方法一:构造出四个相邻的等腰三角形,拼接成一个正六边形

下述操作均在GameApp.cpp中进行

1,在InitResource函数中,将图元类型修改为:D3D11_PRIMITIVE_TOPOLOGY_TRIANGLELIST

```
m_pd3dImmediateContext->IASetPrimitiveTopology(D3D11_PRIMITIVE_TOPOLOGY_TRIANGLELIST);
```

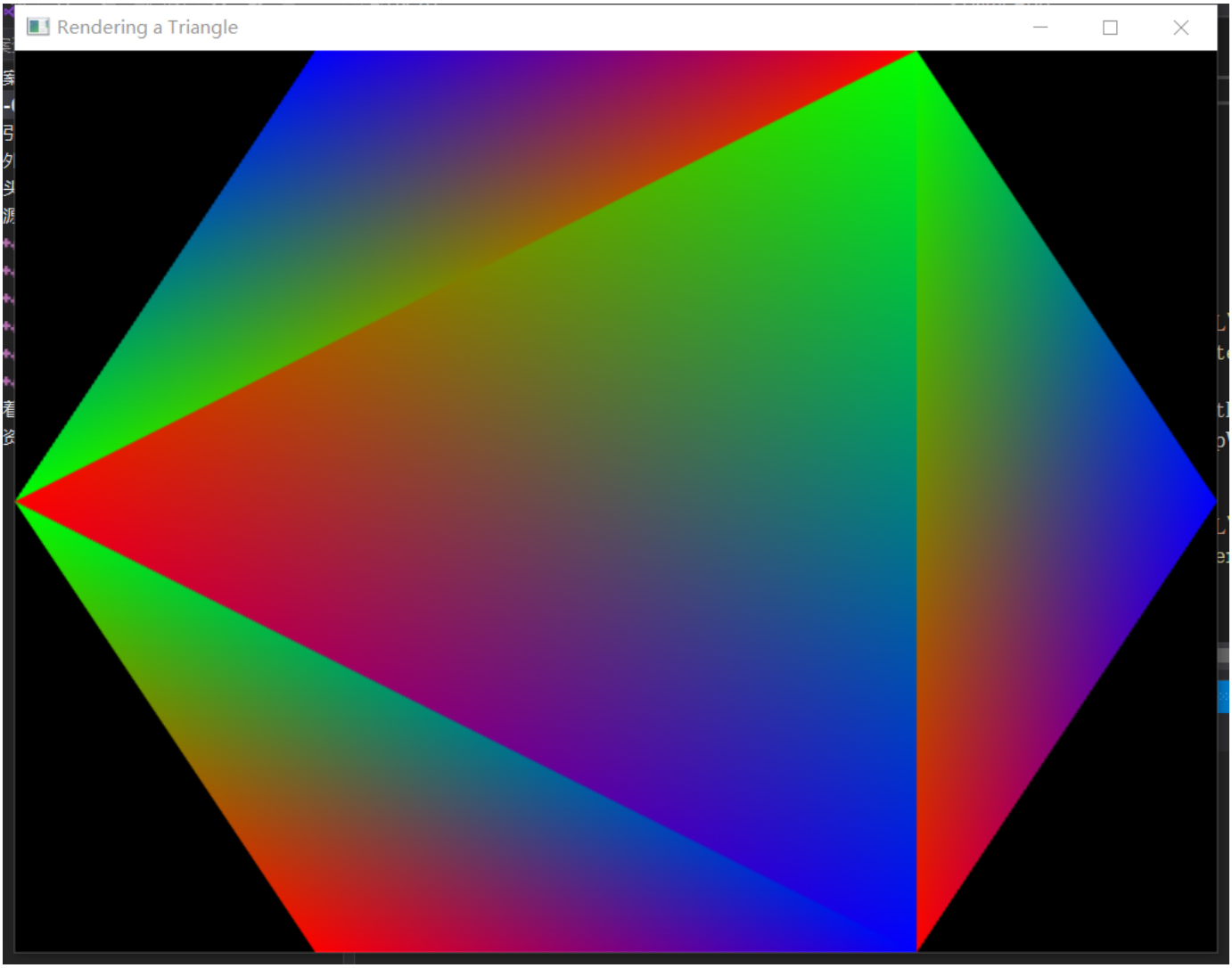
2,在顶点缓冲区,输入这四个三角形的顶点数据

```
VertexPosColor vertices[] =
{
    //方法一:采用四个相邻的等腰三角形拼成一个等六边形
    { XMFLOAT3(-1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(-0.5f, 1.0f, 0.5f), XMFLOAT4(0.0f, 0.0f, 1.0f, 1.0f) },
    { XMFLOAT3(0.5f, 1.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },

    { XMFLOAT3(0.5f, 1.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(0.5f, -1.0f, 0.5f), XMFLOAT4(0.0f, 0.0f, 1.0f, 1.0f) },
    { XMFLOAT3(-1.0f, 0.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },

    { XMFLOAT3(0.5f, 1.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 0.0f, 1.0f, 1.0f) },
    { XMFLOAT3(0.5f, -1.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },

    { XMFLOAT3(-1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(0.5f, -1.0f, 0.5f), XMFLOAT4(0.0f, 0.0f, 1.0f, 1.0f) },
    { XMFLOAT3(-0.5f, -1.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },
};
```

3,在DrawScene函数中,将绘制的顶点数修改为12

```
m_pd3dImmediateContext->Draw(12, 0);
```

结果:



方法二:使用正六边形的六个顶点连续构造三角形,从而填充成一个正六边形

下述操作均在GameApp.cpp中进行

1,在InitResource函数中,将图元类型修改为:D3D11_PRIMITIVE_TOPOLOGY_TRIANGLESTRIP

```
m_pd3dImmediateContext->IASetPrimitiveTopology(D3D11_PRIMITIVE_TOPOLOGY_TRIANGLESTRIP);
```

2,在顶点缓冲区根据所需构造的连续三角形输入正六边形的六个顶点

```
VertexPosColor vertices[] =
{
    //方法二:采用等六边形的六个顶点组成连续的三角形
    { XMFLOAT3(-0.5f, 0.99f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(0.5f, 0.99f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },
    { XMFLOAT3(1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(0.5f, -1.0f, 0.5f), XMFLOAT4(0.0f, 0.0f, 1.0f, 1.0f) },
    { XMFLOAT3(-0.5f, -1.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },
    { XMFLOAT3(-1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(-0.5f, 0.99f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(1.0f, 0.0f, 0.5f), XMFLOAT4(0.0f, 1.0f, 0.0f, 1.0f) },
    { XMFLOAT3(-0.5f, -1.0f, 0.5f), XMFLOAT4(1.0f, 0.0f, 0.0f, 1.0f) },
};
```

3,在DrawScene函数中,将绘制的顶点数修改为9

```
m_pd3dImmediateContext->Draw(9, 0);
```

结果: