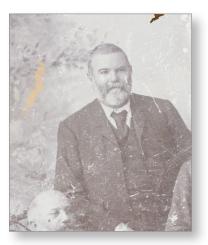


#### **EXERCISE PREVIEW**





BEFORE AFTER

#### **EXERCISE OVERVIEW**

This exercise covers a variety of techniques that can be used to restore an old photo. We will remove dust and scratches, change the color to a sepia tone, and remove some large splotches of color.

### **DOWNLOADING THE FILES**

These instructions were written for Photoshop CS6; however, the main concepts are the same for most recent versions of Photoshop.

**1.** To download the files you'll use in this exercise, please visit: **nobledesktop.com/goodies** 

Under **Old Photo Restoration**, click the **Class Files** button to download the compressed files.

- **2.** Once the file is downloaded and uncompressed you should have a folder named **seminar-oldPhotoRestoration** containing 2 images.
- 3. In Photoshop, go to File > Open.
- **4.** Navigate to the **seminar-oldPhotoRestoration** folder and open **old-photo-done-flat.jpg.** This is a finished version of how the finished image will look.
- 5. Close it after you've had a good look.
- 6. Go to File > Open.
- 7. From the seminar-oldPhotoRestoration folder, open old-photo.jpg.

### REMOVE SOME OF THE BIG BLOBS

There are several big blobs across the image that we want to remove. Let's start with the **dark brown** one at the **top right** of the image.

1. Duplicate the Background layer by hitting Cmd-J (MAC) or Ctrl-J (WINDOWS).

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- 2. Double-click on the layer name and rename it remove blobs.
- 3. Select the Patch tool ( ). If you can't find it, click and hold on the Spot Healing Brush tool ( ) and select it from the menu.
- **4.** In the **Options** bar at the top of the screen make sure:

CS6 Users:

Patch is set to Content-Aware.

CS5 Users:

- Source is checked.
- Transparent is NOT checked.
- **5.** Drag a selection around the **dark brown** spot at the **top right** of the image. Be sure to encompass the entire spot, selecting a bit beyond the edge of the dark brown.
- 6. To "heal" the spot:
  - Click anywhere inside the selection and drag it to an area that looks nice.
  - When you find an area you think looks good, let go of the mouse.
- **7.** In CS5 there may still some leftover brown, drag the selection again to a good looking area and release. That should remove any remaining brown.
- **8.** Use this **Patch** tool ( ) to fix the orange/tan colored blob on the left side in the middle. To review:
  - Drag a selection around the blob.
  - Click anywhere in the selected area and drag it to a good looking area (to the right and down looks good)
  - When it looks good, release the mouse.
- **9.** Let's fix one more blob. At the bottom left of the image, there is a blue blob on the man's cheek. Fix that using the same technique.

NOTE: We'll remove the remaining white blobs later.

### **ALTERING CONTRAST & COLOR**

We want to make this photo a uniform sepia tone. In this section we'll convert the image to grayscale and add our own color back in. We'll do this using layers, so it's completely non-destructive.

- 1. Go to Layer > New Adjustment Layer > Gradient Map.
- 2. Name it make grayscale and click OK.

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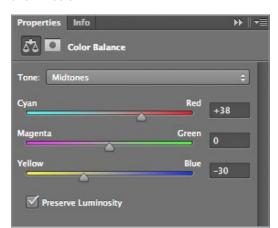
## ADOBE PHOTOSHOP Old Photo Restoration

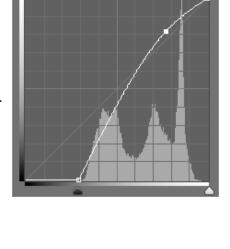


**3.** In the **Properties** panel, if the **Black, White** gradient isn't already chosen then click on the **menu arrow** (shown below) and choose the **Black, White** gradient (3rd from the top left).



- **4.** This image needs darker blacks and more contrast. Go to Layer > New Adjustment Layer > Curves.
- 5. Name it contrast and click OK.
- **6.** In the **Properties** panel, as shown in the screenshot to the right:
  - Move the black point (on the bottom left) over to the right to deepen the blacks.
  - Brighten the highlights by adding a point near the highlights and dragging up (as shown to the right).
- 7. To add a sepia tone, go to Layer > New Adjustment Layer > Color Balance.
- 8. Name it sepia tone and click OK.
- **9.** In the **Properties** panel, make a nice sepia tone using the settings shown below:





- **10.** Let's see the progress we've made so far. To do this we'll put all the retouching layers into a group. In the **Layers** panel, if it's not still selected, select the **sepia tone** layer.
- 11. Shift-click on the make grayscale layer to select the three adjustment layers.
- 12. Hit Cmd-G MAC or Ctrl-G WINDOWS to group them.

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# Old Photo Restoration ADOBE PHOTOSHOP



- **13. Double-click** on the group's name and rename it **contrast & color**.
- **14.** Then **Shift-click** on the **remove blobs** layer so it and the group are selected.
- 15. Hit Cmd-G MAC or Ctrl-G WINDOWS to group them.
- **16.** Name this group **photo restoration.**
- 17. Hide & show ( ) the photo restoration group to see the before and after.
- **18.** Make sure the **photo restoration** group is shown, and expand it by clicking the arrow to its left.

### **REMOVING DUST & SCRATCHES**

To avoid a ton of hand retouching, we'll use the **Dust & Scratches** filter. Be careful not to overuse this filter because it can blur away important details.

- 1. Select the remove blobs layer.
- 2. Duplicate the layer by hitting Cmd-J (MAC) or Ctrl-J (WINDOWS).
- 3. Name the new layer remove dust & scratches.
- **4.** We'll apply a small amount of the dust and scratches filter to the entire image. Go to **Filter > Noise > Dust & Scratches** and set:

Radius: **3** Threshold: **10** 

- 5. Click OK.
- **6.** Most of the image could stand to have more dust and scratches removed, but we must be careful not to remove important details. Do a **Select > All**.
- 7. Choose the Lasso tool ( ).
- 8. In the Options bar at the top of the screen set the Feather to 10 pixels.
- **9.** Hold **Option** (MAC) or **Alt** (WINDOWS) and lasso around the important details you'd like to keep such as the eyes, the beard, the chair back, the jacket buttons and anything else you think should remain sharp.
- 10. Go to Filter > Noise > Dust & Scratches and set:

Radius: 4
Threshold: 8

- 11. Click OK.
- 12. Do a Select > Deselect.
- 13. In the Options bar at the top of the screen set the Feather back to 0 pixels.
- **14.** That's better. **Hide & show** ( ) the **remove dust & scratches** layer to see the progress.

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## ADOBE PHOTOSHOP Old Photo Restoration



**15.** Make sure the **remove dust & scratches** layer is shown ( ) before continuing.

### HAND RETOUCHING

The rest of the retouching will be done by hand using a combination of the **Patch** and **Healing Brush** tools.

- 1. It should still be selected, but if not reselect the **remove dust & scratches** layer.
- 2. Duplicate it by hitting Cmd-J (MAC) or Ctrl-J (WINDOWS).
- 3. Name the new layer more retouching.
- **4.** The process of removing the remaining scratches and blotches will take a little while. As you work, we recommend hiding/showing the **retouching** layer to see your progress. Remove the remaining marks using a combination of the following:
  - The **Patch** tool ( ) to fix the larger areas.
  - Select a portion of the image and run the Dust & Scratches filter on it.
     A Radius of 8 and Threshold of 10 works well on some of the larger white scratches.
  - The **Spot Healing Brush** tool ( ) for smaller, easy to remove scratches and small blotches. TIP: To remove straight line scratches: click at one end, then **Shift-click** at the other end.
  - The **Healing Brush** tool ( ) for harder to remove scratches and blotches.
    - Make sure in the Healing Brush options at the top of the screen that
       Sample: is set to Current Layer and not All Layers.
    - To use the Healing Brush you **Option–click** or **Alt–click** windows on a part of the image that looks good, then paint over the bad area.
  - An important step for this image is to use the **Dodge** ( ) and **Burn** ( ) tools to help redefine edges/hide scratch marks. Darkening an edge can define it and make it appear sharper. Use this technique to help define or even recreate details that have been lost. Remember that photos are just light and shade. If something isn't there, you can create it yourself. In the example below, we made the lapel and vest more defined by enhancing the highlights and shadows. Using a pressure sensitive Wacom tablet can help a lot!





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# Old Photo Restoration ADOBE PHOTOSHOP

### FINAL SHARPENING

- **1. Hide & show** ( ) the **photo restoration** layer group to see a before and after. Wow, quite a difference!
- 2. Once you are satisfied with the retouching, do a Select > All (Cmd-A MAC) or Ctrl-A WINDOWS).
- 3. Go to Edit > Copy Merged.
- **4.** Select top layer (in this case the **photo restoration** layer group).
- 5. Do an Edit > Paste.
- **6.** Name the new layer **sharpened**.
- 7. Go to Filter > Sharpen > Smart Sharpen and set the following:
  - Amount: **60**
  - Radius: 3
  - Remove: Lens Blur
- 8. Click OK and you're done!

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