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 CC 2015 but should work the same or similarly in 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 files.

2. After the download is finished and uncompressed, you should have a folder named **seminar-oldPhotoRestoration** containing two images.

3. Launch Photoshop.

4. Go to **File > Open**.

5. Navigate to the **seminar-oldPhotoRestoration** folder and open **old-photo-done-flat.jpg**. This is a goal for how the finished image should look.

6. Close it after you've had a good look.

7. Go to **File > Open**.

8. From the **seminar-oldPhotoRestoration** folder, open **old-photo.jpg**.

REMOVING 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.

2. In the **Layers** panel **(Window > Layers)** double–click on the **Layer 1** name and rename it **remove blobs**.

3. Select the **Lasso** tool (▢).

4. 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.

5. Open the Fill dialog by choosing **Edit > Fill** (or by hitting **Shift–Delete** ⬭MAC⬭ or **Shift–Backspace** ⬭WINDOWS⬭).

6. In the Fill dialog that appears, make sure **Contents** is set to **Content-Aware**.

7. Click **OK**.

   The area should be nicely filled in with content that better matches its surroundings! Content-aware often works great, but it's not perfect. If it doesn't work as well as you'd like, try filling it again and Photoshop may guess better a second or third time.

8. If content-aware fill is not giving you a good result, there are other techniques, that give you more control over the final result. Let's try one of them now.

   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.

9. In the **Options** bar at the top of the screen make sure **Patch** is set to **Content-Aware**.

10. Drag a selection around the orange/tan colored blob (on the left side in the middle of the photo).

11. 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. The area does not have to match exactly, because the content-aware option will adjust it to better match the surrounding area.

12. Let's fix one more blob. Choose the **Lasso** tool (▢).

13. At the bottom left of the image, there is a blue blob on the man's cheek. Drag a selection around the blue blob.

14. Open the Fill dialog by choosing **Edit > Fill** (or by hitting **Shift–Delete** ⬭MAC⬭ or **Shift–Backspace** ⬭WINDOWS⬭).

15. **Contents** should still be set to **Content-Aware**, so click **OK**.

    NOTE: If that does not work to your satisfaction, try using the **Patch** tool (▢) instead.

ALTERING CONTRAST & COLOR

We'll remove the remaining white blobs later. Next 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**.

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 (third from the top left).


CLICK HERE AND THEN CHOOSE THE GRADIENT
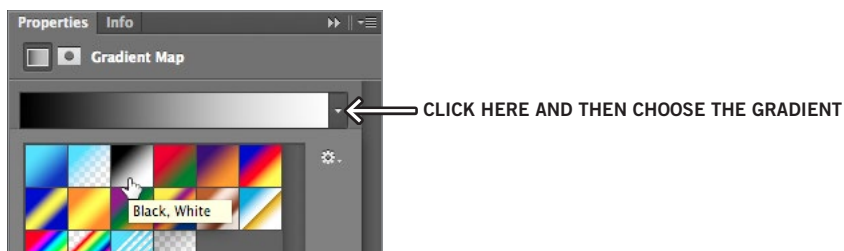
4. This image needs darker blacks and more contrast. Go to **Layer > New Adjustment Layer > Curves**.

5. Name it **contrast** and click **OK**.

6. In the **Properties** panel, we want to adjust the curve as shown below:
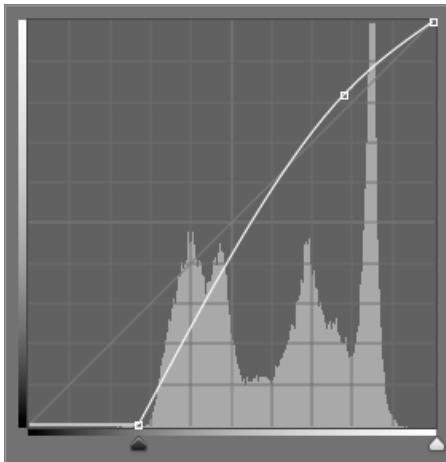
• Move the black point (on the bottom left) over to the right to deepen the blacks.

• Brighten the highlights by adding a point near the highlights (towards the top right) and dragging up (as shown in the screenshot above).

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:
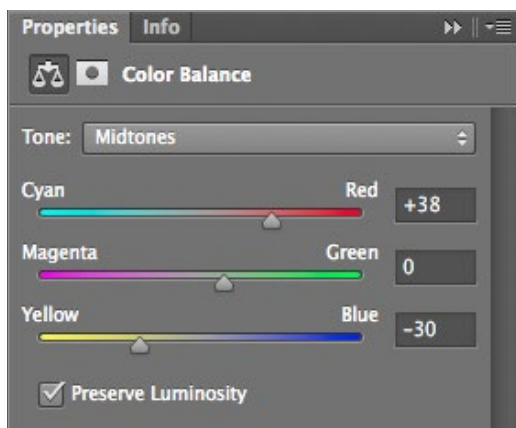
10. Let's see the progress we've made so far. To do this we'll put all the retouching layers into a group. In the **Layers** panel, if it's not still selected, select the **sepia tone** layer.

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.

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 & 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 px**.

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 px**.

14. That's better. **Hide & show** (👁) the **remove dust & scratches** layer to see the progress.

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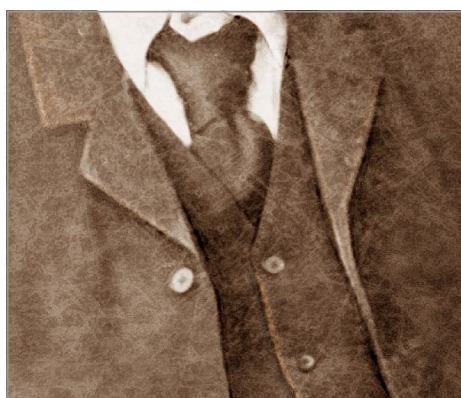
HAND RETOUCHING

The rest of the retouching will be done by hand using a combination of techniques.

1. Make sure the **remove dust & scratches** layer is selected.

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:

• Use content-aware fill or 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 (🖌) to remove scratches and blotches that are more challenging.

  – Make sure in the Healing Brush options at the top of the screen that **Sample:** is set to **Current Layer**.

  – To use the Healing Brush you **Option–click** ⎙MAC⎙ 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. Keep in mind 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!
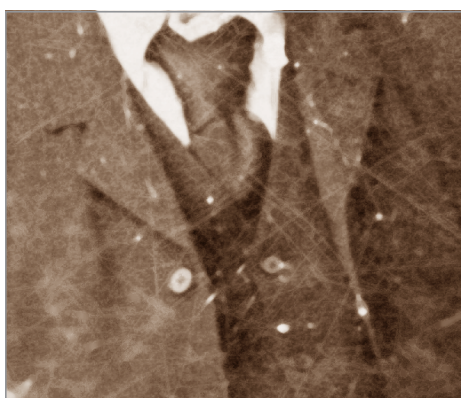
BEFORE   **AFTER**

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 the 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**.

8. We found the following settings worked well for our final retouched image, but feel free to adjust as needed:

Amount: **60**

Radius: **3**

Reduce Noise: **13%**

Remove: **Lens Blur**

9. Click **OK** and you're done!