// MinTuts/Procedural Terrain.shader

```
Shader "MinTuts/Procedural Terrain" {
  SubShader {
    Pass {
      CGPROGRAM

        #pragma vertex   vert
        #pragma fragment frag

        #include "UnityCG.cginc"

        struct v2f {
          float4 pos  : SV_POSITION;
          float3 wpos : POSITION1;
        };

        v2f vert(float4 vertex : POSITION) {
          v2f o;

          o.pos  = UnityObjectToClipPos(vertex);
          o.wpos = mul(unity_ObjectToWorld, vertex);

          return o;
        }

        float4 frag(v2f i) : COLOR {
          float  p = i.wpos.y * 0.015;
          float3 y = float3(p, p, p);

          return float4(y, 1);
        }

      ENDCG
    }
  }
}
```

Here we are defining the **vert** function…
specified by the **#pragma** definition
from earlier
This function has a *single* argument…
of the type **float4**…
with a **semantic** filter of **POSITION**
(*the same semantic meaning as* ***SV_POSITION***)…
returning the **v2f** structured data type
defined earlier

The expanded name of **v2f**, vertex2fragment,
communicates something crucially *important*
about what this function returns
It is the *output of* the **vert** function,
and the *input to* the **frag** function
This data has a single purpose: *pass data*
from the **vertex** function… to the **fragment**
function

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```

First things first: create our output data structure