

How can I extract the color from a solid color GDI brush?

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Suppose you have a GDI `HBRUSH` and you suspect that it is a solid color brush. How can you confirm this suspicion and, if true, get the underlying color?

You can ask the `GetObject` function to peek inside the brush.

```
COLORREF GetBrushColor(HBRUSH brush)
{
    LOGBRUSH lbr;
    if (GetObject(brush, sizeof(lbr), &lbr) != sizeof(lbr)) {
        // Not even a brush!
        return CLR_NONE;
    }
    if (lbr.lbStyle != BS_SOLID) {
        // Not a solid color brush.
        return CLR_NONE;
    }
    return lbr.lbColor;
}
```

Given a brush, the `GetObject` function gives you basic information about the brush. The `lbStyle` member tells you what kind of brush you have. In our case, we are interested in solid color brushes.

If we do have a solid color brush, then the `lbColor` tells the underlying color.

We can run a few simple tests to confirm that this works:

```
COLORREF clr;

// This returns clr == RGB(0,0,0)
clr = GetBrushColor((HBRUSH)GetStockObject(BLACK_BRUSH));

// This returns clr == RGB(64,64,64)
clr = GetBrushColor((HBRUSH)GetStockObject(DKGRAY_BRUSH));

// This returns clr == RGB(1,2,3)
HBRUSH brush = CreateSolidBrush(RGB(1, 2, 3));
clr = GetBrushColor(brush);
DeleteObject(brush);

// This returns clr == GetSysColor(COLOR_INFOBK)
clr = GetBrushColor(GetSysColorBrush(COLOR_INFOBK));

// This returns clr == CLR_NONE, not a solid color brush
clr = GetBrushColor((HBRUSH)GetStockObject(HOLLOW_BRUSH));
```

If you want to understand brushes that aren't solid color brushes, you can dig into the `lbHatch` member. It contains additional information that describes the brush, the format of which varies depending on the `lbStyle`.

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