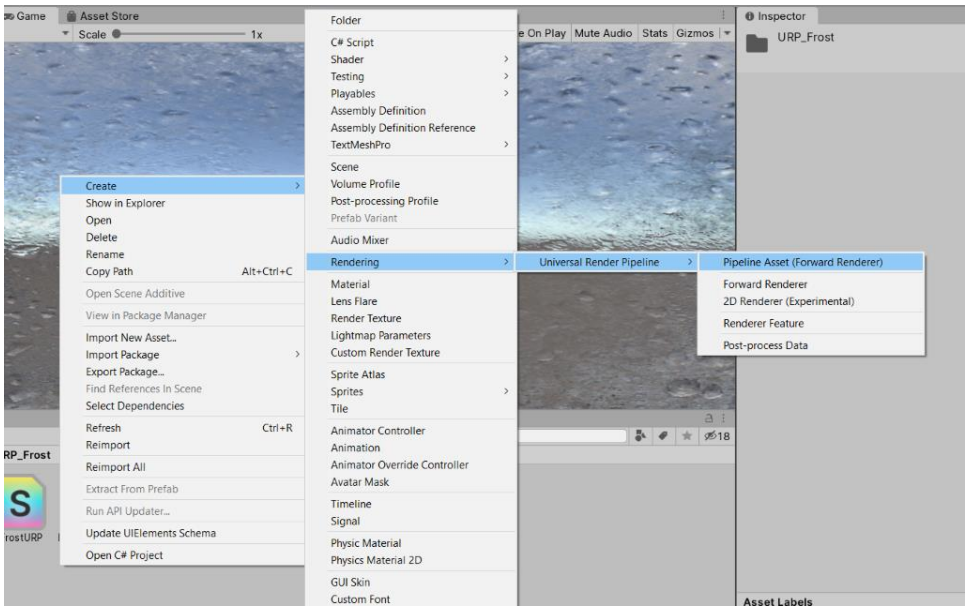


a. **SupGames/PlanarReflectionLWRP/Unlit**
b. **SupGames/PlanarReflectionLWRP /Diffuse Vertex Lit**
c. **SupGames/PlanarReflectionLWRP /Diffuse Pixel Lit**
d. **SupGames/PlanarReflectionLWRP /Specular Vertex Lit**
e. **SupGames/PlanarReflectionLWRP /Specular Pixel Lit**
f. **SupGames/PlanarReflectionLWRP /Bumped Diffuse**
g. **SupGames/PlanarReflectionLWRP /Bumped Specular**

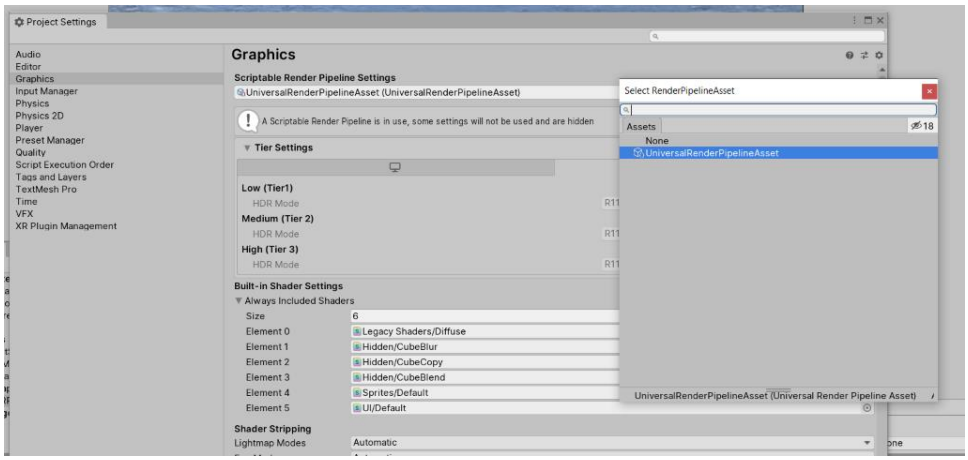
3. **The effect works only on runtime, not in Editor mode.**
4. **Enable VR if you are using VR**

How to setup URP(if you have already configured URP for your scene skip this part):

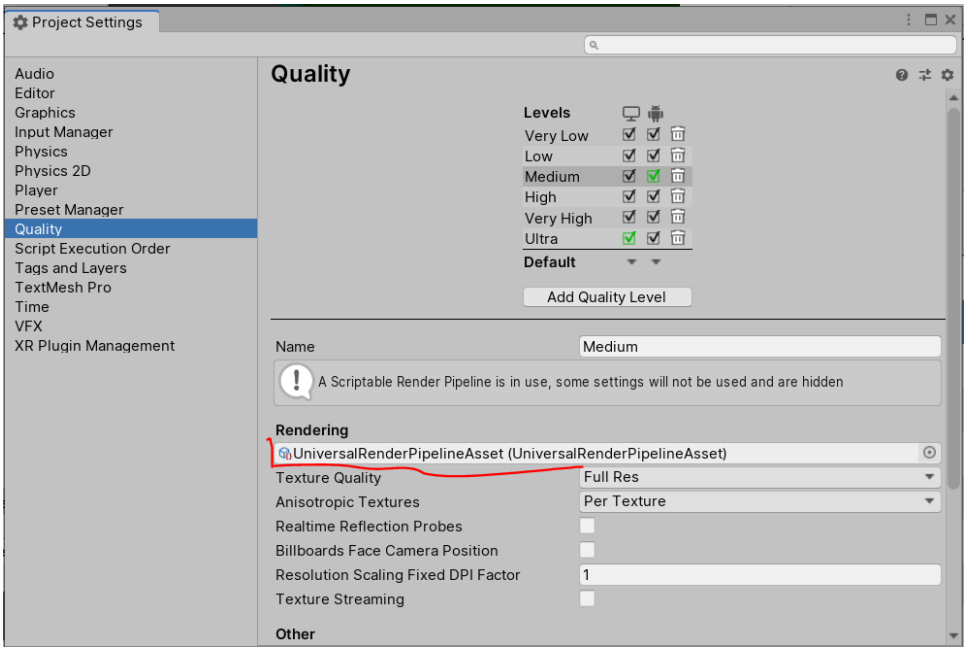
1. Firstly install the URP package to your project. Go to **Windows->Package Manager.** In the list find the LightweightRP and install it.
2. Firstly we need to create the Pipeline Asset. For that press **RightClick->Create->Rendering->UniversalRenderPipeline->PipelineAsset**



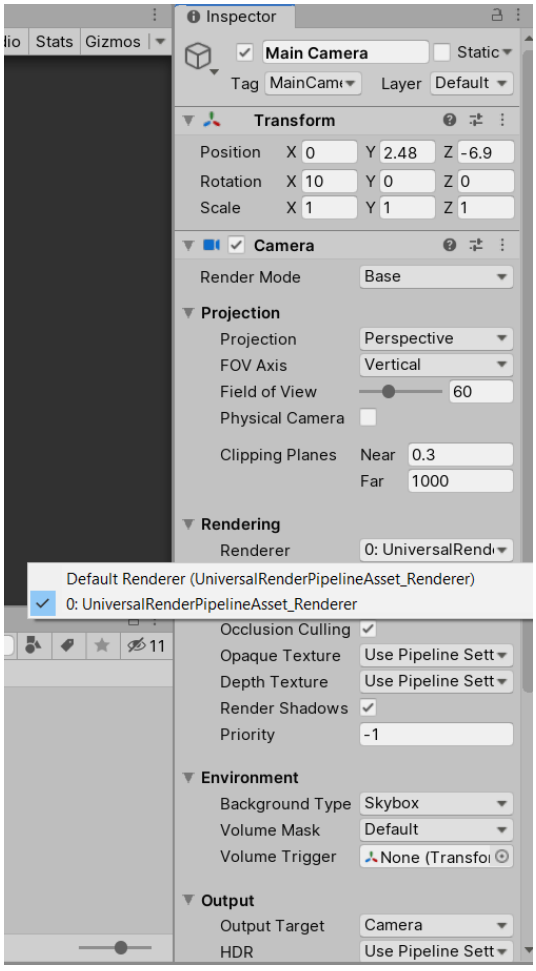
3. Go to **Edit->ProjectSettings->Graphics.** In the Scriptable Render Pipeline Settings, drag and drop the pipeline asset that we created in previous section



4. Go to **Edit->Project Settings->Quality.** In rendering section drag and drop the pipeline asset you created



5. Go to your camera object and in **Rendering** settings pick for **Renderer** the pipeline asset you created

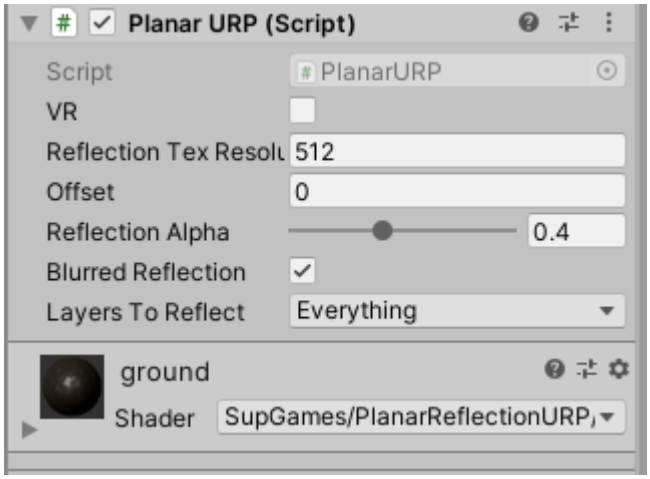


How to setup URP Planar Reflection

1. **Firstly you need to add PlanarURP.cs script to your plane object**

    a. **Reflection Tex Resolution –** the resolution of the reflection texture on the plane. Try to keep this value low and as squeare of 4(256,512,1024 etc.)
    b. **Offset –** the value of distance between the plane surcafe and the reflected surface
    c. **Reflection Alpha –** the value refers to reflectivity of the object
    d. **Blurred Reflection –** blurrs the reflection (single pass)
    e. **Layers to reflect –** as follows from the name, the layers which will be reflected.

2. **Apply one of the shaders below in the material of the plane object**



    a. **SupGames/PlanarReflectionURP/Unlit**
    b. **SupGames/PlanarReflectionURP /Diffuse Vertex Lit**
    c. **SupGames/PlanarReflectionURP /Diffuse Pixel Lit**
    d. **SupGames/PlanarReflectionURP /Specular Vertex Lit**
    e. **SupGames/PlanarReflectionURP /Specular Pixel Lit**
    f. **SupGames/PlanarReflectionURP /Bumped Diffuse**
    g. **SupGames/PlanarReflectionURP /Bumped Specular**

3. **The effect works only on runtime, not in Editor mode.**
4. **Enable VR if you are using VR**

All the testing was made on low-end mobile device Meizu M2 Note in the scene containing:
-101 **different gameObjects**,
-101 **different Materials**,
-51 **different Textures**,
-1 **Directional Light(realtime)**,
-**approximately 45k polygons**