



Adobe Photoshop CC 2015

Part 2: Editing and Manipulating Photographs

Spring 2016, Version 1

Table of Contents

Introduction.....	2
Downloading the Data Files.....	2
Correcting and Enhancing Digital Images.....	2
Adjusting Color, Contrast, and Tonal Range Using Preset Adjustments	2
Dealing with Common Issues in Digital Photography.....	3
Removing Color Casts	3
Bringing the Subject Out of the Shadows.....	4
Fixing Underexposed and Overexposed Images	6
Selective Editing.....	7
Using Layer Masks	7
Burning and Dodging	9
Correcting Image Distortion	10
Retouching Photographs	11
Removing Dark Under Eye Circles	11
Removing Hot and Bald Spots	11
Brightening Yellow Teeth	12
Diminishing Love Handles and Double Chins	13
Airbrushing	14
Sharpening Images.....	16
Creating a Panoramic Image from Several Shots	17
Converting Color Photographs to Black and White Images	18
Uploading High Resolution Images to the Web	19

Introduction

Adobe Photoshop CC 2015 is a photo editing program that pushes the boundaries of digital imaging and editing. While widely used by professional photographers as well as web and graphic designers, Photoshop can also provide a creative outlet for amateurs, enthusiasts, and artists alike. Part one of this three part series covers the basics of image editing such as resizing, cropping, rotating, and automatic adjustments. It also gives step-by-step instructions on repairing red eye, dust, and skin imperfections. Part two covers in detail how to color correct and adjust the tonal range of an image; airbrush, sharpen, and retouch photographs; and convert images to black and white. Uploading high-resolution image files using the Zoomify feature is also covered.

Downloading the Data Files

This handout includes sample data files that can be used to follow along the steps. If you plan to use the data files, download the following ZIP file to your computer and extract the files. It is recommended to save the data files on your desktop for easy access.

- [Adobe Photoshop CC 2015 Part 2 Data Files](#)

Correcting and Enhancing Digital Images

Photoshop offers a comprehensive set of tools for color correcting, adjusting tonal range, and sharpening the overall focus of an image. Before editing, it is highly recommended to duplicate the original image and work from a copy. Also, before removing color casts and/or adjusting the overall contrast and tonal range of an image, complete the following steps: check the image resolution and document size; resize if necessary; rotate; crop; and repair flaws such as dust and stains.

Adjusting Color, Contrast, and Tonal Range Using Preset Adjustments

The **Adjustments** panel offers an extensive list of presets (Levels Presets, Curves Presets, Exposure Presets, Hue/Saturation Presets, Black & White Presets, Channel Mixer Presets, and Selective Color Presets). Sometimes an image only needs one adjustment; other times it may need several. There are two ways to apply an adjustment. It can either be applied directly to the image or as a separate layer. Furthermore, an adjustment layer can affect all visible layers or just the currently selected layer. It all depends on how the adjustment layer is created and set up.

To use preset adjustments:

1. Open the **adjustments_presets.jpg** file.
2. If the **Adjustments** panel is not displayed, click the **Window** menu and select **Adjustments**.
3. If necessary, double-click the **Adjustments** tab to maximize the **Adjustments** panel.
4. In the **Adjustments** panel, click the **Curves** icon  (see Figure 1). The **Curves Properties** panel displays, and a new **Curves 1** adjustment layer is added in the **Layers** panel.
5. Select **Cross Process (RGB)** from the **Preset** drop-down list to see the effect on the image.
6. Select **Color Negative (RGB)** from the **Preset** drop-down list to see the effect on the image.

NOTE: To remove either one of these adjustments, right-click the adjustment layer in the **Layers** panel and select **Delete Layer**.

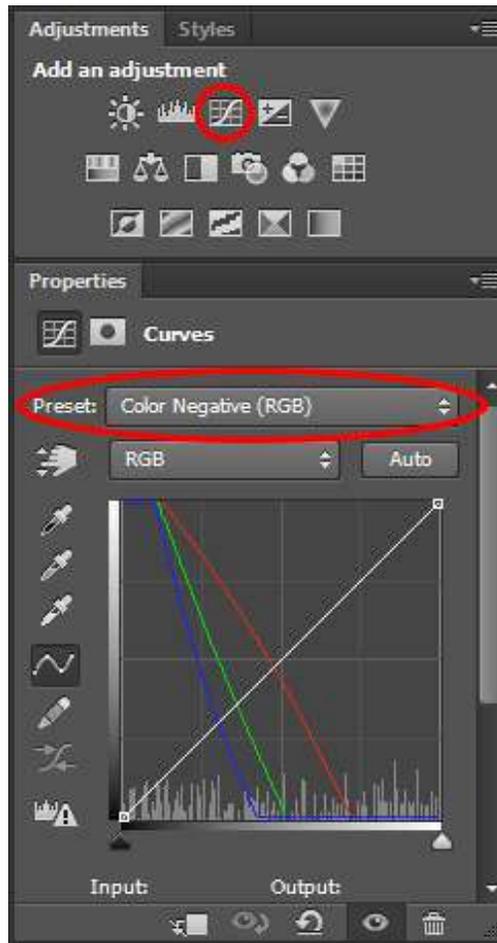


Figure 1 – Curves Presets in the Adjustments Panel

Dealing with Common Issues in Digital Photography

Photoshop's assortment of tools provides a way to salvage photos that would otherwise be cast into the abyss.

Removing Color Casts

Most cameras are set to **Auto White Balance** by default. However, white balance can be set in the camera to reflect the environment in which the photograph is being taken (e.g., daylight, tungsten, fluorescent, flash, cloudy, and shade). An image's white balance has two components. The first component is temperature and the second is tint. The temperature measures the coolness (blue-green tones) or the warmth (yellow-red tones) of an image. The tint compensates for magenta or green color casts in the image.

To remove color casts in JPEG and TIFF image files:

1. Click the **File** menu and select **Open As**.
2. In the **Open** dialog box, locate and select the **removing_colorcast.tif** file.
3. Click the **Open As** arrow and select **Camera Raw** from the list.
4. Click the **Open** button. The **Camera Raw 9.1** dialog box opens.
5. In the **Basic** panel, click the **White Balance** arrow and select **Auto** from the list (see Figure 2).
6. Click the **Auto** link located above the **Exposure** slider.

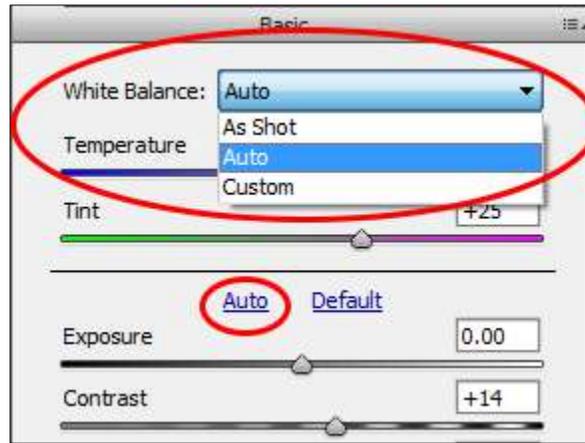


Figure 2 – Basic Panel of Camera Raw 9.1

7. Select the **Red Eye Removal Tool**  on the **Camera Raw** toolbar (see Figure 3).

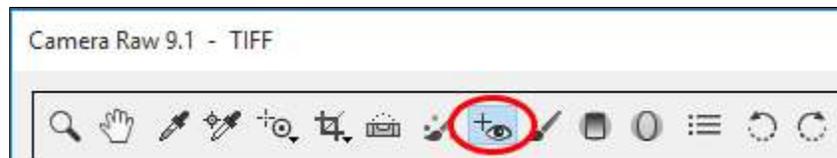


Figure 3 – Red Eye Removal Tool on the Camera Raw Toolbar

8. Drag a selection around each red eye.
9. In the **Red Eye Removal** panel, deselect the **Show Overlay** check box.
10. Drag the **Darken** slider to the right until the subject's red eyes disappear (see Figure 4).

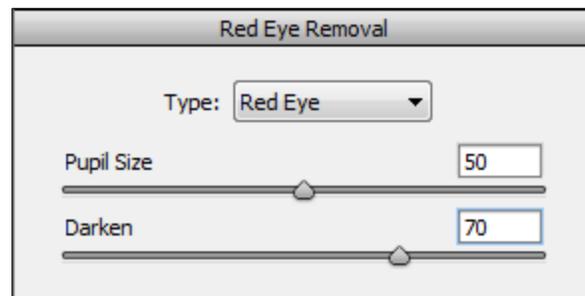


Figure 4 – Red Eye Removal Panel

11. Do one of the following:
 - To open the image in Photoshop, click the **Open Image** button.
 - To save the changes and close the image, click the **Done** button.

Bringing the Subject Out of the Shadows

All too often, snapshots end up with the subjects being in the shadows. Photoshop has made it possible to recover these otherwise ruined photographs.

To use the Shadows/Highlights adjustment:

1. Open the **shadows_highlights.jpg** file.
2. Click the **Image** menu, point to **Adjustments**, and select **Shadows/Highlights** (see Figure 5).

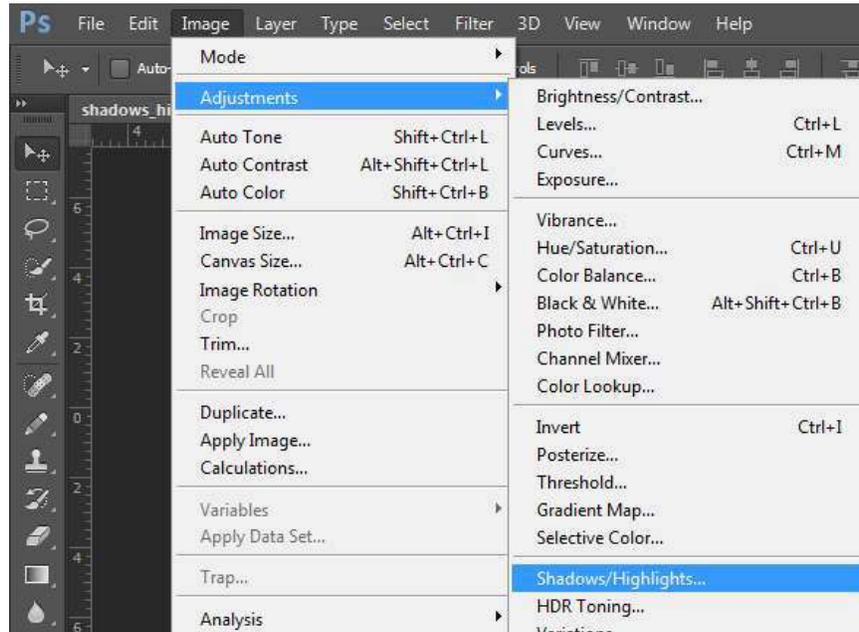


Figure 5 – Image Menu When Selecting Shadows/Highlights

3. The **Shadows/Highlights** dialog box opens. If you are satisfied with the default correction, click the **OK** button. Or, if you want to make further adjustments, select the **Show More Options** check box to expand the dialog box (see Figure 6).
4. In the **Adjustments** section, drag the **Color** slider to **+45**.

NOTE: Deselect and select the **Preview** check box to see the image before and after the adjustment is applied.

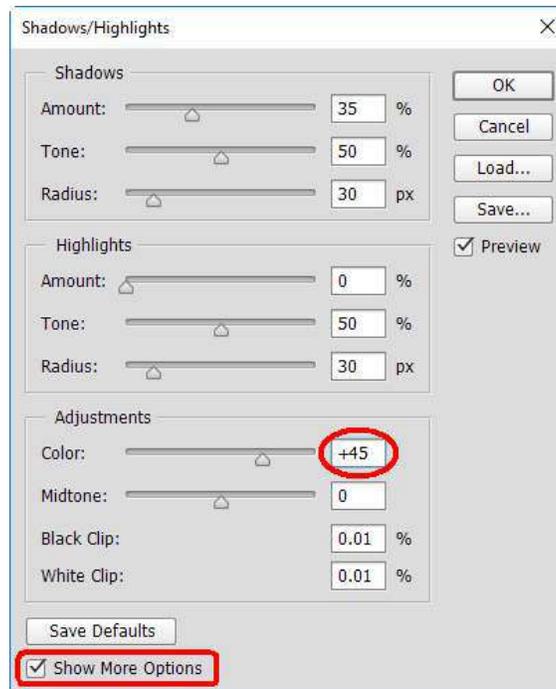


Figure 6 – Shadow/Highlights Dialog Box

5. Click the **OK** button to apply the changes.

NOTE: To add more contrast and color saturation, add a **Levels** adjustment layer.

Fixing Underexposed and Overexposed Images

Even with a digital camera, users will often experience underexposed (i.e., too dark) or overexposed (i.e., too bright) images. The following steps resolve these issues by utilizing respective blend modes in the Layers panel.

NOTE: With overexposed images, the details might not be retrievable. So it is always better to be underexposed than overexposed.

To fix underexposed images:

1. Open the **underexposed.jpg** file.
2. In the **Layers** panel, right-click the **Background** layer and select **Duplicate Layer**.
3. In the **Duplicate Layer** dialog box, type **Screen** in the **As** box to rename the layer (see Figure 7).
4. Click the **OK** button.

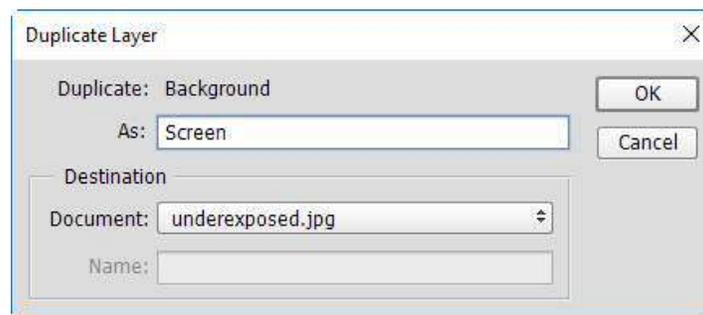


Figure 7 – Duplicate Layer Dialog Box

5. In the **Layers** panel, click the **Blending Mode** arrow and select **Screen** (see Figure 8).
6. Right-click the **Screen** layer and select **Duplicate Layer**.
7. In the **Duplicate Layer** dialog box, click the **OK** button.
8. With the **Screen copy** layer selected, click the **Opacity** arrow, and then drag the **Opacity** slider to the left to darken the image a little bit (see Figure 9).

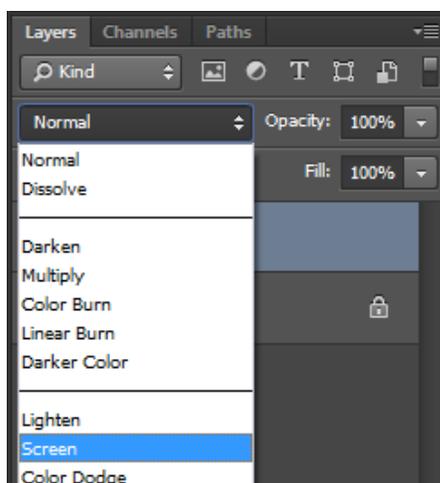


Figure 8 – Blending Mode Menu

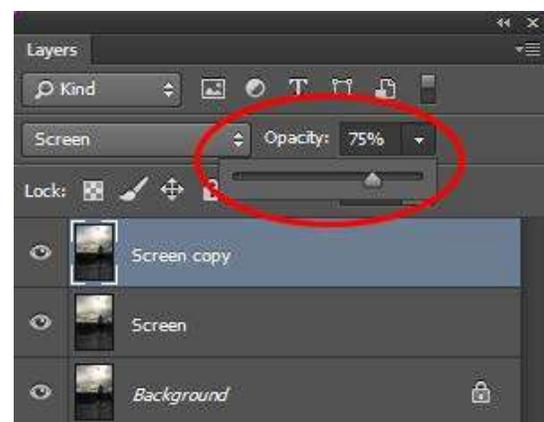


Figure 9 – Opacity Slider

To fix overexposed images:

1. Open the **overexposed.jpg** file.
2. In the **Layers** panel, duplicate the **Background** layer.

3. In the **Duplicate Layer** dialog box, type **Multiply** in the **As** box to rename the layer (see Figure 10).
4. Click the **OK** button.

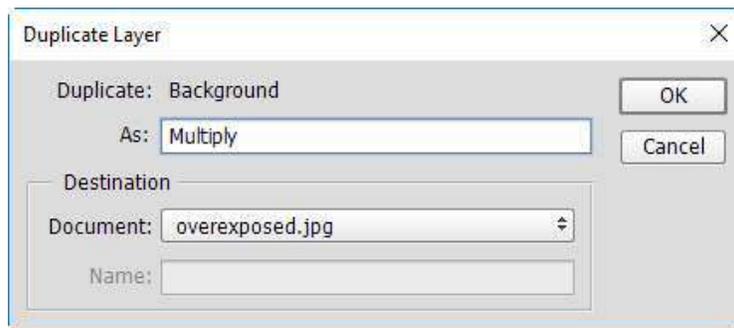


Figure 10 – Duplicate Layer Dialog Box

5. With the **Multiply** layer selected, click the **Blending Mode** arrow and select **Multiply** (see Figure 11).

NOTE: Duplicating the **Multiply** layer again will darken the image even more.

6. With the **Multiply** layer selected, click the **Opacity** arrow, and then drag the **Opacity** slider to the left to lighten the image (see Figure 12).

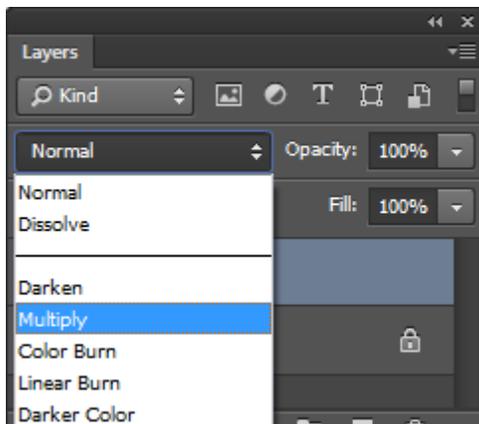


Figure 11 – Blending Mode Menu

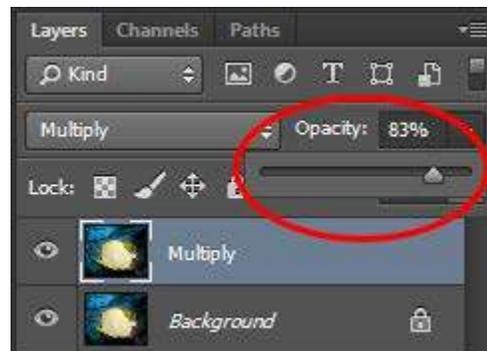


Figure 12 – Opacity Slider

Selective Editing

Often times, a photograph will exhibit only portions of it that need adjusting. The sky may be blown out because it was too bright, but the landscape is perfectly fine. The grass may seem dull, but the rest of the image seems vibrant and alive. Or maybe the subject itself is large and multi-textured, multi-dimensional, or multi-reflective, such as a building, and was overexposed in some parts while underexposed in others. Whatever the case, selective editing is often necessary in escalating an image from ordinary to extraordinary.

Using Layer Masks

Using a separate adjustment layer as opposed to applying an adjustment directly to the image has many advantages. One is the use of the layer mask in applying the adjustment to a selected part of the image while keeping the rest intact.

To use layer masks:

1. Open the **layer_mask.jpg** file.
2. Click the **Image** menu and select **Auto Tone**.
3. In the **Adjustments** panel, click the **Channel Mixer** icon  (see Figure 13). The **Channel Mixer Properties** panel displays.
4. Click the **Output Channel** arrow and select **Green** from the list (see Figure 14).
5. Drag the **Green** slider to the right to make the field greener.

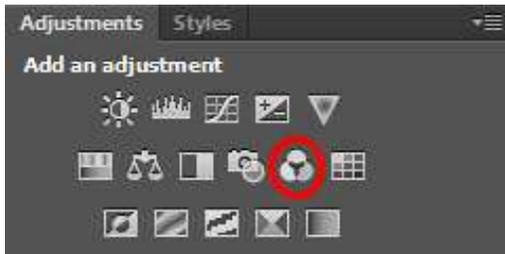


Figure 13 – Adjustments Panel



Figure 14 – Channel Mixer Properties Panel

6. In the **Layers** panel, click the **Channel Mixer 1** layer mask, not just the layer itself (see Figure 15).

NOTE: The layer mask is selected when a second border surrounds it.

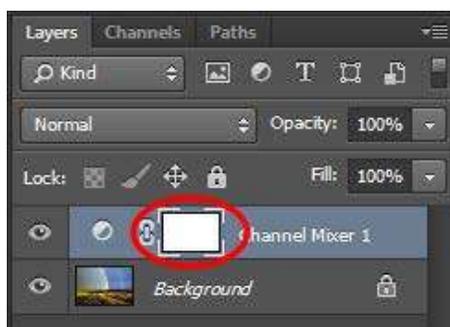


Figure 15 – Channel Mixer Layer Mask

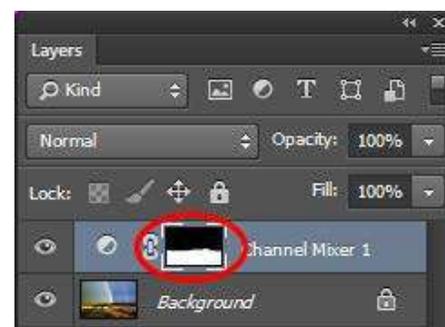


Figure 16 – Channel Mixer Layer Mask with Selective Editing

7. In the **Tools** panel, set the **Foreground** color to black, and then select the **Brush Tool**.
8. Adjust the brush size as needed and paint the sky on the canvas to remove the green cast; however, avoid painting the field.

NOTE: The black area of the **Channel Mixer 1** layer mask represents where the adjustment layer is not affecting the image (see Figure 16).

Burning and Dodging

Burning and dodging are techniques used in photography to fix portions of an image that may be underexposed or overexposed. Photoshop offers actual **Burn** and **Dodge** tools; however, they are not as effective as using the following technique.

To burn and dodge an image:

1. Open the **burn_dodge.jpg** file.
2. In the **Adjustments** panel, click the **Levels** icon . The **Levels Properties** panel displays, and a new **Levels 1** adjustment layer is added in the **Layers** panel.
3. In the **Levels Properties** panel, drag the **Shadow** slider slightly to the right and the **Highlight** slider to the left (see Figure 17).

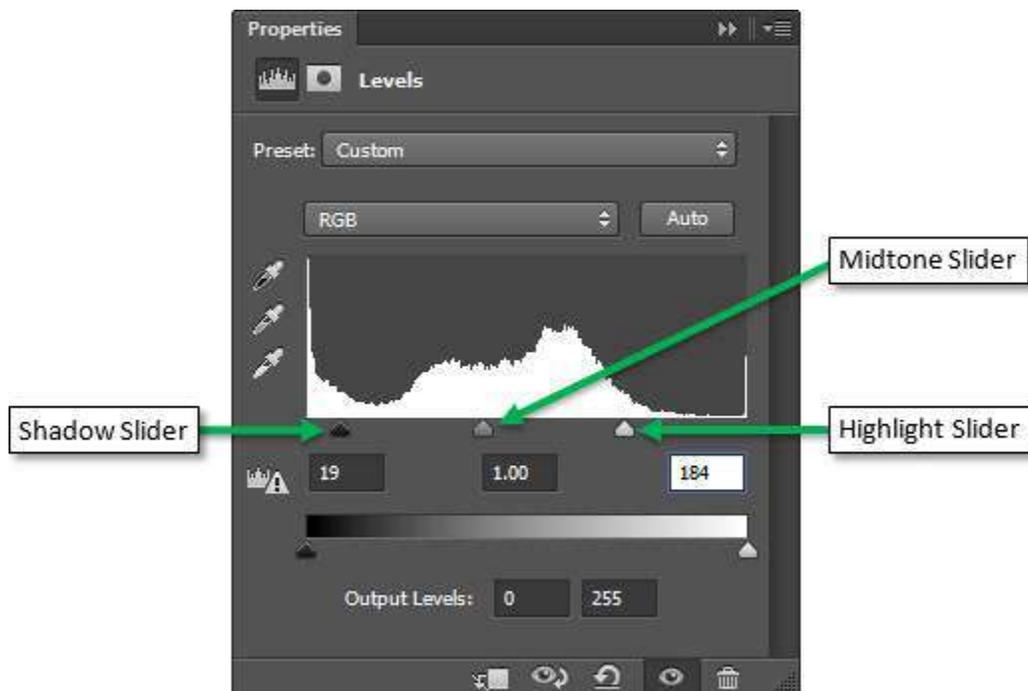


Figure 17 – Levels Properties Panel

4. In the **Layers** panel, select the **Levels 1** layer mask (see Figure 18).

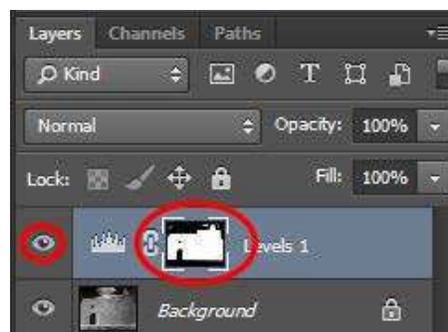


Figure 18 – Levels 1 Layer Mask

5. In the **Tools** panel, set the **Foreground** color to black, and then select the **Brush Tool**.
6. Paint the ground, sky, door, and circle window black to turn the adjustment layer off in those areas.

7. Click the eye icon  next to the **Levels 1** layer to show or hide its content in order to compare the before and after effect.

Correcting Image Distortion

A wide-angle lens can distort an image by curving straight lines inward, especially when the photo is taken too close in range to the subject. This is called **barrel distortion**. A **pincushion distortion** causes the image to be pinched towards the center and is a lens effect associated with telephoto lenses. The **Lens Correction** filter can fix both of these lens distortions as well as chromatic aberrations and vignetting.

To use the Lens Correction filter:

1. Open the **barrel_distortion.jpg** file.
2. Click the **Filter** menu and select **Lens Correction**. The **Lens Correction** dialog box opens (see Figure 19).
3. Select the **Remove Distortion Tool**  on the **Lens Correction** toolbar located to the left of the **Preview** window.
4. Select the **Show Grid** check box and set the size to **16**.
5. On the **Custom** tab, drag the **Remove Distortion** slider to the right until the image looks straight.
6. When finished, click the **OK** button.

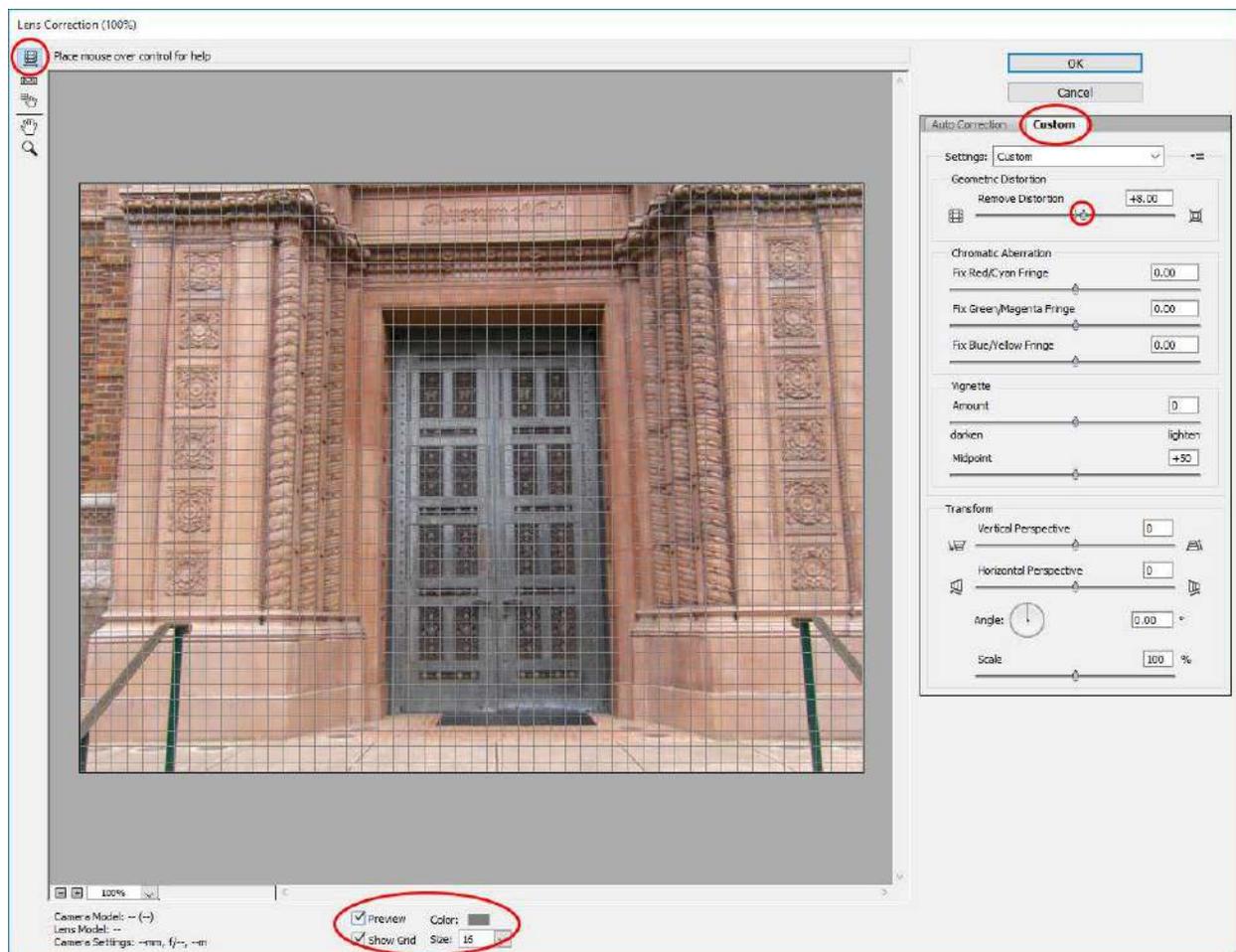


Figure 19 – Lens Correction Dialog Box

Retouching Photographs

Sometimes translating a three dimensional subject to a two dimensional plane can create undesirable effects. Other times it is caused by bad lighting or just a bad day. The following are common scenarios in which Photoshop can make a huge difference with just a few simple steps.

Removing Dark Under Eye Circles

The key to this lesson is learning how to remove dark circles naturally.

To remove dark under eye circles:

1. Open the **remove_dark_circles.jpg** file.
2. Duplicate the **Background** layer, and then select the **Background copy** layer.
3. In the **Tools** panel, select the **Zoom Tool**, and then zoom in on the subject's eyes.
4. In the **Tools** panel, select the **Clone Stamp Tool**.
5. On the **Options** bar, lower the **Opacity** to **40%** (see Figure 20).
6. On the **Options** bar, click the **Mode** arrow and select **Lighten** from the list.

NOTE: Selecting the **Lighten** mode will only affect areas that are darker than the sampled area.

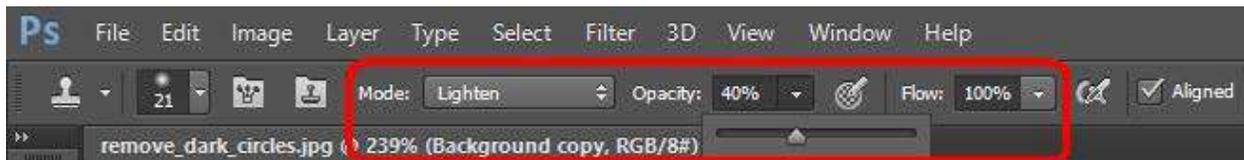


Figure 20 – Clone Stamp Tool Options

7. Press and hold down the **Alt** key and click once in an area near the eye unaffected by the dark circles.
8. Resize the brush as needed.
9. Paint a stroke over the dark circles under the eye.
10. Repeat step 7 if the dark circles do not disappear after one stroke.

Removing Hot and Bald Spots

Flash photography is one culprit of blown out and unwanted spots on the face. Uneven or bright lighting can also reflect off shiny surfaces of the face creating hot spots. The following steps can help remedy this situation. The same technique can be used to cover up bald spots.

To remove hot and bald spots:

1. Open the **remove_hot_spot.jpg** file.
2. Duplicate the **Background** layer, and then select the **Background copy** layer.
3. In the **Tools** panel, select the **Clone Stamp Tool**.
4. On the **Options** bar, lower the **Opacity** to **40%**, and then change the **Mode** to **Darken**.

NOTE: This method will add tone without destroying the detail or texture of the image.

5. Select a medium sized soft-edged brush from the **Brush Preset** picker.
6. Hold down the **Alt** key and click once in an area of the skin with no hot or bald spots.
7. Using the mouse, gently paint over the hot or bald spot and watch it fade away.

Brightening Yellow Teeth

Sometimes it is the lighting and other times it is just too much coffee that causes teeth to appear yellow in pictures.

To whiten yellow teeth:

1. Open the **yellow_teeth.jpg** file.
2. Duplicate the **Background** layer, and then select the **Background copy** layer.
3. In the **Tools** panel, select the **Magnetic Lasso Tool** hidden under the **Lasso Tool** (see Figure 21).
4. Click in an area just outside the teeth, then drag the **Magnetic Lasso Tool** around the edges of the teeth and click back on the first anchor to close the selection (see Figure 22).

NOTE: While dragging the **Magnetic Lasso Tool**, you can click to add more specific anchor points.

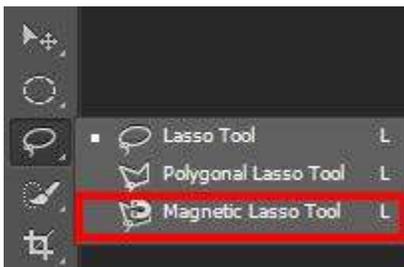


Figure 21 – Magnetic Lasso Tool



Figure 22 – Selected Teeth

5. Click the **Select** menu, point to **Modify**, and select **Feather**.
6. In the **Feather Selection** dialog box, type **1** in the **Feather Radius** box to smooth the edges of the selection (see Figure 23).
7. Click the **OK** button.

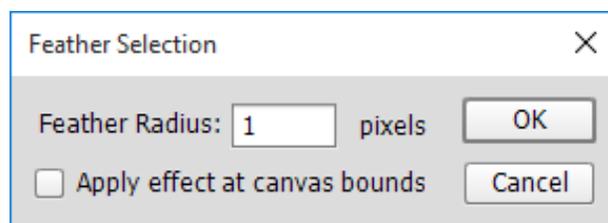


Figure 23 – Feather Selection Dialog Box

8. Click the **Image** menu, point to **Adjustments**, and select **Hue/Saturation**.
9. In the **Hue/Saturation** dialog box, click the **Colors** arrow and select **Yellows** from the list (see Figure 24).
10. Drag the **Saturation** slider to the left until the yellow color on the teeth is removed.
11. Drag the **Lightness** slider to the right to brighten the teeth.
12. Click the **OK** button to apply the adjustment.
13. Click the **Select** menu and select **Deselect**.

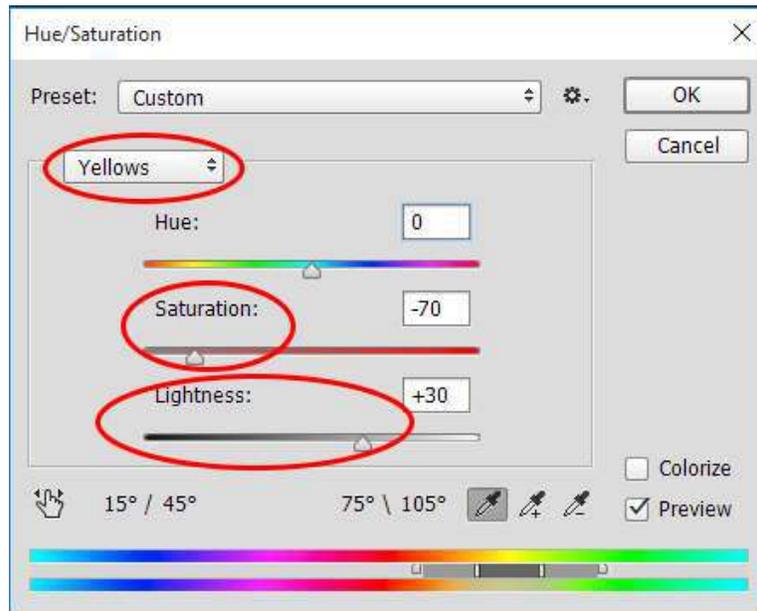


Figure 24 – Hue/Saturation Dialog Box

Diminishing Love Handles and Double Chins

While the tight elasticity of one's bathing suit keeps it on, it also squeezes the flesh causing love handles to appear. And no one can escape the double chin in every snapshot. Photoshop's many tools can eliminate these issues by using the **Pinch** and **Liquify** filters.

To reduce a double chin using the Pinch filter:

1. Open the **double_chin.jpg** file.
2. In the **Tools** panel, select the **Lasso Tool**.
3. Draw a very loose selection around the subject's jaw and lower part of the face on both sides (see Figure 25).
4. Click the **Filter** menu, point to **Distort**, and select **Pinch**.
5. In the **Pinch** dialog box, drag the **Amount** slider to decrease the pinch amount to **40%** (see Figure 26).
6. Click the **OK** button.



Figure 25 – Lasso Tool Selection

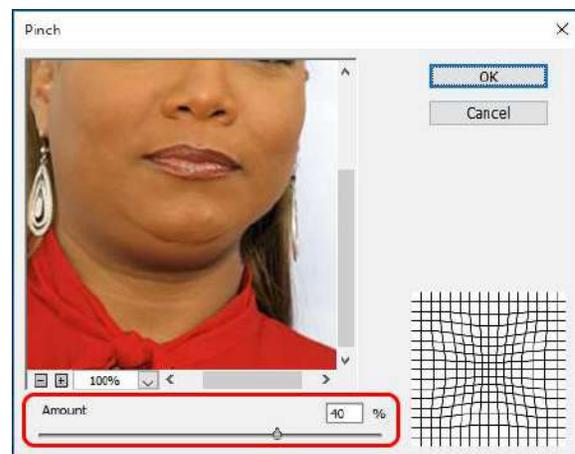


Figure 26 – Pinch Dialog Box

7. Click the **Select** menu and select **Deselect**.

NOTE: If the effect is too subtle, click the **Filter** menu and reapply **Pinch**. The first command on the **Filter** menu is the most recent action taken.

To remove love handles using the Liquify filter:

1. Open the **love_handles.jpg** file.
2. Click the **Filter** menu and select **Liquify**.
3. In the **Liquify** dialog box, select the **Pucker Tool**  on the **Liquify** toolbar located to the left of the **Preview** window (see Figure 27).
4. Under **Brush Tool Options**, change the brush size to **60**.
5. In the **Preview** window, click several times on the subject's love handles to bring them inward.
6. Click the **OK** button.

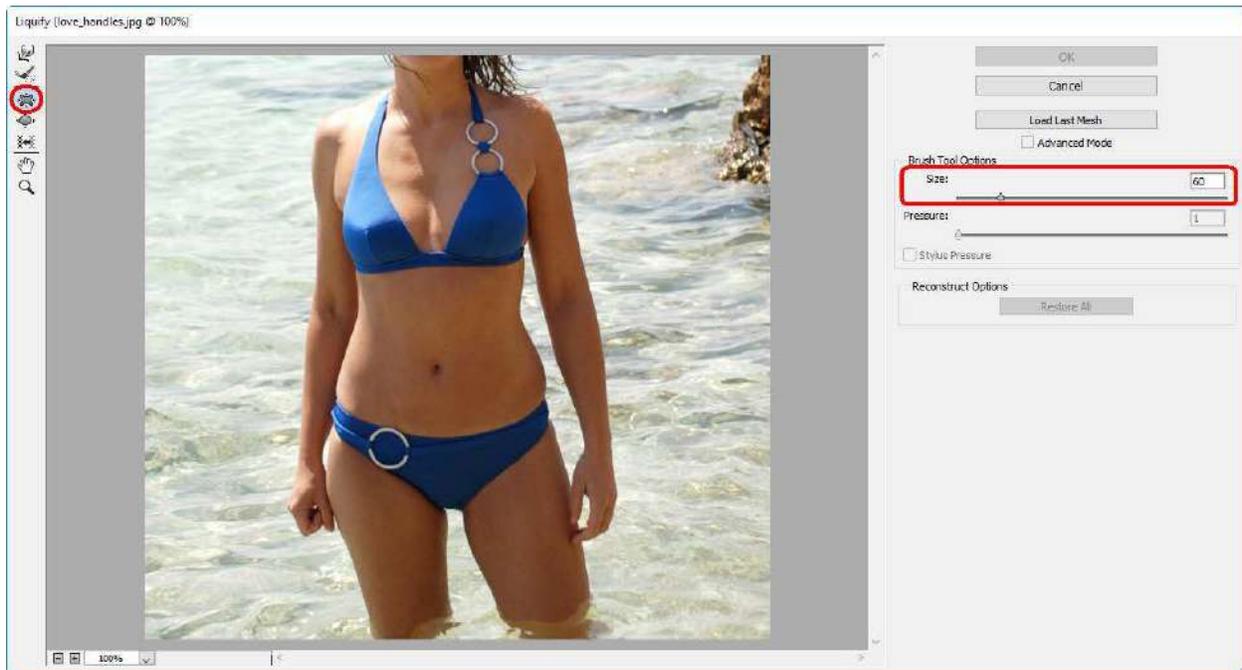


Figure 27 – Liquify Dialog Box

Airbrushing

The following steps incorporate the **History Brush Tool** and a **Noise** filter called **Median** to achieve a flawless airbrushed portrait as seen on magazine covers.

To airbrush facial blemishes and other imperfections:

1. Open the **airbrushing.jpg** file.
2. Duplicate the **Background** layer, rename the duplicated layer to **Airbrush**, and then select the **Airbrush** layer.
3. Click the **Filter** menu, point to **Noise**, and select **Median**. The **Median** dialog box opens.
4. Using the **Preview** window as a guide, drag the **Radius** slider to the right to increase the number of pixels to **20** (see Figure 28).
5. Click the **OK** button.
6. In the **Tools** panel, select the **History Brush Tool** (see Figure 29).

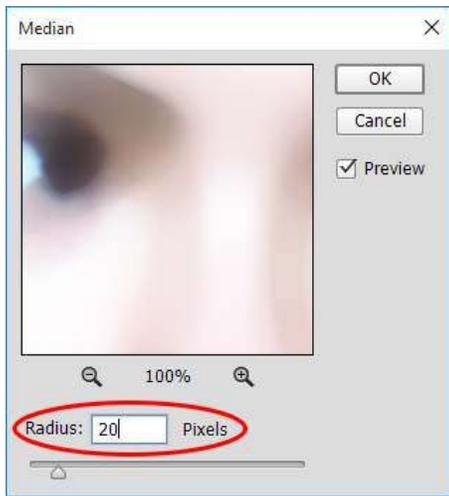


Figure 28 – Median Dialog Box



Figure 29 – History Brush Tool

7. Click the **Window** menu and select **History**.
8. In the **History** panel, select the **Median** state check box. The **History Brush Tool** icon appears in the check box (see Figure 30).
9. In the **History** panel, select the **Duplicate Layer** state (see Figure 31).

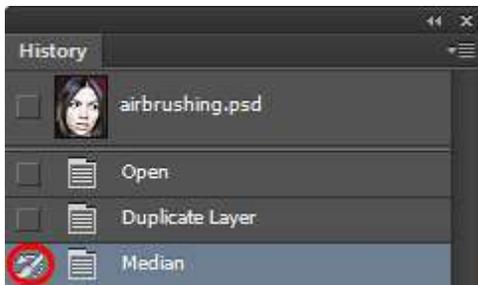


Figure 30 – History Panel

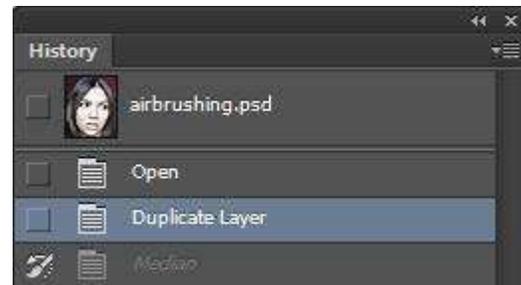


Figure 31 – Duplicate Layer State Selected

10. On the **Options** bar, select a medium sized soft-edged brush from the **Brush Preset** picker (see Figure 32).

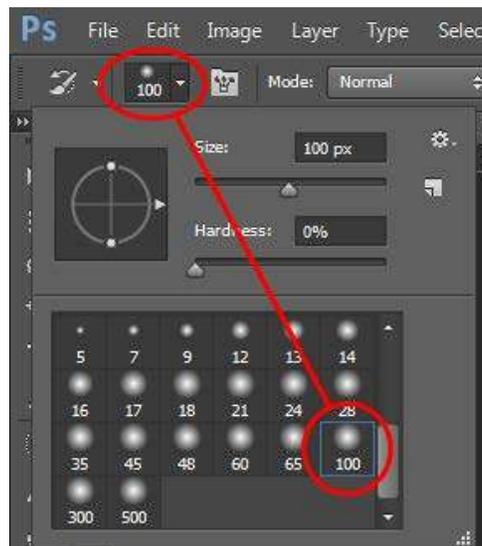


Figure 32 – Brush Preset Picker

11. On the canvas, paint over the facial blemishes.

NOTE: Avoid painting over the eyes, nose, lips, and hair.

Sharpening Images

The last task in correcting and enhancing digital photographs is to sharpen them. Sharpening digital photos helps to bring back some of the original crispness lost during the correction process. In some cases, it can be used to fix images that seem slightly out of focus. Part one covers how to sharpen images before printing. This section delves into using the **Smart Sharpen** filter which can be very useful to sharpen out of focus images.

NOTE: Because today's digital cameras produce large sized files, the proper magnification to view photos during sharpening is 50%.

To use the Smart Sharpen filter:

1. Open the **smart_sharpen.jpg** file.
2. Click the **Filter** menu, point to **Sharpen**, and select **Smart Sharpen**. The **Smart Sharpen** dialog box opens (see Figure 33).

NOTE: **Amount** controls the amount of sharpening and the **Radius** determines how many pixels the sharpening will affect.

3. Lower the **Amount** value to about **60-70%** and set the **Radius** to **1**.

NOTE: For blurrier images, increase the **Amount** as needed. The **Preview** window displays the changes as they occur.

4. Click the **Remove** arrow and select **Lens Blur** which is better at detecting edges, creating less color halos, and gives a better sharpened image.
5. Click the **Set additional options** button , and then select the **Use Legacy** and **More Accurate** check boxes.

NOTE: You can save a copy of the **Smart Sharpen** filter settings by selecting **Save Preset** in the **Preset** list box.



Figure 33 – Smart Sharpen Dialog Box

6. Click the **Shadows/Highlights** arrow to reveal more options (see Figure 34).
7. Drag the **Fade Amount** slider to the right in both the **Shadows** and **Highlights** sections.
NOTE: This reduces the amount of sharpening already applied, therefore adjust very slightly.
8. Click the **OK** button.

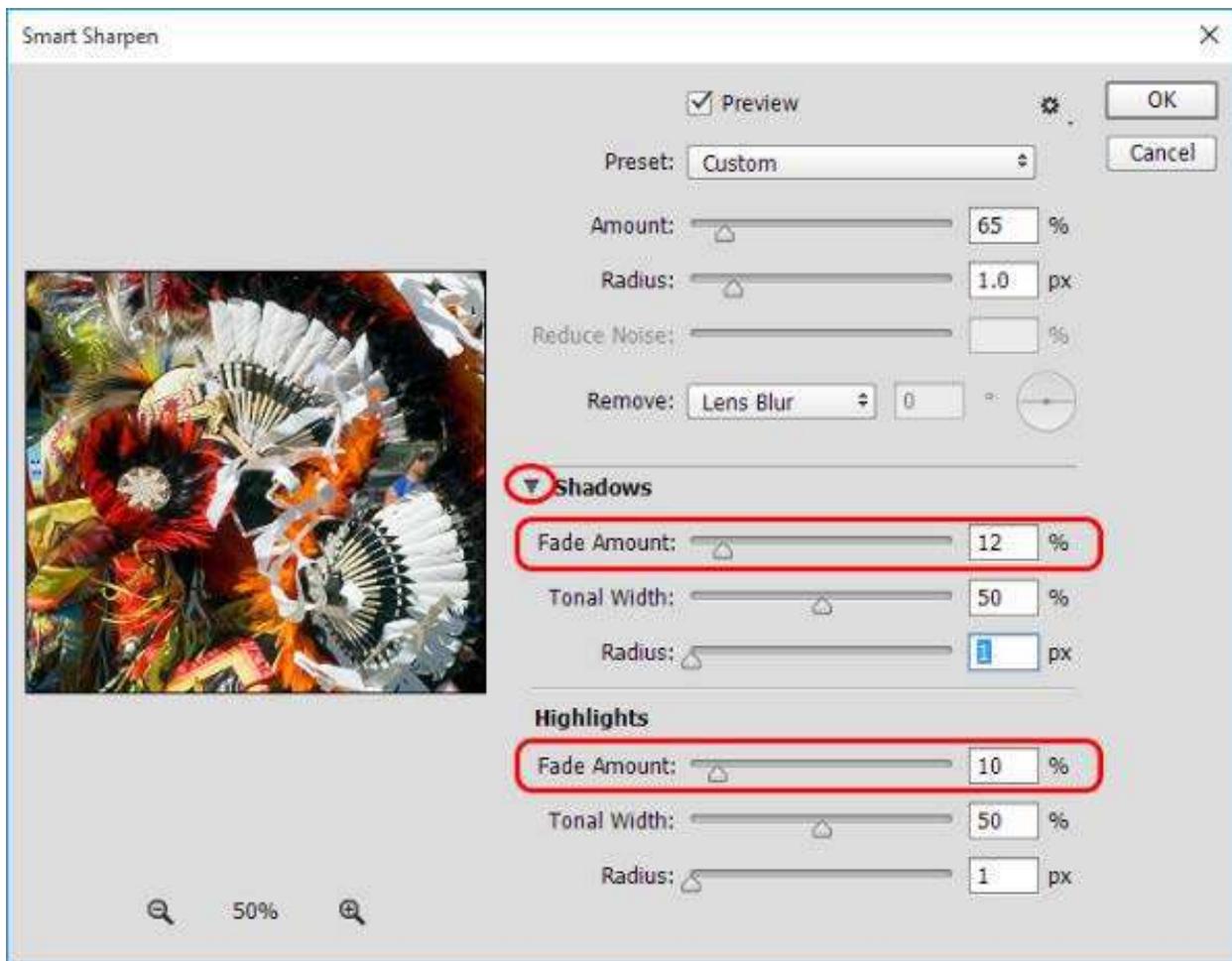


Figure 34 – Shadows and Highlights Settings in the Smart Sharpen Dialog Box

Creating a Panoramic Image from Several Shots

Photoshop has several automated features, one of which is **Photomerge**. Photomerge takes several photos and combines them into a single image. Whether the composite is of two or seven images, Photomerge stacks all selected images into one document, aligns them, and then blends them together into one seamless image.

To use Photomerge:

1. Click the **File** menu, point to **Automate**, and select **Photomerge**.
2. In the **Photomerge** dialog box, click the **Browse** button (see Figure 35).
3. In the **Open** dialog box, locate and select the **panoramic_01.jpg**, **panoramic_02.jpg**, **panoramic_03.jpg**, and **panoramic_04.jpg** files.
4. Click the **OK** button.
5. In the **Photomerge** dialog box, select the **Auto** option button.

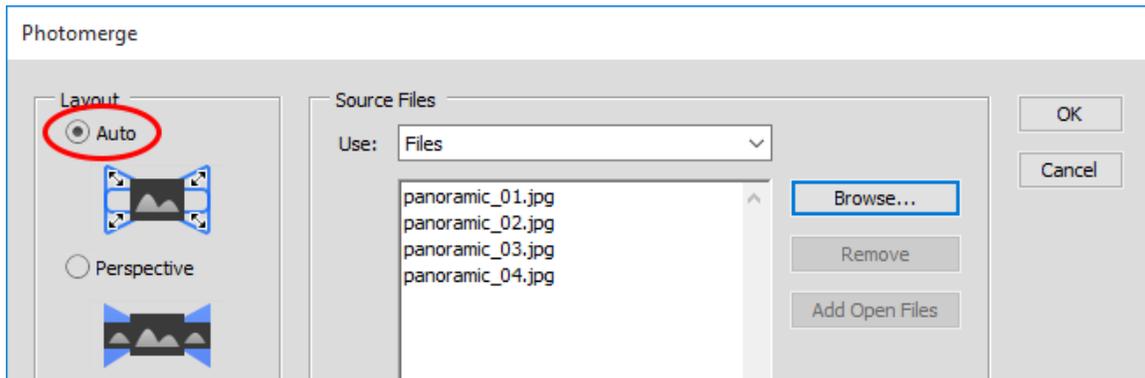


Figure 35 – Photomerge Dialog Box

6. Make sure the **Blend Images Together** check box is selected (see Figure 36).

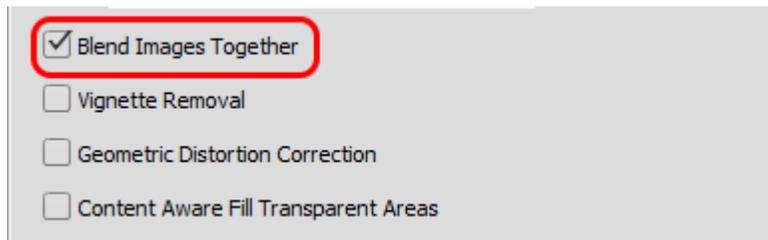


Figure 36 – Photomerge Options in the Photomerge Dialog Box

7. Click the **OK** button. The complete panorama appears on a new canvas.
8. In the **Tools** panel, select the **Crop Tool**, and then select the portion of the image you want to save (see Figure 37).



Figure 37 – Cropping Photomerged Image

9. Click the **Commit** button on the **Options** bar to complete the crop.

Converting Color Photographs to Black and White Images

There are several ways that Photoshop can convert a color photograph to a black and white image. One way is to click the **Image** menu, point to **Mode**, and select **Grayscale**. Another alternative is to click the **Image** menu, point to **Adjustments**, and select **Desaturate**. While quick and easy, these methods produce a very flat and lackluster image. The following steps reveal how to do the job while maintaining tonal integrity and great contrast.

To use the Black and White adjustment layer:

1. Open the **convert_bw.jpg** file.
2. In the **Adjustments** panel, click the **Black & White** icon  (see Figure 38). The **Black & White Properties** panel displays, and a new **Black & White 1** adjustment layer is added in the **Layers** panel.

NOTE: The **Black & White** adjustment settings can also be changed by selecting the command from the **Adjustments** submenu of the **Image** menu. However, by applying it as a separate adjustment layer, you can edit the conversion later, use a layer mask to bring color to selected parts of the image, lower the opacity for a faded-color look, or delete the adjustment layer altogether to return to the original color image.

3. In the **Black & White Properties** panel, click the **Auto** button (see Figure 39).

NOTE: To tweak the tonality, contrast, and lightness a bit more, you can use the individual color sliders in the **Black & White Properties** panel.

4. For an instant duotone effect, select the **Tint** check box.
5. Click the color swatch next to the **Tint** check box.



Figure 38 – Adjustments Panel



Figure 39 – Black & White Properties Panel

6. In the **Color Picker** dialog box, use the vertical color slider and the hue box to select the desired tint color.

Uploading High Resolution Images to the Web

Photoshop's **Zoomify** feature allows users to upload full resolution images as fast as a regular JPEG.

To use Zoomify:

1. Open the **zoomify.jpg** file.
2. Click the **File** menu, point to **Export**, and select **Zoomify**.
3. In the **Zoomify Export** dialog box, click the **Template** arrow and select **Zoomify Viewer with Navigator (Black Background)** from the list (see Figure 40).

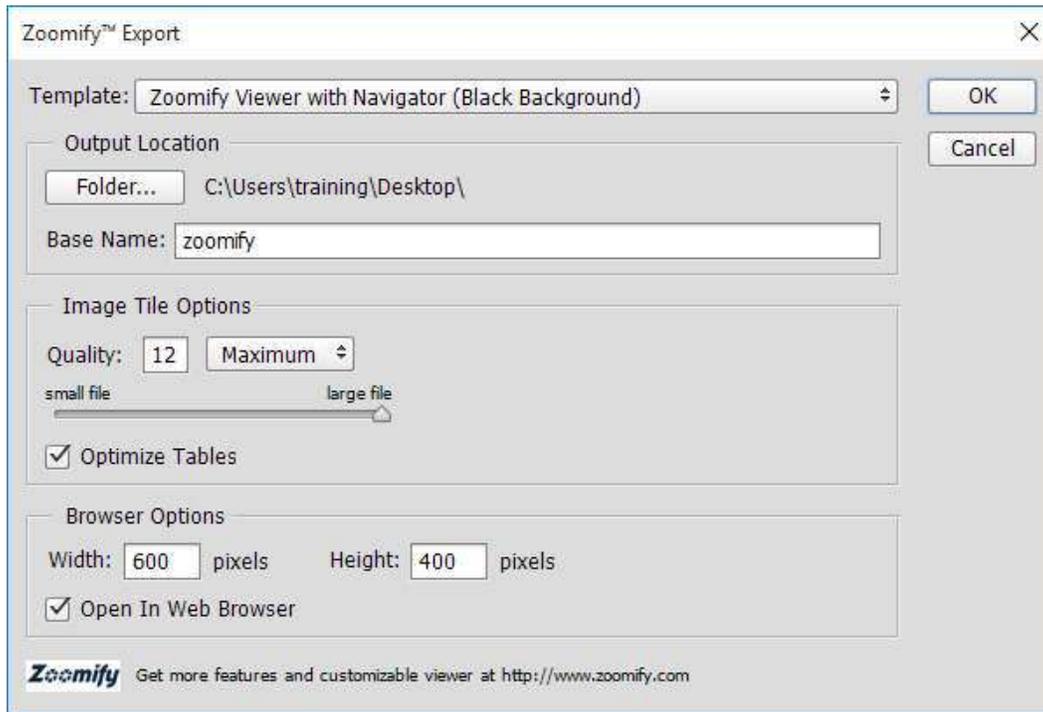


Figure 40 – Zoomify Export Dialog Box

4. Under **Output Location**, click the **Folder** button.
5. In the **Browse for Folder** dialog box, select **Desktop**, and then click the **OK** button.
6. In the **Base Name** box, type **zoomify**.
7. Under **Image Tile Options**, set the quality at its highest by dragging the slider all the way to the right or by typing **12** in the **Quality** box.
8. Under **Browser Options**, type **600** in the **Width** box and **400** in the **Height** box.
9. Click the **OK** button.
10. Minimize all windows to display the desktop.
11. Double-click the **zoomify.html** file on the desktop to preview it before uploading it to a web server (see Figure 41).

NOTE: When uploading the image to a web server, you need to upload both the HTML file and the folder content.



Figure 41 – Zoomify HTML File