

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; 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 two 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 goal for how the finished image should 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).

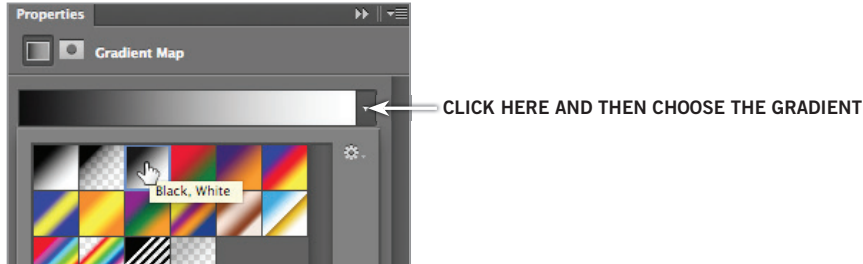
2. Double-click on the layer name and rename it **remove blobs**.
 3. Select the **Patch** tool (). If you can't find it, click and hold on the **Spot Healing Brush** tool () and select it from the menu.
 4. In the **Options** bar at the top of the screen make sure:
 - CC & CS6 Users:
 - **Patch** is 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. If so, 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

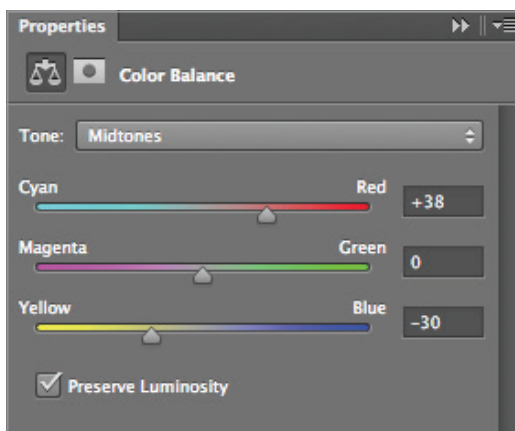
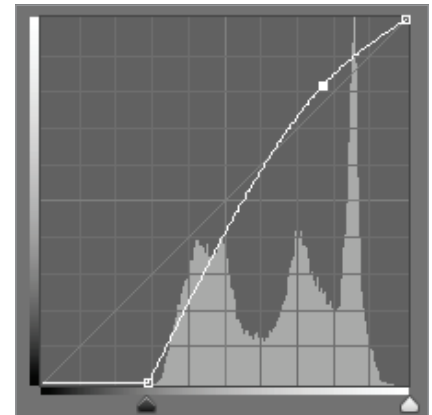
We want to make this photo a uniform sepia tone. In this section we'll convert the image to grayscale and add our own color back in. We'll do this using layers, so it's completely non-destructive.

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


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).



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.

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.

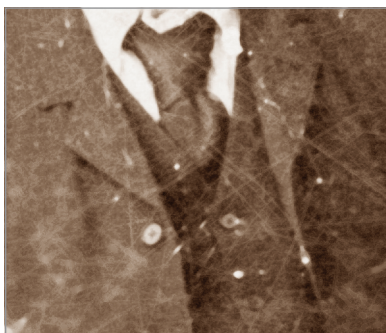
1. Select the **remove blobs** layer.
2. Duplicate the layer by hitting **Cmd-J** (MAC) or **Ctrl-J** (WINDOWS).
3. Name the new layer **remove dust & scratches**.
4. We'll apply a small amount of the **Dust & Scratches** filter to the entire image. Go to **Filter > Noise > Dust & Scratches** and set: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

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** (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. 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!




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** and set the following:
 - Amount: **60**
 - Radius: **3**
 - Remove: **Lens Blur**
 8. Click **OK** and you're done!
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