

LESSON D14_EN: INTRODUCTION TO A PICTURE EDITING PROGRAM

Parent Entity:

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After learning this lesson you will be more reach with the following knowledge:

- In this lesson you get a short introduction how you can modify images with the Adobe® Photoshop®. Then it is no problem doing simple activities on images like change the images size, change the brightness / contrast, hue / saturation and the resolution. Besides the user can save an image with different file types.

CONTENT OF THE LESSON.

1. Introduction to Adobe® Photoshop®
2. Adobe® Photoshop's® basic
3. Modify images
4. Other Useful Tasks From The Tool Bar
5. Palettes
6. Help Function

LEARNING OBJECTIVES:

After learning this lesson you will accomplish the ability to:

- You can open and save an existing image.
- You can rotate the image to the right orientation.
- You can modify the brightness / contrast of a picture.
- You can change or resize the image / resolution.
- You can save and export files.
- You can import a picture.
- You can make a border and use the undo command.
- You can use each action of the toolbar.
- You can use help function.

1. INTRODUCTION TO ADOBE® PHOTOSHOP®

The Adobe® Photoshop® is a product from Adobe® and it is one of the famous tools for working with digital images. This tool is very powerful. The Adobe® Photoshop® can work with images from a digital camera, from scans or other sources. When you start the Adobe® Photoshop® and create a new document, then you can see the screen, which is shown in the following figure. This screen in figure1.1 consists of three main elements:

- 1.)- **Menu bar:** The menu bar is at the top and contains following menu items: File, Edit, Image, Layer, Select, Filter, View, Window and Help. Then each menu item contains sub menu items.
- 2.)- **Tool bar:** After opening a new file in the Photoshop® the toolbar is on the left side and support the user to change the image. The different functions are described later in this lesson.
- 3.)- **Palettes:** Palettes are stacked up together in groups and they are on the right side of the working space. Palettes help you to monitor and modify images. Also the palettes are specified later in this lesson.

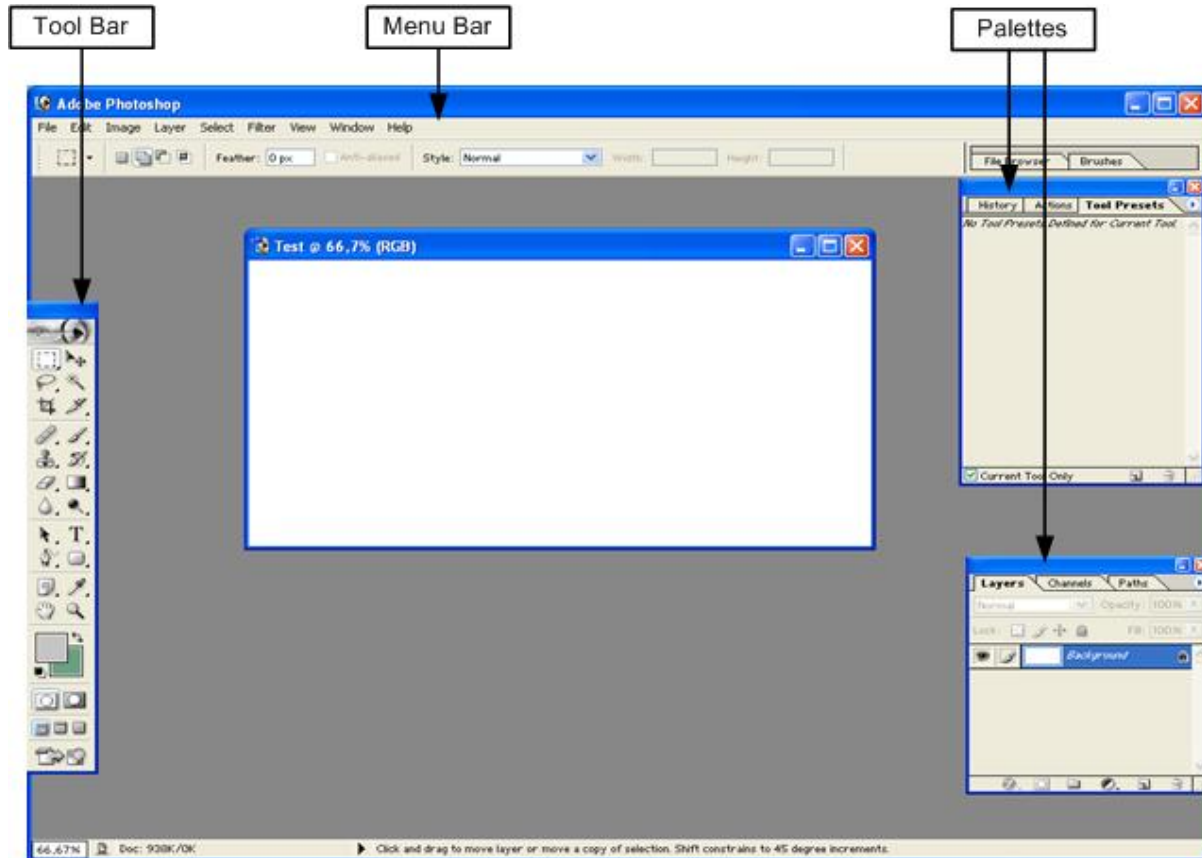


Fig. 1.1. Screen from the Adobe® Photoshop® Programme

In the following pages you get a short introduction about some important main functions. Often used functionalities from the Adobe® Photoshop® are explained. They support you to make simple modifications on the images by using this programme. After that the tool bar with their functions are described and at last the reader gets a survey about the different palettes.

2. Open and save an existing image

You have images and you need to manipulate these files in a common format such as PSD, JPG, GIF, PNG, etc.

- Photoshop (.PSD) is the default format for newly created image by the Adobe® Photoshop® graphics editor.
- Joint Photographic Experts Group (JPEG/JPG) [1] [2] is an image file format supported on the web. JPEG format supports for 16.7 million colours. JPG does not work well on line drawings, lettering or simple graphics but work well for photograph and complex graphics.
- Portable Network Graphics (PNG) [1] [2] is the widely supported by the web. PNG was designed to offer the main features of the GIF format however it does not support animation.
- Graphics Interchange Format (GIF) [1] [2] is one of the graphics formats supported by the web. GIF supports animated images. Use the GIF format when there are large areas of uniform colour and the total number of only 256 colours. GIF files work well with logos, line drawings and icons.

First you have to select **File** in the menu bar and then you must select the sub menu item **Open**. Then you have to navigate to your image file, which you would like to open. After you have opened the desired image you should save this image as an Adobe® Photoshop® document (.psd). Therefore you have to select the sub menu **Save As** in the file menu. Before you click on the save button you have to choose the desired format (jpg, gif, etc.).

During the work on the image use the sub menu **Save** in the menu **File** for saving the changes. If the image is ready then you can select the file format for saving. Therefore you use the sub menu **Save as** in the file menu and must select again the desired format.

3. Modify images

Under the menu item **Image** you find many tasks to modify the image.

3.1. Cropping and Orientation

If the image is not in the right view for example upside-down then you can rotate the image in the Adobe® Photoshop®. Therefore you have to pull down **Image | Rotate Canvas** and then you select the appropriate change.



Fig. 3.1. Part of the tool bar



Fig. 3.2. Screenshot of a cropping process

After this step the image is in the right orientation. In some cases you like to select only a part from the image and the rest of the image can be removed. But first it is necessary to select the desired area. From the tool bar you have to select the tool, which is shown in figure 3.1. When you move the cursor over the image you will see the same image as you selected in the tool bar. Then you can choose the area from the image by pressing the left mouse button during the selection. After that you can adjust this selection by changing the rough edges. For example you can increase or decrease the selection. When you are satisfied with the crop you've selected, select Crop under the menu entry Image as you can see in figure 3.2.

3.2. Tones, Contrast and Color

After you have the image cropped you can do some corrections. For example: Is the image a little bit darker than the original image? Is it too greenish overall? Therefore a set of functions for fixing such failures exists in the Adobe® Photoshop®. In figure 3.3 there are some very helpful functions like **Auto Level**, **Auto Contrast** and **Auto Color**. After you press one of



Fig. 3.3. Screenshot of the menu bar

this Menu items the image will change the level, contrast or color automatically.

3.2.1. Images | Adjustment | Brightness/Contrast

In figure 3.4 there are two images with a red, green and a blue stripe. If you select the menu **Image | Adjustment | Brightness/Contrast** you can change the Brightness and Contrast from the image. In the **Original.jpg** the value for both (Brightness, Contrast) was reduced and it looks much darker than the original.

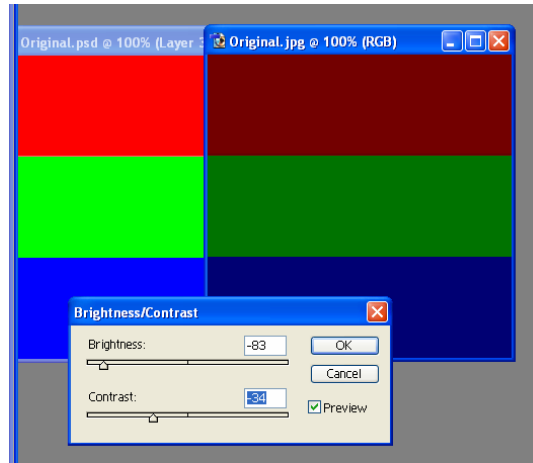


Fig. 3.4. Example for the change of brightness / contrast

3.2.2. Images | Adjustment | Hue/Saturation

Then you also have the possibility to change the **Hue / Saturation / Lightness** of images.

You can adjust the hue, saturation, and lightness from the dialog box as shown in figure 3.5. From the dialog box, you can check the preview from the check box. You can see your adjustment before you finalize them. Slide the **hue** when you want colors in the image over to other colors. Slide the **saturation** when you want to increase or decrease the colors intensity in the image. Slide the **lightness** when you want to increase or decrease how light the image is. After the hue/saturation/lightness changes, click OK to close the hue/saturation window.

In figure 3.5 on the left the value of lightness was changed from 0 to +57. The colors look pale in comparison with the original image. In figure 3.5 on the right hand side the hue was set on +43 instead of 0 and there the colors of the strips changed very strong.



Fig. 3.5. Examples for the change of hue / saturation

3.3. Resize the Image / Resolution

The image is now in the right position, cropped and some corrections are also done. So it is time to save the image. Then you can resize the image and change the resolution of the image. You have to pull down Image | Image Size. The Image Size window will come up like you see in the figure on the left.

For the image you can change either the width or the height and the second value is adapted automatically. For the Height / Width you can choose as units pixels or percent. Also in the same box you can designate the resolution in pixels / cm or in pixels / inch. Then you have to press the OK-button. Besides you have to consider the following: if you choose a high level of resolution then the file size of the image is bigger. If you adjust the image size and resolution for a presentation in the web, be very careful. You know that people do not like to wait very long for downloading a image.

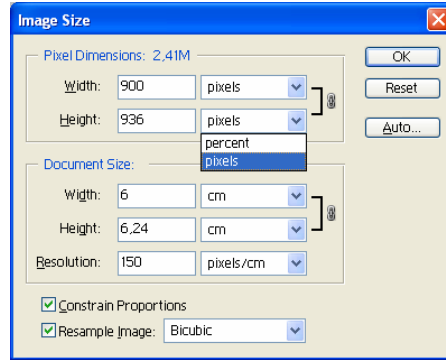


Fig. 3.6. Change of size / resolution of an image

The 72 dpi is the common setting for computer monitors. Therefore the images on the screen should have a resolution of 72 dpi. The number of pixels or dots per inch (ppi/dpi) is called **resolution**. The low-end printer has 150 dpi and photographs should be 300 dpi or higher. The lower resolution reduces the file size.

If you want to change setting from the 72 dpi to a higher resolution, the computer cannot improve the graphic quality. On the other hand, if you want to reduce the resolution of a graphic, you can do. You should save the original, high-resolution image before changing to the low resolution.

3.4. Save and Export

If you like to use the image for the web, therefore you have to make sure, that the resolution of the image is 72dpi. Then you also have to control the image size again so that you really can use the image in the web. For example, you probably don't want your image to be 1000 pixels wide. Then you have can choose under file menu also **Save for web** besides **Save** and **Save As**. This sub menu function is very helpful. It opens four tabs and chooses the fourth tab automatically. The upper-left pane shows the quality of your original image and the other three images allow you to modify the options (images format, etc.). Then you can decide, which image you like to save for Web.

3.5. Import Pictures from another File

Sometimes it is necessary to import already existing images. If these images are included in a PDF-file, then you can pull down File | Import | PDF Image. Then you have to search after the location of the PDF and select this File! Then all images from a pdf-file are selected and you have the chance to import all images or select a concrete image for the import. Then you can start modifying.

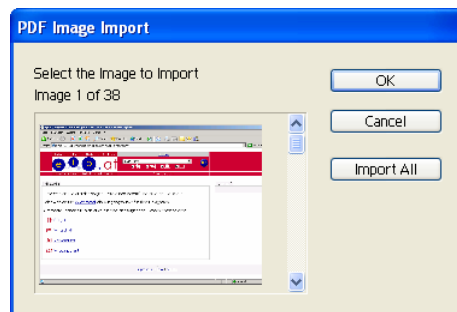


Fig. 3.7. Import of images

3.6. Make a Border for the Image

In some cases a border is necessary! You have to pull down Edit | Stroke. Then a new window is opened and you can choose the width and the colour of the border. Besides you can choose the location (inside, center, outside) of the border. The following two figures show you the window for creating a border and an image with such a border.

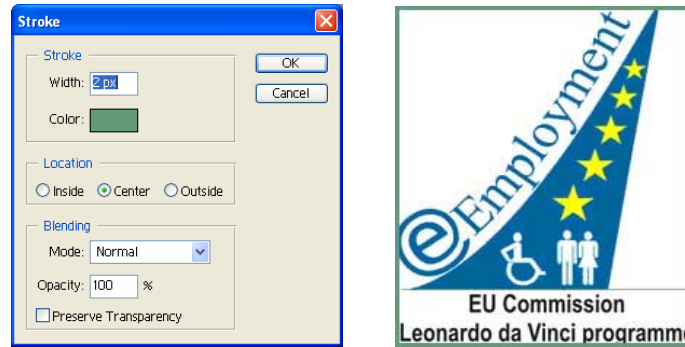


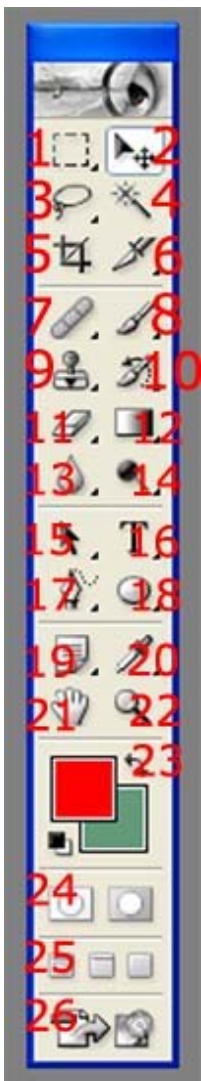
Fig. 3.8. Creating a border with its result

3.7. UNDO Command

If you have made any change, you can always switch back and forth between the before and after actions. So you can make sure that you know what you have done before you make the edit permanent. It exists two possibilities to undo the last action. Therefore you can make this with the Command-Z key (Ctrl-Z for Windows users) combination or by selecting “Undo” from the Edit menu. In the menu Edit you also find the menu item Step forward to redo an action.

4. Other Useful Tasks From The Tool Bar

In figure 4.1 there are many numbers and theses numbers identify an action from the tool bar, which are described shortly in the following list.



1. **Marquee tools** help you to make rectangular, elliptical, single row, and single column selections.
2. **Move tool** moves selections, layers, and guides. In the figure beside you see many numbers. Each number is a separate layer and with the help of the Move tool you can change very easy the position from a number.
3. **Lasso tools** make freehand, polygonal (straightedge), and magnetic (snap to) selections in opposite to the marquee tools.
 4. The **Magic Wand tool** selects similarly colored and connected areas. So it is possible to select only these parts of the figure with a similarly colored background.
 5. The **Crop tool** allows you to cut out a specified area from an image.
 6. The **Slice tool** divides an image into smaller sections / slices. These slices are used in most cases for web design work.
 7. The **Healing Brush tool** fixes failures in the image such as scratches, blemishes.
 8. The **Paintbrush tool** paints brushstrokes; the Pencil tool paints hard-edged strokes.
 9. The **Clone Stamp tool** paints with a sample of an image; the Pattern Stamp tool paints with part of an image as a pattern.
 10. The **History Brush tool** paints a copy of the selected state or snapshot into the current image window; the Art History Brush tool paints with stylized strokes that simulate the look of different paint styles, using a selected state or snapshot.
- 1.- The **Eraser tool** erases pixels and restores parts of an image to a previously saved state; the Background Eraser tool erases areas to transparency by dragging; the Magic Eraser tool erases solid-colored areas to transparency with a single click.
- 2.- The **Gradient tools** create straight-line, radial, angle, reflected, and diamond blends between colors; the Paint Bucket tool fills similarly colored areas with the foreground color.
- 3.- The **Blur tool** blurs hard edges in an image; the Sharpen tool sharpens soft edges in an image; the Smudge tool smudges data in an image.
- 4.- The **Dodge tool** lightens areas in an image; the Burn tool darkens areas in an image; the Sponge tool changes the color saturation of an area.
- 5.- The **Path Selection tool** makes shape or segment selections showing anchor points, direction lines and direction points.
- 6.- The **Type tool** creates type on an image. Then you can change the font, size, colour etc.
- 7.- The **Pen tools** draw smooth-edged paths.
- 8.- The **Shape tools** create rectangles, rounded rectangles, ellipses, polygons, and lines; the Custom Shape tool makes customized shapes selected from a custom shape list on the tool options bar.
- 9.- The **Annotation tool** makes notes and voice annotations that can be attached to an image.

Fig. 4.1. Tool bar

- 10.)- The **Eyedropper tool** samples colors in an image and so it is easy to create the same color again.
- 11.)- The **Hand tool** allows you to move an image within the Photoshop window.
- 12.)- The **Zoom tool** enlarges and reduces the view of an image.
- 13.)- The **foreground color** box in the Toolbox (the top left square) displays the currently selected foreground color. The foreground color you also use for painting or drawing. The **background color** (bottom right) displays the selected background color. For change one of the colors, click its box, and the Color Picker dialog box will appear.
- 14.)- The **edit mode buttons** allow you to edit either in standard mode (left) or in Quick Mask mode (right).
- 15.)- The **screen mode** buttons provide different screen views of your image.
- 16.)- **ImageReady** is another Adobe image-editing program. You can jump between Photoshop and ImageReady to transfer an image between the two applications for editing without closing or exiting the original application.

5. Palettes

By default in Adobe® Photoshop® palettes are set, each of these palettes includes tabs that allow you access to more options. You can modify your image in size, colour and with many other effects. In the following the different palettes are only listed:

- Navigator palette
- Info palette
- Color palette
- Swatches palette
- Styles palette
- History palette
- Actions palette
- Layers palette
- Channels palette
- Paths palette

6. Help function

You can start this function with the last entry (“Help”) in the menu bar and the sub item “Photoshop Help”. Then a browser window opens with extensive data, which explain all functions of this programme. It is easy to handle.

Further information you can get from <http://www.adobe.com/products/photoshop/>. There you can learn about new features of Adobe® Photoshop®, you can read reviews or you can participate in user forums etc.

Key Point Summary Conclusions and Recommendations

1. Adobe® Photoshop® is a tool for making digital images. The tool can work with another peripheral such as digital camera and scanner.
2. There are many formats for putting graphic on the web. Each differs from the others as follows:
 - The PSD format is the default format by the Adobe® Photoshop®.
 - The JPEG/JPG format work well for photograph and complex graphics.
 - The PNG format is widely supported by the web but it does not support animation.
 - The GIF format works well with logos, line drawing and icons.
3. You can adjust the colour image and change the Brightness and contrast by using the menu: IMAGES | ADJUSTMENT | BRIGHTNESS/CONTRAST
4. The image size and resolution of pictures have affect with a presentation in the web. A high level of resolution will make your image bigger.
5. There are two options to switch back and forth between the before and after action by using Command-Z key (Ctrl-Z for Windows users) combination or by selecting “Undo” from the Edit menu. In the menu Edit you also find the menu item Step forward to redo an action.

Study Guide

ESSENTIAL QUESTIONS FOR THE VERIFICATION OF THE ACCOMPLISHED KNOWLEDGE

1. Which format do you select when you want to see the photographs?
2. Which format support animations image?
3. Which format do you select when you want to line drawings and icons?
4. Which format does not support animation?
5. How do I adjust the contrast and the brightness of my image?
6. What are hue and saturation?
7. What is the resolution? Give more details.
8. Can I improve the quality of image?
9. How do you switch back and forth between the before and after actions?

10. List 3 actions from the tool bar and shortly describe.

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2. <http://www.sitepoint.com/article/gif-jpg-png-whats-difference>: last call: 28.11.05.

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- [SUPP.1] <http://www.adobe.com/products/photoshop/>, last call: 19.10.2005. You can learn Adobe Photoshop 7 via this website.
- [SUPP.2] <http://en.wikipedia.org/wiki/Photoshop> last call: 28.11.2005. You can read the short details about Adobe Photoshop 7 via this website.
- [SUPP.3] http://www.pixel2life.com/tutorials/Adobe_Photoshop/All/ last call: 28.11.2005. More than 7,253 Tutorial Categories of Adobe Photoshop via this website.
- [SUPP.4] <http://www.guidebookgallery.org/apps/photoshop/700> last call: 28.11.2005. This site provides you the screenshot from the almost every version of Photoshop.
- [SUPP.5] <http://www.photoshopninja.com/> last call: 28.11.2005. You can find more tips and tricks of Adobe Photoshop via this website.
- [SUPP.6] <http://www.photoshopcafe.com/> last call: 28.11.2005. The free resources and tutorials for Adobe Photoshop user.

SUPPLEMENTARY INDICATIONS ABOUT THE CONTENT OF THE LESSON

1. You can learn more the difference between JPG and GIF for web image at http://www.wfu.edu/~matthews/misc/jpg_vs_gif/JpgVsGif.html last call: 28.11.2005
2. You can learn Adobe® Photoshop® 7 in a movie-based training tutorial and do the exercise at <http://movielibrary.lynda.com/html/modPage.asp?ID=56> last call: 25.11.2005
3. You can learn more tools, techniques, and text effect at <http://www.teamphotoshop.com/The%20Tools-4,8,3.html> last call: 25.11.2005.

RESPONSES TO THE QUESTIONS

1. Which format do you select when you want to see the photographs?
Joint Photographic Experts Group (JPEG/JPG)
2. Which format support animations image?
Graphics Interchange format (GIF)
3. Which format do you select when you want to line drawings and icons?
Graphics Interchange format (GIF)
4. Which format does not support animation?
Portable Network Graphics (PNG)
5. How do I adjust the contrast and the brightness of my image?
Choose the menu Image | Adjustment | Brightness/Contrast . The Contrast/Brightness dialog box will appear.
6. What are hue and saturation?
Hue means the colors. When the hue is adjusted, the color will change.
Saturation means the colors intensity in the image.
7. What is the resolution? Give more details.
Resolution is the number of pixels or dots per inch (ppi/dpi). The higher the resolution, the more details is stored for the graphic. This means that a smaller resolution image is smaller quality, but it is small.
8. Can I improve the quality of image?
If you want to change setting from the 72 dpi to a higher resolution, the computer cannot improve the graphic quality. On the other hand, if you want to reduce the resolution of a graphic, you can do. You should save the original, high resolution image before changing to the low resolution.
9. How do you switch back and forth between the before and after actions?
Using Command-Z key (Ctrl-Z for Windows users) combination or by selecting “Undo” from the Edit menu. In the menu Edit you also find the menu item Step forward to redo an action.
10. List 3 actions from the tool bar and shortly describe.

The Crop tool:	It allows you to cut out a specified area from an image.
The Path Selection tool:	It makes shape or segment selections showing anchor points, direction lines and direction points.
The Zoom tool:	It enlarges and reduces the view of an image.

WORDS TO THE LEARNER:

“Every artist dips his brush in his own soul, and paints his own nature into his pictures.” (Henry Ward Beecher)

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