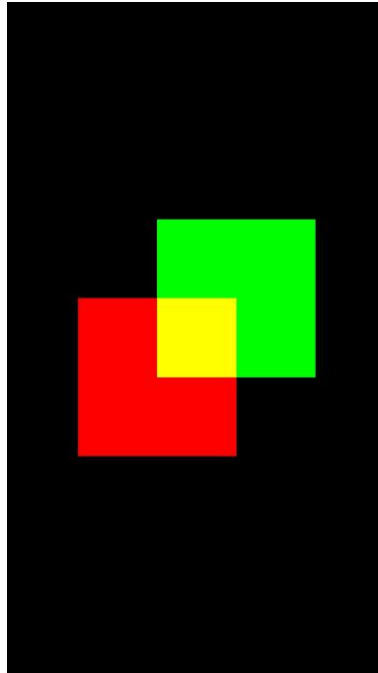


## Android - OpenGL ES 2 - Tutorial 7

### Blending Colors

In the following screenshot, the two squares have a common area and their colors are mixed:



To achieve this, just enable the operation and define the mixing mode. We do this in the "onSurfaceCreated()" method:

```
// Enable blending.  
GL_ES20.glEnable (GL_ES20.GL_BLEND) ;  
// Blending function.  
GL_ES20.glBlendFunc (GL_ES20.GL_ONE, GL_ES20.GL_ONE) ;
```

The general formula is:

$$\text{output} = (\text{source factor} * \text{source fragment}) + (\text{destination factor} * \text{destination fragment})$$

where:

- source factor is the first parameter of the function (GL\_ONE)
- source fragment is the green square
- destination factor is the second parameter of the function (GL\_ONE)
- destination fragment is the red square

In our case, the RGBA components of the green square are multiplied by 1 and added to the RGBA components of the red square multiplied by 1.

To obtain the transparency effect when two textures are overlapped:



we have to set the function as follows:

```
// Blending function.  
GLS20.glBlendFunc(GLS20.GL_ONE, GLS20.GL_ONE_MINUS_SRC_ALPHA);
```