

# Introduction to Photoshop Tutorial Supplement

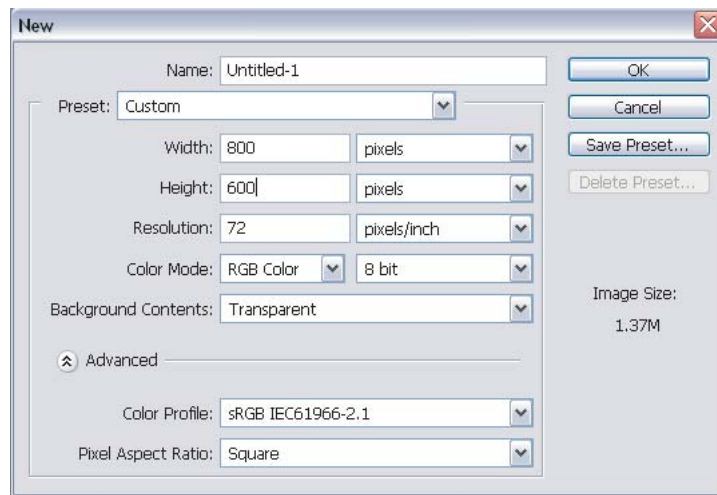
Haas Computing Services

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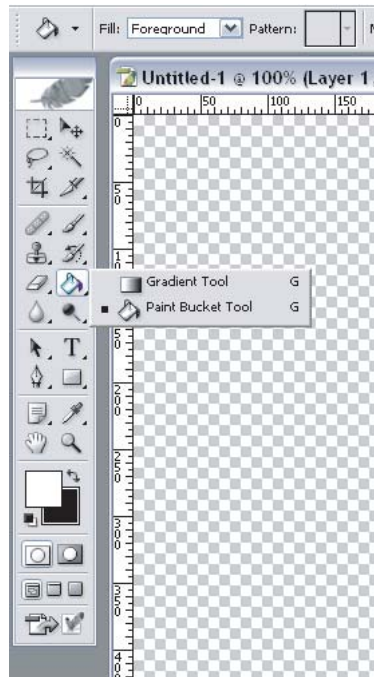
## 1 Making an Image From Scratch

We'll briefly demonstrate a very simple example of Photoshop's ability to create interesting images entirely from scratch, rather than merely editing existing image material. We'll be creating a colorized lightning bolt.

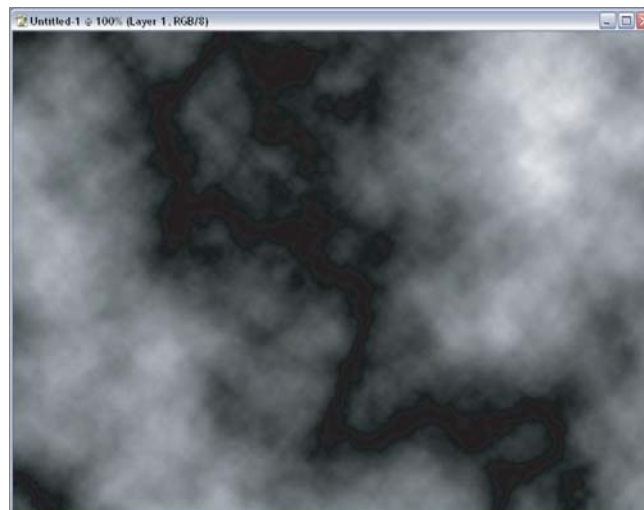
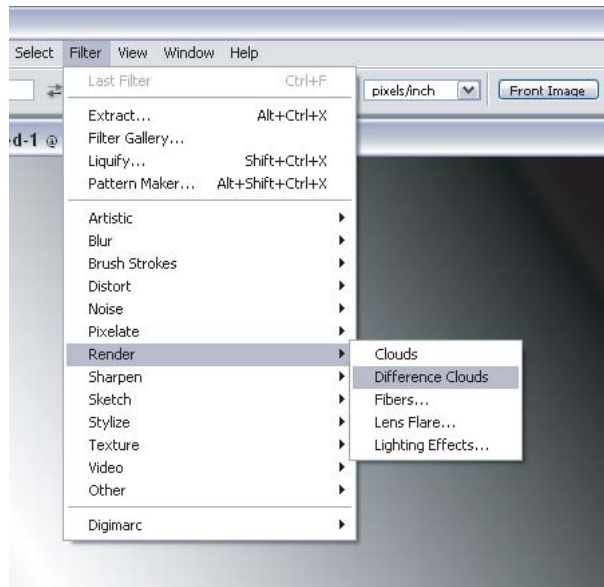
First, create a new image. Make it 800 x 600 pixels in size, at 72 pixels/inch (recall this is the resolution of a monitor), and make the background contents transparent. Make sure the color mode is RGB.



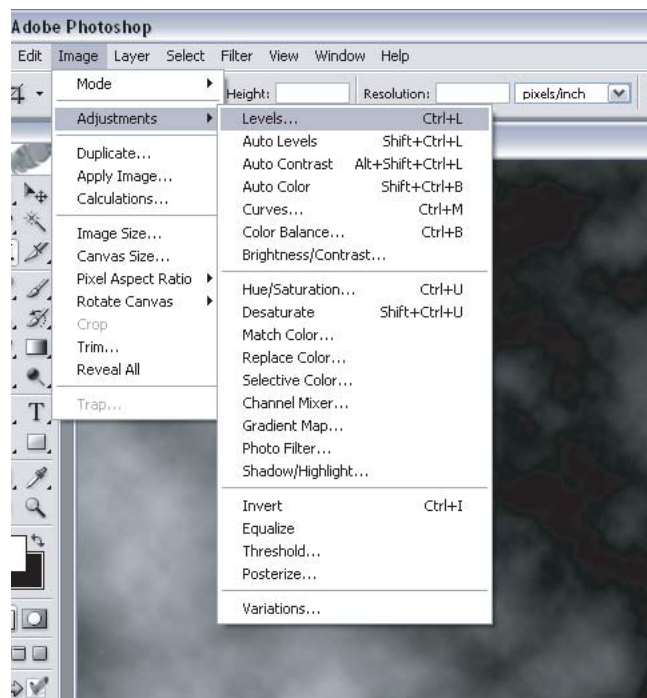
Now, find the gradient tool, and drag a black and white gradient in any direction across the canvas. Some kind of diagonal gradient tends to work best for this.

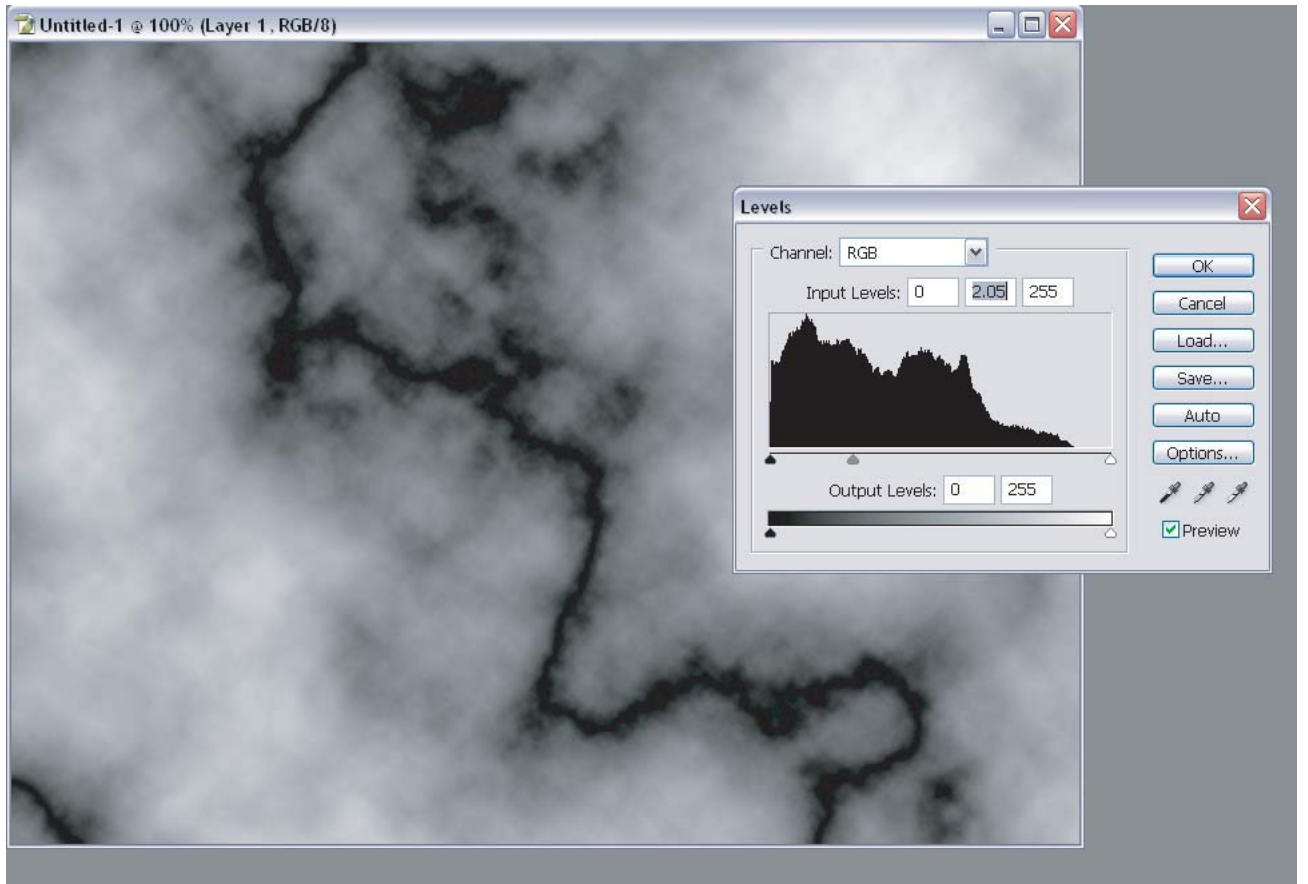


We'll now apply a filter to our image which will turn our gradient into a cloudy image, but with a faint hint of a lightning bolt running across the center. Go to Filter → Render → Difference Clouds.

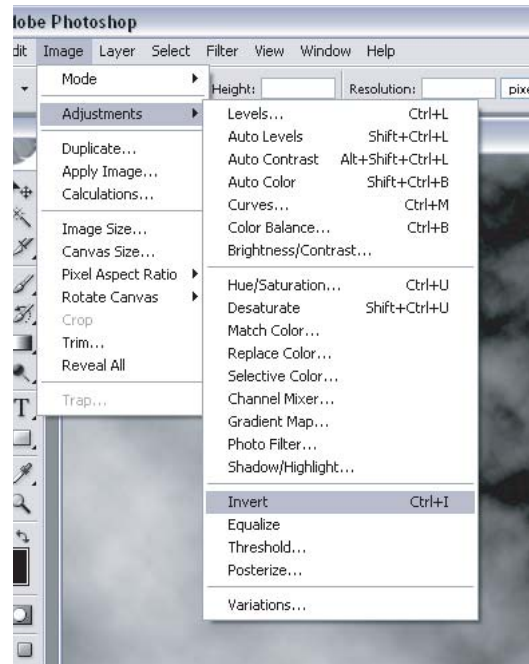


The lightning bolt isn't particularly visible, so we're going to do a few edits. Go to **Image** → **Adjustments** → **Levels**, and then drag the middle slider to the left and right until the lightning bolt in the center becomes more pronounced.



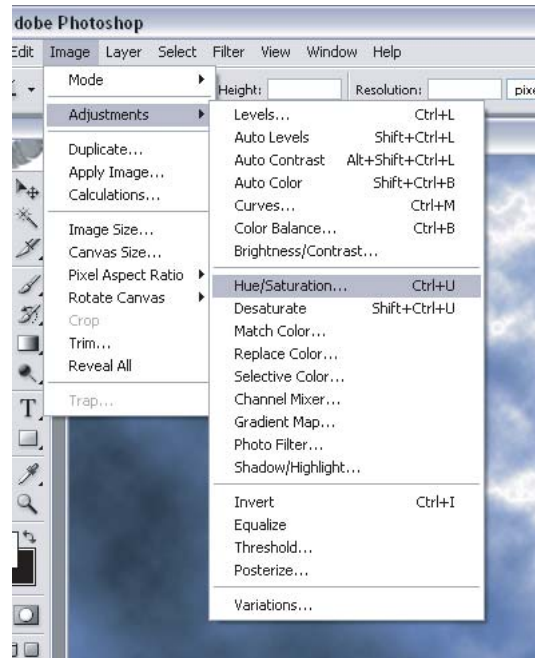


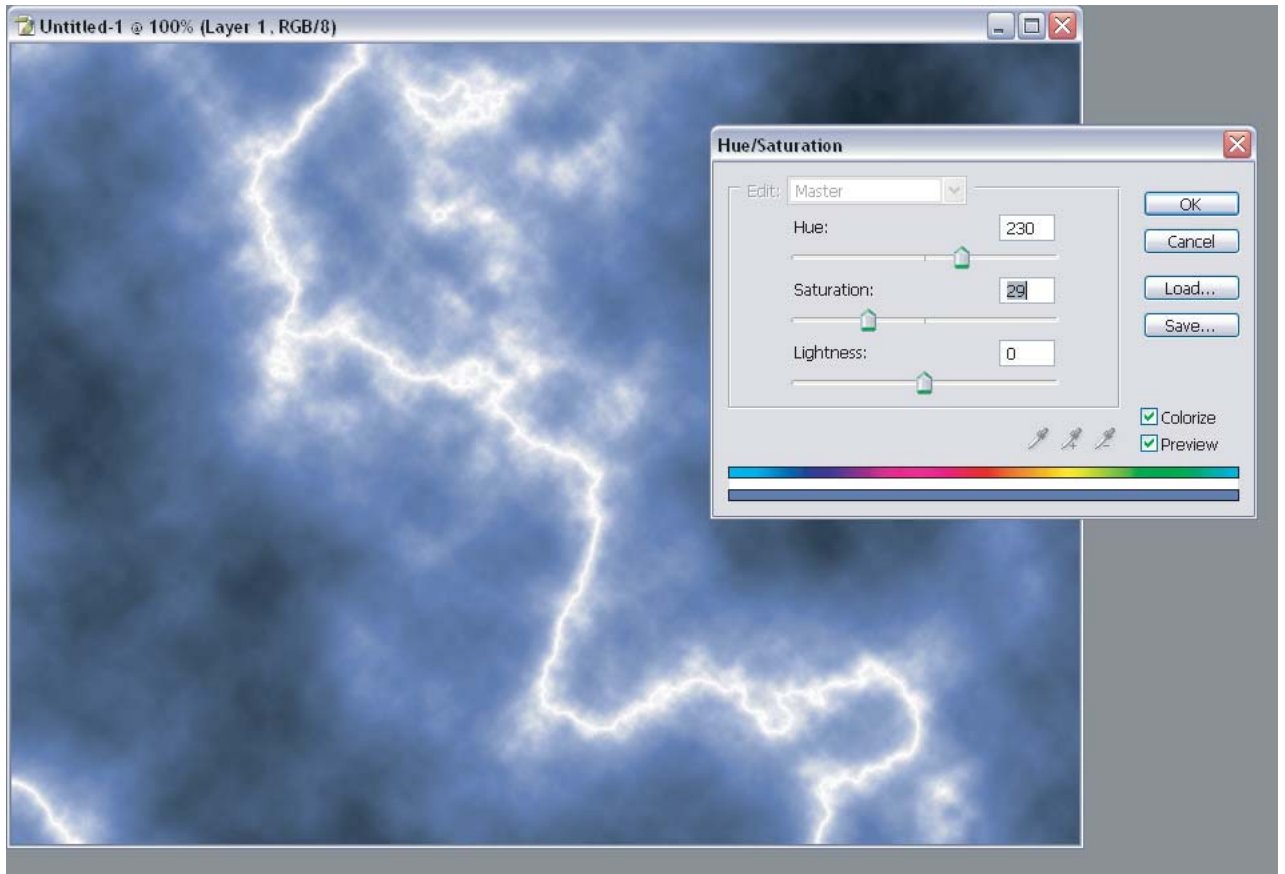
However, we want the lightning bolt to be the light part of the image, and the rest of it dark, instead of the way we have it now. We can achieve this by inverting all the colors in the image. Go to **Image** → **Adjustments** → **Invert**. This flips every pixel's color to its negative color. For black and white images, this just takes black to white and white to black. For colored images, the inversion behavior is more complicated, and will make your image look like a film negative.



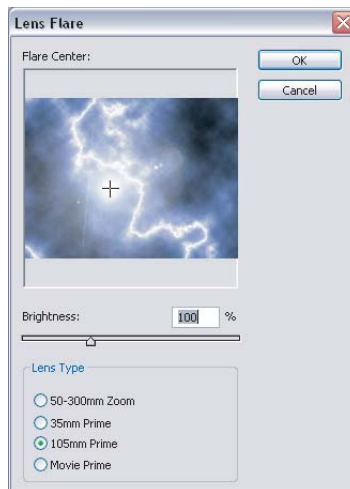
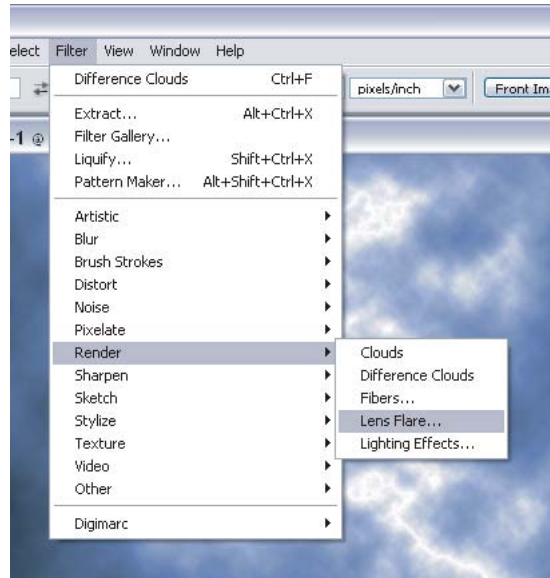


Now that the lightning bolt is light like we want, we should colorize the image. Go to **Image** → **Adjustments** → **Hue/Saturation**. Click the box that says **Colorize**, and then drag the color slider back and forth until you arrive at a color that you like. Adjusting the saturation and lightness sliders will affect the intensity of the color. When you are satisfied, click **OK**.





We're almost done. As a finishing touch, we're going to add a lens flare for effect. Go to **Filter** → **Render** → **Lens Flare**. Choose any option that looks good, and adjust the intensity as desired. You can also click in the image preview window to select where on the image for the lens flare to occur.



When satisfied, click OK. Voila, we've created a classy lightning bolt from scratch.

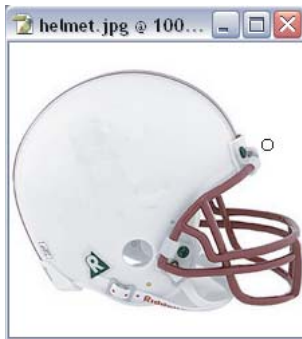


## 2 Retouching an Image

We'll explore two simple but highly effective methods of retouching: the heal tool and the rubber stamp tool.

The rubber stamp tool allows you to sample from one part of your image, and then paint from that sample area onto a new part of the image. This is extremely useful for, say, painting out your ex's face from a photo of the two of you. You would sample the background of the image and use it to paint over the face. In our example, we'll remove the logo of the over-rated school from across the bay from their own football helmet. Open up the image `helmet.jpg`. Find the rubber stamp tool and select it. Now, hold `alt` and click on a white area of the helmet. This selects the center of the sampling area. Now, just regularly click and drag on the logo part of the helmet, and you will begin painting from the sample area. Notice how the cross moves in parallel with your cursor—the position of the cross indicates which area of the image is being sampled from at that moment. If the cross starts leaving the white area, you'll accidentally paint something else on to the helmet. Just stop and `alt`-click again to reset your sample area to the white area once again. Continue repeating this until the logo is entirely painted over with white.





A tool related to the rubber stamp tool is the heal tool. Just as with the rubber stamp tool, you alt-click to select a sample area, and then click and drag to paint from that sample area to another part of the image. However, the heal tool, instead of copying the pixels exactly, preserves much of the color and lighting of the image area that you are painting over. This is *extremely* handy for retouching any kind of minor blemish—for instance, any sort of facial blemish can be painted out in seconds using the heal tool, as well as red-eye and similar photographic problems.

In our example, we're going to retouch probably the most famous birthmark of our time. Open the image `gorbachev.jpg`. Find the heal tool in the tools menu (it's the band-aid icon). Now, alt-click to sample an area on his forehead very near to the birthmark, so that you're sampling an area of similar color. Now start painting over the birthmark. Notice that while you're painting, what you're doing appears identical to using the rubber stamp tool. But watch what happens when you're done painting and you release the mouse button! Photoshop recalculates the shading, giving a very convincing retouching. Continue painting, stopping to resample as necessary, until you're satisfied.

