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Introduction to Photoshop: Creating a New File, Open a file, Saving a file, Main Selections, Picking color, Filling a selection with color, Painting with paintbrush tool, Using the magic wand tool and applying a filter, Color Mode, Changing Foreground and Background colors, Using Brushes, Using the Editing Tool, Selection Tools, Making Rectangular and Square Selections

## 1. INTRODUCTION TO PHOTOSHOP

Photoshop is the premiere software for manipulating or creating raster based images. It can also be used to design an infinite number of projects. So if you have any need to work with digital (or scanned) photographs, or want to create backgrounds, or images for websites, or a poster for your lost kitten or just paint a picture- Photoshop is a great tool to have.

Photoshop is the industry-standard image rendering software. You can use Photoshop to create customized graphics, edit photographs and make flyers and images for print as well as for the web.


## BASIC TOOLS.

Marquee Tool : The images in Photoshop are stored pixel by pixel, with a code indicating the color of each. The image is just a big mosaic of dots. Therefore, before you can do anything in Photoshop, you first need to indicate which pixels you want to change. The selection tool is one way of doing this. Click on this tool to select it, then click and drag on your image to make a dotted selection box. Hold shift while you drag if you want a perfect square or circle. Any pixels within the box will be affected when you make your next move. If you click and hold on this tool with your mouse button down, you will see that there is also an oval selection shape, and a crop tool.

Crop Tool: To crop your image, draw a box with the crop tool. Adjust the selection with the selection points, and then hit return to crop.

Lasso Tool : The lasso tool lets you select freeform shapes, rather than just rectangles and ovals.

Magic Wand: Yet another way to select pixels is with the magic wand. When you click on an area of the image with this tool, all pixels that are the same color as the pixel you clicked will be selected. Double click on the tool to set the level of tolerance you would like (i.e. how similar in color the pixels must be to your original pixel color. A higher tolerance means a broader color range).

The Move Tool: This is a very important tool, because up until now all you have been able to do is select pixels, and not actually move them. The move tool not only allows you to move areas you have selected, but also to move entire layers without first making a selection. If you hold the option (or alt) key while clicking and dragging with the move tool, you can copy the selection.

Airbrush Paintbrush and Pencil tools: can be used to draw with the foreground color on whichever layer is selected. To change the foreground color, double-click on it in the toolbox. You will then see a palette of colors from which to choose. Select one and click OK. To change the brush size, go to Window > Show Brushes.

Eraser Tool: Erases anything on the selected layer. You can change the eraser size by going to Window > Show Brushes.

Line Tool: Can be used to draw straight lines. Click on the tool to select it, then click with the tool on the canvas area and drag to draw a line. When you release the mouse button, the line will end. You can change the thickness of the line or add arrowheads to it by double clicking on the tool to see this dialog box:

Text tool: Click on this tool to select it, then click in the Canvas area. You will be given a dialog box in which to type your text, and choose its attributes. Each new block of text goes on its own layer, so you can move it around with the Move Tool. Once you have placed the text, however, it is no longer editable. To correct mistakes, you must delete the old version (by deleting its layer) and replace it.

Eyedropper: Click with this tool on any color in the canvas to make that color the foreground color. (You can then paint or type with it).

Magnifier: Click with this tool on a part of your image you want to see closer, or drag with it to define the area you want to expand to the size of the window. Hold down the Option or Alt key to make it a "reducer" instead and zoom back out.

Grabber: Click with this and drag to move the entire page for better viewing.

## 2. CREATE A NEW FILES IN PHOTOSHOP

To create a new document in Photoshop, we use the New Document dialog box. There are several ways to get to this dialog box.

1. When you launch Photoshop you can click on the New... button on Photoshop's Start screen.or
2. Click File > New on the Menu Bar along the top of the screen.or
3. Use the keyboard shortcut, $\mathbf{C m d}+\mathbf{N}$ (Mac) / Ctrl $+\mathbf{N}$ (Win). This is a handy keyboard shortcut that we use over and over when working in Photoshop, so it's worth making an effort to remember it.
Any of these options open up the New Document dialog box.

## 3.OPEN A FILE IN PHOTOSHOP

Choose File > Open from the menu at the top of the screen. You can also use the keyboard shortcut $\mathbf{C m d}+\mathbf{O}$ (Mac) or $\mathbf{C t r l}+\mathbf{O}$ (Win). or

From the Home/Screen, click on the Open... button on the left-hand side.
Whichever way you choose, it will open a dialog where you can browse to find your file. Click on the file name and click Open.

## OPEN A RECENT FILE IN PHOTOSHOP

f you've already been working on some images or photos in Photoshop, you can open them quickly in two ways:

1. Choose File > Open Recent, and select a file from the submenu that pops out.
2. You can also simply click on the thumbnails of Recent files on the Home/Start screen.

## 4.SAVE A FILE IN PHOTOSHOP

You can use the Save as option in the File menu to set options for saving image files, such as the format, and whether to include the saved file in the Elements Organizer catalog or to preserve layers in an image. Depending on the format you select, other options may be available to set.

Use the Save command to save changes to the current file or the Save As command to save changes to a different file.

## Save changes to the current file

1. Choose File > Save.

The file remains in the current format.
save a file with a different name, location, or format

## To save a file with Save As:

1. With the image open in Photoshop, select File > Save As.or
2. Press Ctrl+Shift+S (Windows) or Command+Shift+S (Mac OS).
3. A dialog box will appear.
4. Click the Format menu, then choose the desired file format. ...
5. Click Save.
6. Some file formats, such as JPEG and TIFF, will give you additional options when saving.
7. A dialog box appears for choosing options when saving in some image formats.

## Save a file in GIF format

1. Do one of the following:

- Click File > Save As.
- Press Ctrl+Shift+S (Windows) or Command+Shift+S (Mac OS).

2. Specify a file name and location, and choose CompuServe GIF format from the format list.

Your image is saved as a copy in the specified directory (unless it's already in indexedcolor mode).
3. If you are creating an animated GIF, select the Layers As Frames option. Each layer in the final file will play as a single frame in the animated GIF. <TBC>
4. Click Save. If your original image is RGB, the Indexed Color dialog box appears.
5. If necessary, specify indexed color options in the Indexed Color dialog box and click OK.
6. In the GIF Options dialog box, select a row order for the GIF file and click OK:

## Save a file in JPEG format

1. Do one of the following:

- Click File > Save As.
- Press Ctrl+Shift+S (Windows) or Command+Shift+S (Mac OS).

2. Choose JPEG from the format list.
3. $\square$ Specify a file name and location, select file-saving options, and click Save.
4. The JPEG Options dialog box opens.
5. $\square$ If the image contains transparency, select a Matte color to simulate the appearance of background transparency.
6. $\square$ Specify image compression and quality by choosing an option from the Quality menu, dragging the Quality slider, or entering a value between 1 and 12 .


Select a format option:

## Baseline ("Standard")

Uses a format that is recognizable to most web browsers.

## Baseline Optimized

Optimizes the color quality of the image and produces a slightly smaller file size. All web browsers do not support this option.

Progressive
Creates an image that is gradually displayed as it is downloaded to a web browser. Progressive JPEG files are slightly larger in size, require more RAM for viewing, and are not supported by all applications and web browsers.

## Click OK.

## Save a file in PNG format

1. Do one of the following:

- Click File > Save As.
- Press Ctrl+Shift+S (Windows) or Command+Shift+S (Mac OS).

2. Choose PNG from the format list.
3. Specify a file name and location, select file-saving options, and click Save.
4. In the PNG Options dialog box, select an Interlace option and click OK.

None

Displays the image in a web browser only after it is completely downloaded.
Displays low-resolution versions of the image while the full image file is downloading to the browser. Interlacing can make downloading time seem shorter and assures viewers that downloading is in progress. However, interlacing also increases file size.

## 5. MAIN SELECTIONS:

A selection is an area of a photo that you define. When you create a selection, the area is editable (for example, you can lighten one part of a photo without affecting the rest). You can make a selection with either a selection tool or a selection command. A selection border, which you can hide, surrounds the selection. You can change, copy, or delete pixels inside the selection border, but you can't touch areas outside the selection border until you deselect the selection.

Adobe Photoshop Elements provides selection tools for different kinds of selections. For example, the Elliptical Marquee tool selects circular and elliptical areas, and the Magic Wand tool can select an area of similar colors with one click. More complex selections can be made with one of the Lasso tools. You can even smooth the edges of a selection with feathering and anti-aliasing.

## Use selection tools

The selection tools are located in the Tools panel, which is located, by default, on the left side of your screen.

In Photoshop Elements, you must be in Expert mode to see the selection tools.
Use the Rectangular and Elliptical Marquee tools .The Rectangular Marquee tool draws square or rectangular selection borders, and the Elliptical Marquee tool draws round or elliptical


Rectongulorond Ellipticol Marquee tool options
A. Rectangular Marquee tool B. Elliptical Marquee tool C. New selection D. Add to selection E. Subtract from selection F. Intersect with selection
$\square$ Select the Rectangular Marquee tool (A) or the Elliptical Marquee tool (B) in the toolbox.
$\square$ (Optional) Set marquee tool options in the Tool Options bar:

- Specify whether to create a new selection, add to a selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased (Elliptical Marquee tool only).
- From the Mode pop-up menu, choose Normal to visually set the size and proportions of the selection border; Fixed Ratio to set a width-to-height ratio for the selection border; or Fixed Size to specify the marquee's height and width.

Drag over the area you want to select. Hold down the Shift key as you drag to constrain the selection marquee to a square or circle.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

## Use the Lasso tool

The Lasso tool draws freehand selection borders. This tool lets you make very precise selections.

A. Lasso tool B. Polygonal Lasso tool C. Magnetic Lasso tool D. New selection E. Add to selection F. Subtract from selection $G$. Intersect with selection

Select the Lasso tool from the toolbox.
(Optional) Set Lasso tool options in the Tool Options bar:

- Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased.

Drag to draw a freehand selection border:

- To add to the selection, release the mouse button; then press Shift and, when the pointer changes to drag.
- To subtract from the selection, release the mouse button; then press Alt (Option in Mac OS) and when the pointer changes to $\square$ drag.
- To add straight-edge segments, hold the mouse button and press Alt (Option in Mac OS); then release the mouse button and, when the pointer changes click where you want to position the end of the segment.

To close the selection border, release the mouse button. A straight selection segment is drawn from where you released the mouse button to the starting point of your selection.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

## Use the Polygonal Lasso tool

The Polygonal Lasso tool draws straight-edged segments of a selection border. You can create as many segments as you need to draw a selection border.


Polygonallasso tooloptions
A. Lasso tool B. Polygonal Lasso tool C. Magnetic Lasso tool D. New selection E. Add to selection F. Subtract from selection G. Intersect with selection
$\square$ Select the Polygonal Lasso tool from the toolbox.
(Optional) Set Polygonal Lasso tool options in the Tool Options bar:

- Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased.

Click where you want the first straight segment to begin, and click a second time where you want the segment to end and the next one to begin. Continue clicking to create segments.

If you make a mistake, press the Delete key to erase segments. You can switch from creating straight-edge segments to drawing freehand by pressing Alt (Option in Mac OS).

Close the selection border by doing one of the following:

- Position the pointer over the starting point and click. A closed circle appears next to the pointer when you are over the starting point.
- If the pointer is not over the starting point, double-click, or Ctrl-click (Command-click in Mac OS). A straight selection segment is drawn from your pointer to the starting point of your selection.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

- Use the Magnetic Lasso tool
- The Magnetic Lasso tool draws a selection border that automatically snaps to the edges of objects you drag over in the photo. This makes it easy to draw precise selection borders. The Magnetic Lasso tool is useful for quickly selecting objects with complex edges set against high-contrast backgrounds.

Rectangular Marquee tool: Draws square or rectangular selection borders.


Elliptical Marquee tool: Draws round or elliptical selection borders.


Lasso tool: Draws freehand selection borders, best for precision.


Polygonal Lasso tool: Draws multiple straight-edged segments of a selection border.


Magnetic Lasso tool: Draws a selection border that automatically snaps to edges when you drag over in the photo.


Magic Wand tool: Selects pixels of similar color with one click


Quick Selection tool: Quickly and automatically makes selection based on color and texture when you click or click-drag an area


Selection Brush tool: Automatically selects or deselects the area you paint, depending on whether you're in Sselection or Mask mode.


Smart Brush tool: Applies color and tonal adjustments and effects to a selection. The tool automatically creates an adjustment layer for non-destructive editing.


## Refine Selection Brush tool:

Helps you add or remove areas to and from a selection.


Auto Selection tool: Automatically makes a selection when you draw a shape around an object


## 6.COLOR PICKER:

Photoshop uses the foreground color to paint, fill, and stroke selections and the background color to make gradient fills and fill in the erased areas of an image. The foreground and background colors are also used by some special effects filters.

You can designate a new foreground or background color using the Eyedropper tool, the Color panel, the Swatches panel, or the Adobe Color Picker.

The default foreground color is black, and the default background color is white

## Choose a color from the HUD color picker

1. Select a painting tool.
2. Press Shift + Alt + right-click (Windows) or Control + Option + Command (Mac OS).
3. Click in the document window to display the picker. Then drag to select a color hue and shade. Note: After clicking in the document window, you can release the pressed keys.

## Choose colors in the toolbox

The current foreground color appears in the upper color selection box in the toolbox; the current background color appears in the lower box.


Foreground and bockground colorboxes in toolbox
A. Default Colors icon B. Switch Colors icon C. Foreground color box D. Background color box

- To change the foreground color, click the upper color selection box in the toolbox, and then choose a color in the Adobe Color Picker.
- To change the background color, click the lower color selection box in the toolbox, and then choose a color in the Adobe Color Picker.
- To reverse the foreground and background colors, click the Switch Colors icon in the toolbox.
- To restore the default foreground and background colors, click the Default Colors icon in the toolbox.


## Adobe Color Picker overview

In the Adobe Color Picker, you choose colors using four color models: HSB, RGB, Lab, and CMYK. Use the Adobe Color Picker to set the foreground color, background color, and text color. You can also set target colors for different tools, commands, and options.

You can configure the Adobe Color Picker to let you choose only colors that are part of the websafe palette or choose from specific color systems. You can also access an HDR (high dynamic range) picker to choose colors for use in HDR images.

The Color field in the Adobe Color Picker displays color components in HSB color mode, RGB color mode, and Lab color mode. If you know the numeric value of the color you want, you can enter it into the text fields. You can also use the color slider and the color field to preview a color to choose. As you adjust the color using the color field and color slider, the numeric values are adjusted accordingly. The color box to the right of the color slider displays the adjusted color in the top section and the original color in the bottom section.


Adobe Color Picker
A. Picked color B. Original color C. Adjusted color D. Out-of-gamut alert icon E. Alert icon for color that is no web-safe F. Displays only web-safe colors G. Color field H. Color slider I. Color values

Although Photoshop uses the Adobe Color Picker by default, you can use a different color picker than the Adobe Color Picker by setting a preference. For example, you can use the built-in color picker of your computer's operating system or a third-party plug-in color picker.

## Display the Color Picker

- In the toolbox, click the foreground or background color selection box.
- In the Color panel, click the Set Foreground Color or Set Background Color selection box.

The Color Picker is also available when features let you choose a color. For example, by clicking the color swatch in the options bar for some tools, or the eyedroppers in some color adjustment dialog boxes.

## Choose a color with the Adobe Color Picker

You can choose a color by entering color component values in HSB, RGB, and Lab text boxes, or by using the color slider and the color field.

To choose a color with the color slider and color field, click in the color slider or move the color slider triangle to set one color component. Then move the circular marker or click in the color field. This sets the other two color components.

## Choose a color using the HSB model

Using the HSB color model, the hue is specified in the color field, as an angle from $0^{\circ}$ to $360^{\circ}$ that corresponds to a location on the color wheel. Saturation and brightness are specified as percentages. In the color field, the hue saturation increases from left to right and the brightness increases from the bottom to top.

1. In the Adobe Color Picker, select the H option and then enter a numeric value in the H text box or select a hue in the color slider.
2. Adjust the saturation and brightness by clicking in the color field, moving the circular maker, or entering numeric values in the $S$ and $B$ text boxes.
3. (Optional) Select either the S option or B option to display the color's saturation or brightness in the color field for making further adjustments.

## Choose a color using the RGB model

Choose a color by specifying its red, green, and blue components.

1. In the Adobe Color Picker, enter numeric values in the R, G, and B text boxes. Specify component values from 0 to 255 ( 0 is no color, and 255 is the pure color).
2. To visually select a color using the color slider and color field, click either R, G, or B and then adjust the slider and color field.

The color you click appears in the color slider with 0 (none of that color) at the bottom and 255 (maximum amount of that color) at the top. The color field displays the range of the other two components, one on the horizontal axis and one on the vertical axis.

## Choose a color using the Lab model

When choosing a color based on the Lab color model, the L value specifies the luminance of a color. The A value specifies how red or green a color is. The B value specifies how blue or yellow a color is.

1. In the Adobe Color Picker, enter values for $L$ (from 0 to 100), and for $A$ and $B$ (from -128 to +127 ).
2. (Optional) Use the color slider or color field to adjust the color.

## Choose a color using the CMYK model

You can choose a color by specifying each component value as a percentage of cyan, magenta, yellow, and black.

1. In the Adobe Color Picker, enter percentage values for $\mathrm{C}, \mathrm{M}, \mathrm{Y}$, and K , or use the color slider and color field to choose a color.

## 7.FILLING A SELECTION WITH COLOR:

## Fill a selection or layer with color

1. Choose a foreground or background color. ...
2. Select the area you want to fill. ..
3. Choose Edit > Fill to fill the selection or layer. ...
4. In the Fill dialog box, choose one of the following options for Use, or select a custom pattern: ...
5. Specify the blending mode and opacity for the paint.

By Filonia LeChat

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It may be second nature for you to open the Photoshop graphics software and use it to work on your digital photographs, but keep the program in mind for other kinds of artwork as well. Photoshop offers artistic tools for digital doodlers as well, with many options for coloring, drawing and painting right on the screen. With a couple of quick clicks, you may find that your computer monitor serves as a creative canvas.

## Step1

Open Photoshop, click "File" and select "New." Type "Color" into the "Name" box and set your preferred drawing dimensions. For a full page of drawing, type 11 inches by 8.5 inches. Pull down the "Color Mode" menu and select "RGB Color." Pull down the "Background Contents" menu and select "White." Click the "OK" button to open the workspace.

## Step2

Double click the top-left square of the "Color Picker," the two overlapping colored boxes on the "Tools" palette. Select a paint color from the rainbow and click the "OK" button.

## Step3

Click the "Brush" tool, which looks like a paintbrush, on the "Tools" palette. Pull down the brush menu at the top of the screen, the second button from the left. Select a solid, round brush head,

It may be second nature for you to open the Photoshop graphics software and use it to work on your digital photographs, but keep the program in mind for other kinds of artwork as well. Photoshop offers artistic tools for digital doodlers as well, with many options for coloring, drawing and painting right on the screen. With a couple of quick clicks, you may find that your computer monitor serves as a creative canvas.

## Step4

Position your cursor on the "Color" box and draw the outline of a design, such as a flower or heart.

## Step 5

Click the "Paint Bucket" tool, which looks like a spilling can of paint, on the "Tools" palette. Click inside the outline you just drew, which fills it with the same color, making it a solid shape.

## Step6

Switch back to the "Brush" tool, change to a new paint color and select a different, smaller brush head. Move the "Opacity" slider bar down to 30 percent. Color more designs on the drawing. Notice that now, the colors are semi-transparent, since their opacity has been turned down.

## Step7

Move the "Opacity" slider back to 100 percent. Click the "Paint Bucket" tool again. Select a new color from the "Color Picker" that hasn't been used yet in the drawing. Click the white space of the "Color" box, which fills with color behind the drawing.

## Step8

Click the "File" menu, select "Save As" and save the file to the computer.
You can fill the inside of a selection, path, or layer with a color or pattern. You can also add color to the outline of a selection or path, called stroking.

## Fill with the Paint Bucket tool

The Paint Bucket tool fills adjacent pixels that are similar in color value to the pixels you click.
Choose a foreground color. (See Choose colors in the toolbox.)
$\square$ Select the Paint Bucket tool
Specify whether to fill the selection with the foreground color or with a pattern.
$\square$ Specify a blending mode and opacity for the paint. (See Blending modes.)
Enter the tolerance for the fill.

The tolerance defines how similar in color a pixel must be (to the pixel you click) to be filled. Values can range from 0 to 255 . A low tolerance fills pixels within a range of color values very similar to the pixel you click. A high tolerance fills pixels within a broader range.
$\square$ To smooth the edges of the filled selection, select Anti-aliased.
To fill only pixels contiguous to the one you click, select Contiguous; leave Contiguous unselected to fill all similar pixels in the image.
$\square$ To fill pixels based on the merged color data from all visible layers, select All Layers.
Click the part of the image you want to fill. All specified pixels within the specified tolerance are filled with the foreground color or pattern.

If you're working on a layer and don't want to fill transparent areas, make sure that the layer's transparency is locked in the Layers panel. (See Lock layers.)

## Fill a selection or layer with color

1. Choose a foreground or background color. (See Choose colors in the toolbox.)
2. Select the area you want to fill. To fill an entire layer, select the layer in the Layers panel.
3. Choose Edit > Fill to fill the selection or layer. Or to fill a path, select the path, and choose Fill Path from the Paths panel menu.
4. In the Fill dialog box, choose one of the following options for Use, or select a custom pattern:

Foreground Color, Background Color, Black, 50\% Gray, or White
Fills the selection with the specified color.

Fills with a color you select from the Color Picker.
$\square$ Specify the blending mode and opacity for the paint. (See Blending modes.)
If you're working in a layer and want to fill only areas containing pixels, choose Preserve Transparency.

Click the OK button to apply the fill.

## Draw a circle or square ana fill colours.

You can draw a circle or square using the elliptical or rectangular marquee tools, and then add a line (called a stroke) to the selection marquee. Stroking a selection is a quick way to add a border or frame around an object. You can stroke any selection you create with the selection tools.

In the Layers panel, click the New Layer button to create a new layer for the circle or square. Isolating the circle or square on its own layer makes it easier to work with.

Select the Elliptical Marquee tool or the Rectangular Marquee tool in the toolbox.
$\square$ Drag in the document window to create the shape. Hold down the Shift key while dragging to constrain the shape to a circle or square.
$\square$ Choose Edit > Stroke.
$\square$ In the Stroke dialog box, type a value for Width, and then click the color swatch to display the Adobe Color Picker.
$\square$ In the Adobe Color Picker, locate the color range you want using the triangle sliders on the color spectrum bar, and then click the desired color in the color field. The color you select appears in the top half of the color swatch. The original color remains in the bottom half. Click OK.

Set the location for the stroke in relationship to the marquee by choosing Inside, Center, or Outside. Adjust the other settings as desired, and click OK. Photoshop strokes the line using the color and stroke settings you set.

## 8.PAINTING WITH PAINTBRUSH.

The Brush tool and the Pencil tool paint the current foreground color on an image. The Brush tool creates soft strokes of color. The Pencil tool creates hard-edged lines.

Choose a foreground color. (See Choose colors in the toolbox.)
Select the Brush tool

Choose a brush from the Brush Presets panel. See Select a preset brush.
$\square$ Set tool options for mode, opacity, and so on, in the options bar.
Do one or more of the following:

- Click and drag in the image to paint.
- To draw a straight line, click a starting point in the image. Then hold down Shift, and click an ending point.
- When using the Brush tool as an airbrush, hold down the mouse button without dragging to build up color.


## Paint tool options

Set the following in the options bar. Options available vary with each tool.

## Mode

Sets the method for blending the color you paint with the underlying existing pixels. Available modes change with the currently selected tool. Paint modes are similar to layer blending modes. See Blending modes.

Opacity
Sets the transparency of color you apply. As you paint over an area, the opacity does not exceed the set level no matter how many times you move the pointer over the area, until you release the mouse button. If you stroke over the area again, you apply additional color, equivalent to the set opacity. Opacity of 100 percent is opaque.

Sets the rate at which color is applied as you move the pointer over an area. As you paint over an area, while holding down the mouse button, the amount of color builds up based on the flow rate, up to the opacity setting. For example, if you set the opacity to $33 \%$ and the flow to $33 \%$, each time you move over an area, its color moves $33 \%$ toward the brush color. The total will not exceed $33 \%$ opacity unless you release the mouse button and stroke over the area again.

## Basics functions of Brushes for Photoshop

Now go and grab the "Brush tool" from the tool bar.


And the first menu in option bar is "Brush preset picker". Here we can change brush tip, this menu shows different types of icon are actually different types of brushes available.

Now click on this small wheel icon. you will get here some list of different group of preset brushes. These brushes are inbuilt with Photoshop.

## Paint with the Brush tool:

1. Choose a foreground color. (See Choose colors in the toolbox.)
2. Select the Brush tool or Pencil tool .
3. Choose a brush from the Brush Presets panel. See Select a preset brush.
4. Set tool options for mode, opacity, and so on, in the options bar.
5. Do one or more of the following:

## 9. USING THE MAGIC WAND TOOL AND APPLYING A FILTER

Magic Wand: Yet another way to select pixels is with the magic wand. When you click on an area of the image with this tool, all pixels that are the same color as the pixel you clicked will be selected. Double click on the tool to set the level of tolerance you would like (i.e. how similar in color the pixels must be to your original pixel color. A higher tolerance means a broader color range).

Magic Wand tool: Selects pixels of similar color with one click


Go to File > Open and navigate to an image. In this example, we will use an image of an eagle with a blue sky background.

Go to File > Save As and rename the file. This is a practical way to make sure you keep an original copy of the image.
.Go to the Toolbar, click and hold on the Quick Selection Tool, and select the Magic Wand Tool.


Click and release on the area you want to select. In this case, we have clicked on the blue sky above the eagle. Most of the sky will be selected, but there may be an area that isn't if there is a gradient in color there.

Hold down the Shift key and then click on any area that was left unselected. Notice that while the Shift key is held down, a small plus sign appears next to the cursor indicating that you will be adding to the selection. The Alt (PC)/Option (Mac) key would produce a minus sign in the cursor, allowing you to subtract from a selection.
$\square$ Go to the Select menu and choose Inverse to flip-flop the selected area, so now the object in your image (in this case the eagle) is selected. Inversing is a useful technique for isolating an image area that is against a solid, uniform background color.

Zoom in on the object and then go to the Filter > Sharpen menu and select Unsharp Mask.
.In the Unsharp Mask dialog box, enter 200 in the Amount field, and 20 in the Threshold field. This will increase the detail in the image by accentuating the highlight and shadow. You can adjust these numbers to suit your image. Toggle the Preview on and off to see the difference. Click OK.

## Best Uses for the Magic Wand

With a little effort and some time spent learning how to use its features, the Magic Wand is useful with any image. However, when you are first starting with Photoshop, you may want to
stick with images that have clear contrasts and clean lines. If you talk to many Photoshop users, you will find that the Magic Wand feature is commonly used to select solid backgrounds.

## Features for the Magic Wand

The Magic Wand is similar to Photoshop's other selection tools in that it allows you to easily add and subtract from your chosen areas without having to repeatedly go through the process from scratch. It also includes the option for feathering, which creates a more rounded selection, and anti-aliasing, which evens out those rough lines.

## 10.COLOR MODE OR IMAGE MODE

The color mode, or image mode, determines how the components of a color are combined, based on the number of color channels in the color model. Color modes include grayscale, RGB, and CMYK, among others. Photoshop Elements supports bitmap, grayscale, indexed, and RGB color modes.


RGB mode (millions of colors); 2: Index Color mode (256 colors); 3: Grayscale mode (2 colors); 4: Bitmap mode ( 2 colors)

Different color modes:

1. RGB mode (millions of colors)
2. CMYK mode (four-printed colors)
3. Index mode ( 256 colors)
4. Grayscale mode ( 256 grays)
5. Bitmap mode ( 2 colors)

The color mode or image mode determines how colors combine based on the number of channels in a color model. Different color modes result in different levels of color detail and file size. For instance, use CMYK color mode for images in a full-color print brochure, and use RGB color mode for images in web or e-mail to reduce file size while maintaining color integrity.

## RGB Color mode

Photoshop RGB Color mode uses the RGB model, assigning an intensity value to each pixel. In 8 -bits-per-channel images, the intensity values range from 0 (black) to 255 (white) for each of the RGB (red, green, blue) components in a color image. For example, a bright red color has an $R$ value of 246 , a $G$ value of 20 , and a $B$ value of 50 . When the values of all three components are equal, the result is a shade of neutral gray. When the values of all components are 255 , the result is pure white; when the values are 0 , pure black.

RGB images use three colors, or channels, to reproduce colors on screen. In 8-bits-per-channel images, the three channels translate to 24 ( 8 bits x 3 channels) bits of color information per pixel. With 24-bit images, the three channels can reproduce up to 16.7 million colors per pixel. With 48-bit (16-bits-per-channel) and 96-bit (32-bits-per-channel) images, even more colors can be reproduced per pixel. In addition to being the default mode for new Photoshop images, the RGB model is used by computer monitors to display colors. This means that when working in color modes other than RGB, such as CMYK, Photoshop converts the CMYK image to RGB for display on screen.

Although RGB is a standard color model, the exact range of colors represented can vary, depending on the application or display device. The RGB Color mode in Photoshop varies according to the working space setting that you specify in the Color Settings dialog box.

## CMYK Color mode

In the CMYK mode, each pixel is assigned a percentage value for each of the process inks. The lightest (highlight) colors are assigned small percentages of process ink colors; the darker (shadow) colors higher percentages. For example, a bright red might contain $2 \%$ cyan, $93 \%$ magenta, $90 \%$ yellow, and $0 \%$ black. In CMYK images, pure white is generated when all four components have values of $0 \%$.

Use the CMYK mode when preparing an image to be printed using process colors. Converting an RGB image into CMYK creates a color separation. If you start with an RGB image, it's best to edit first in RGB and then convert to CMYK at the end of your editing process. In RGB mode, you can use the Proof Setup commands to simulate the effects of a CMYK conversion without changing the actual image data. You can also use CMYK mode to work directly with CMYK images scanned or imported from high-end systems.

Although CMYK is a standard color model, the exact range of colors represented can vary, depending on the press and printing conditions. The CMYK Color mode in Photoshop varies according to the working space setting that you specify in the Color Settings dialog box.

## Lab Color mode

The CIE L*a*b* color model (Lab) is based on the human perception of color. The numeric values in Lab describe all the colors that a person with normal vision sees. Because Lab describes how a color looks rather than how much of a particular colorant is needed for a device
(such as a monitor, desktop printer, or digital camera) to produce colors, Lab is considered to be a device-independent color model. Color management systems use Lab as a color reference to predictably transform a color from one color space to another color space.

The Lab Color mode has a lightness component (L) that can range from 0 to 100. In the Adobe Color Picker and Color panel, the $a$ component (green-red axis) and the $b$ component (blueyellow axis) can range from +127 to -128 .

Lab images can be saved in Photoshop, Photoshop EPS, Large Document Format (PSB), Photoshop PDF, Photoshop Raw, TIFF, Photoshop DCS 1.0, or Photoshop DCS 2.0 formats. You can save 48-bit (16-bits-per-channel) Lab images in Photoshop, Large Document Format (PSB), Photoshop PDF, Photoshop Raw, or TIFF formats.

## Grayscale mode

Grayscale mode uses different shades of gray in an image. In 8-bit images, there can be up to 256 shades of gray. Every pixel of a grayscale image has a brightness value ranging from 0 (black) to 255 (white). In 16-and 32-bit images, the number of shades in an image is much greater than in 8-bit images.

Grayscale values can also be measured as percentages of black ink coverage ( $0 \%$ is equal to white, $100 \%$ to black).

Grayscale mode uses the range defined by the working space setting that you specify in the Color Settings dialog box.

## Bitmap mode

Bitmap mode uses one of two color values (black or white) to represent the pixels in an image. Images in Bitmap mode are called bitmapped 1-bit images because they have a bit depth of 1.

## Duotone mode

Duotone mode creates monotone, duotone (two-color), tritone (three-color), and quadtone (fourcolor) grayscale images using one to four custom inks.

## Indexed Color mode

Indexed Color mode produces 8 -bit image files with up to 256 colors. When converting to indexed color, Photoshop builds a color lookup table (CLUT), which stores and indexes the colors in the image. If a color in the original image does not appear in the table, the program chooses the closest one or uses dithering to simulate the color using available colors.

Although its palette of colors is limited, indexed color can reduce file size yet maintain the visual quality needed for multimedia presentations, web pages, and the like. Limited editing is available in this mode. For extensive editing, you should convert temporarily to RGB mode. Indexed color
files can be saved in Photoshop, BMP, DICOM (Digital Imaging and Communications in Medicine), GIF, Photoshop EPS, Large Document Format (PSB), PCX, Photoshop PDF, Photoshop Raw, Photoshop 2.0, PICT, PNG, Targa®, or TIFF formats.

## Multichannel mode

Multichannel mode images contain 256 levels of gray in each channel and are useful for specialized printing. Multichannel mode images can be saved in Photoshop, Large Document Format (PSB), Photoshop 2.0, Photoshop Raw, or Photoshop DCS 2.0 formats.

These guidelines apply when converting images to Multichannel mode:

- Layers are unsupported and therefore flattened.
- Color channels in the original image become spot color channels in the converted image.
- Converting a CMYK image to Multichannel mode creates cyan, magenta, yellow, and black spot channels.
- Converting an RGB image to Multichannel mode creates cyan, magenta, and yellow spot channels.
- Deleting a channel from an RGB, CMYK, or Lab image automatically converts the image to Multichannel mode, flattening layers.
- To export a multichannel image, save it in Photoshop DCS 2.0 format


## 11. CHANGING FOREGROUND AND BACKGROUND COLORS

Select the Eyedropper tool on the toolbox, and then click anywhere in the active document to change the foreground color. Hold down the Alt (Win) or Option (Mac) key, and then click to change the background color. Click on a color swatch in the Swatches panel to change the foreground color.

## Steps

## 1.Open your Adobe Photoshop program.

2.Locate "Set Foreground Color" tool. It's located at the bottom of the toolbox on your left side and it looks like two squares stacking on top of one another.


Click the top square. This square is on the first top of the other square. A Color Picker box for foreground color opens.


Select a color hue on the sliding scale. It is located at the center of the Color Picker box. You can either drag up and down or click on one hue for your foreground color. As you drag the sliding scale up and down, the color in the color field to your left changes along with its value and saturation variants.


Choose a color in the color field to your left. The color field is located at the left side of the Color Picker box; it looks like the biggest square displaying different shades of colors. By clicking on any color, the display on the small square to the right side of the hue sliding scale will change. This square is separated into two horizontal squares indicating your chosen current and new colors.


Click "OK" button. It is on the top right hand side of the Color Picker box. When you are satisfied with the foreground color of your choice, click the button "OK."
The new foreground color displays. The "Set Foreground Color" square at the bottom of the toolbox displays your new foreground color.

The editing tools are found below the selecting tools on the tools panel. Naturally, they all have different functions related to editing an image. You can do simple procedures like draw or erase, or perform more complex tasks like dodging and burning -- manipulating the exposure of selected areas -- that will make for studio quality prints and creative visuals.


- Spot Healing Brush Tool: Corrects blemishes in the image like dust specs and blends the final image
- Brush Tool: Paints on the image, allows you to select size of brush area as well as color
- Clone Stamp Tool: Copy pixels from one part of the image and recreate elsewhere
- History Brush Tool: Kind of "unpaints" the edits you made; this brush will revert the selected parts of the image you drew on back to the original form
- Eraser Tool: Erases pixels from the image, exposing the layer below the image you are working on, or the blank sheet if no layer is there
- Gradient Tool: Creates a blending of foreground and background colors in the image
- Blur Tool: Makes parts of the image blurry; useful when creating a selective focus
- Dodge Tool: A useful tool for brightening dark areas of an image; the Burn Tool (nested within the Dodge Tool) darkens bright areas of an image

As with the Selection Tools, there are other tools with similar functions nested within each of the default Editing Tools on display. Remember, click and hold over any of the tools to see the variant options.

- Spot Healing Brush: Healing Brush, Patch, Content-Aware Move, Red Eye
- Brush: Pencil, Color Replacement, Mixer Brush
- Clone Stamp: Pattern Stamp
- History Brush: Art History Brush
- Eraser: Background Eraser, Magic Eraser
- Gradient: Paint Buckets, 3D Material Drop
- Blur: Sharpen, Smudge
- Dodge: Burn, Sponge


## Dodging and Burning

Dodging part of an image means that you are brightening up that part, whereas burning it means you are making it darker. In the image below, the area of grass above the dog has been dodged, and the area below him has been burned while the area by the hose has been left alone.

These tools can be especially useful if you are cropping part of an image out and layering it on another image, merging the two, and you want to get rid of the "halo effect" -- the bright contrast around the perimeter of the cropped image -- and make the final result look pure.

## 12.USING BRUSH TOOL:

The Brush tool and the Pencil tool paint the current foreground color on an image. The Brush tool creates soft strokes of color. The Pencil tool creates hard-edged lines.

Choose a foreground color. (See Choose colors in the toolbox.)
Select the Brush tool

Choose a brush from the Brush Presets panel. See Select a preset brush.
Set tool options for mode, opacity, and so on, in the options bar.
Do one or more of the following:

- Click and drag in the image to paint.
- To draw a straight line, click a starting point in the image. Then hold down Shift, and click an ending point.
- When using the Brush tool as an airbrush, hold down the mouse button without dragging to build up color.


## Paint tool options

Set the following in the options bar. Options available vary with each tool.
Mode

Sets the method for blending the color you paint with the underlying existing pixels. Available modes change with the currently selected tool. Paint modes are similar to layer blending modes. See Blending modes.

Opacity
Sets the transparency of color you apply. As you paint over an area, the opacity does not exceed the set level no matter how many times you move the pointer over the area, until you release the mouse button. If you stroke over the area again, you apply additional color, equivalent to the set opacity. Opacity of 100 percent is opaque.

Sets the rate at which color is applied as you move the pointer over an area. As you paint over an area, while holding down the mouse button, the amount of color builds up based on the flow rate, up to the opacity setting. For example, if you set the opacity to $33 \%$ and the flow to $33 \%$, each time you move over an area, its color moves $33 \%$ toward the brush color. The total will not exceed $33 \%$ opacity unless you release the mouse button and stroke over the area again.

## Basics functions of Brushes for Photoshop

Now go and grab the "Brush tool" from the tool bar.


And the first menu in option bar is "Brush preset picker". Here we can change brush tip, this menu shows different types of icon are actually different types of brushes available.

Now click on this small wheel icon. you will get here some list of different group of preset brushes. These brushes are inbuilt with Photoshop.

## Paint with the Brush tool:

6. Choose a foreground color. (See Choose colors in the toolbox.)
7. Select the Brush tool or Pencil tool .
8. Choose a brush from the Brush Presets panel. See Select a preset brush.
9. Set tool options for mode, opacity, and so on, in the options bar.
10. Do one or more of the following:

## 13.SELECTION TOOLS:

The selection tools are located in the Tools panel, which is located, by default, on the left side of your screen.

In Photoshop Elements, you must be in Expert mode to see the selection tools.
Use the Rectangular and Elliptical Marquee tools .The Rectangular Marquee tool draws square or rectangular selection borders, and the Elliptical Marquee tool draws round or elliptical selection borders.


Rectangularand Ellip tical Manquee tooloptions
A. Rectangular Marquee tool B. Elliptical Marquee tod C. New selection D. Add to selection E. Subtract fr
selection F. Intersect with selection
Select the Rectangular Marquee tool (A) or the Elliptical Marquee tool (B) in the toolbox.
$\square$ (Optional) Set marquee tool options in the Tool Options bar:

- Specify whether to create a new selection, add to a selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased (Elliptical Marquee tool only).
- From the Mode pop-up menu, choose Normal to visually set the size and proportions of the selection border; Fixed Ratio to set a width-to-height ratio for the selection border; or Fixed Size to specify the marquee's height and width.

Drag over the area you want to select. Hold down the Shift key as you drag to constrain the selection marquee to a square or circle.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

## Use the Lasso tool

The Lasso tool draws freehand selection borders. This tool lets you make very precise selections.

A. Lasso tool B. Polygonal Lasso tool C. Magnetic Lasso tool D. New selection E. Add to selection F. Subtract from selection G. Intersect with selection

Select the Lasso tool from the toolbox.
(Optional) Set Lasso tool options in the Tool Options bar:

- Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased.

Drag to draw a freehand selection border:

- To add to the selection, release the mouse button; then press Shift and, when the pointer changes to drag.
- To subtract from the selection, release the mouse button; then press Alt (Option in Mac OS) and when the pointer changes todrag.
- To add straight-edge segments, hold the mouse button and press Alt (Option in Mac OS); then release the mouse button and, when the pointer changes click where you want to position the end of the segment.

To close the selection border, release the mouse button. A straight selection segment is drawn from where you released the mouse button to the starting point of your selection.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

## Use the Polygonal Lasso tool

The Polygonal Lasso tool draws straight-edged segments of a selection border. You can create as many segments as you need to draw a selection border.


PolygonalLasso tooloptions
A. Lasso tool B. Polygonal Lasso tool C. Magnetic Lasso tool D. New selection E. Add to selection F. Subtract from selection G. Intersect with selection

Select the Polygonal Lasso tool from the toolbox.
$\square$ (Optional) Set Polygonal Lasso tool options in the Tool Options bar:

- Specify whether to create a new selection, add to an existing selection, subtract from a selection, or select an area intersected by other selections.
- To soften the selection border so that it blends into the area outside the selection, enter a Feather value.
- To smooth the edges of your selection, select Anti-aliased.

Click where you want the first straight segment to begin, and click a second time where you want the segment to end and the next one to begin. Continue clicking to create segments.

If you make a mistake, press the Delete key to erase segments. You can switch from creating straight-edge segments to drawing freehand by pressing Alt (Option in Mac OS).

Close the selection border by doing one of the following:

- Position the pointer over the starting point and click. A closed circle appears next to the pointer when you are over the starting point.
- If the pointer is not over the starting point, double-click, or Ctrl-click (Command-click in Mac OS). A straight selection segment is drawn from your pointer to the starting point of your selection.

Click Refine Edge to make further adjustments to your selection and make it more precise. See how you can refine the edges of a selection.

- Use the Magnetic Lasso tool
- The Magnetic Lasso tool draws a selection border that automatically snaps to the edges of objects you drag over in the photo. This makes it easy to draw precise selection borders. The Magnetic Lasso tool is useful for quickly selecting objects with complex edges set against high-contrast backgrounds.

Rectangular Marquee tool: Draws square or rectangular selection borders.


Elliptical Marquee tool: Draws round or elliptical selection borders.


Lasso tool: Draws freehand selection borders, best for precision.


Polygonal Lasso tool: Draws multiple straight-edged segments of a selection border.


Magnetic Lasso tool: Draws a selection border that automatically snaps to edges when you drag over in the photo.


Magic Wand tool: Selects pixels of similar color with one click


Quick Selection tool: Quickly and automatically makes selection based on color and texture when you click or click-drag an area


Selection Brush tool: Automatically selects or deselects the area you paint, depending on whether you're in Sselection or Mask mode.


Smart Brush tool: Applies color and tonal adjustments and effects to a selection. The tool automatically creates an adjustment layer for non-destructive editing.


## Refine Selection Brush tool:

Helps you add or remove areas to and from a selection.


Auto Selection tool: Automatically makes a selection when you draw a shape around an object


## 14. RECTANGULAR AND SQUARE SELECTIONS

The Rectangular Marquee Tool sitting at the very top of the Tools panel in Photoshop. It's the tool with the icon that looks like the outline of a square. Click on it to select it:


The Rectangular Marquee Tool is located at the top of the Tools panel.

## Drawing Rectangular Selections

Using the Rectangular Marquee Tool in its most basic form is easy. You simply click with your mouse at the point where you want to begin the selection, which will usually be in the top left corner of the object or area you need to select, then continue holding your mouse button down as you drag towards the bottom right corner of the object or area. When you release your mouse button, the selection is complete!


Colorful wooden blocks.

See that large red block in the top row? Let's say I wanted to change its color, a very simple thing to do. Now, if this was Star Trek, I could simply say "Computer, select red block, top row", followed by "Change color to purple", or whatever color we wanted. Unfortunately, reality hasn't quite caught up to science fiction just yet, but that doesn't mean life in this day and age is unbearably difficult. Far from it! Photoshop may not be able to identify the wooden block, since all it sees are pixels, but not only can you and I see it, we can see that it's very clearly in the shape of a rectangle, which means that the task of selecting it is perfectly suited for the Rectangular Marquee Tool.

First, I'll select the Rectangular Marquee Tool from the Tools panel as we saw a moment ago. You can also select tools using their keyboard shortcuts. Pressing the letter $\mathbf{M}$ on your keyboard will instantly select the Rectangular Marquee Tool. Then, to begin the selection, I'll click in the top left corner of the block. While still holding down my mouse button, I'll drag towards the bottom right corner of the block:


If you find that you didn't begin your selection in exactly the right spot, there's no need to start over. Just hold down your spacebar, then drag your mouse to move the selection where you need it. When you're done, release your spacebar and continue dragging out the selection.

To complete the selection, all I need to do is release my mouse button. The wooden block is now selected (or at least, the pixels that make up what we see as the block are selected), and a selection outline appears around the block in the document window. Any edits I make at this point will affect that specific block and no others:

To change the color of the block, we'll use Photoshop's Hue/Saturation image adjustment. To select it, I'll go up to the Image menu at the top of the screen where I'll choose Adjustments and then Hue/Saturation:

| Vibrance... |  |
| :--- | ---: |
| Hue/Saturation... | $\mathscr{H}$ |
| Color Balance... | $\mathscr{B}$ B |
| Black \& White... | こ仓HB |
| Photo Filter... |  |
| Channel Mixer... |  |

The Hue/Saturation image adjustment is great for changing the color of objects in an image.
This brings up the Hue/Saturation dialog box. I think I'll change the block's color to orange. I know I said purple earlier, but now that I've had a few more minutes to think about it, a nice bright orange would probably be a better choice. Changing the color is as easy as dragging the Hue slider left or right until you find the color you want. I'm going to drag mine towards the right to a value of 28 to select orange. Then, to bump up the color saturation a bit, I'll drag the Saturation slider towards the right to a value of around +25 :

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value of around +25:
```


change an object's color by dragging the Hue slider. Increase or decrease color saturation with the Saturation slider.

When I'm happy with the new color, I'll click OK to exit out of the dialog box. I don't need my selection anymore, so to remove it, I'll go up to the Select menu at the top of the screen and choose Deselect:


Remove selections by choosing Deselect from under the Select menu.

A faster way to remove a selection is with the keyboard shortcut, Ctrl+D (Win) / Command+D (Mac), but either way will work. With the selection outline now gone, we can see that only the area that was inside the rectangular selection outline was affected by the Hue/Saturation adjustment. The formerly red block is now an orange block, while the rest of the photo remains unchanged:


Only the area inside the rectangular selection was affected by the Hue/Saturation adjustment.

## Drawing Square Selections

So far, we've seen how easy it is to select a rectangular-shaped object or area in a photo with the Rectangular Marquee Tool, but what if you need to select something that's perfectly square? Is there a way to force the selection outline into a square? Not only is there a way to do it, there's actually two ways to do it, although one of them is much faster than the other.

Here's a photo I have open in Photoshop of some rather grungy looking tiles:


Let's say I want to select the tile in the center so I can use it as an interesting background or texture for an effect. Since the tile is obviously square, we'll want to constrain our selection to a square. First, we'll look at the long way to go about it.

Any time the Rectangular Marquee Tool is selected, the Options Bar at the top of the screen will display options specifically for this tool. One of the options is called Style, and by default, it's set to Normal, which means we're free to drag out any size selection we need with any dimensions. To force the selection into a square, first change the Style option to Fixed Ratio, then enter a value of $\mathbf{1}$ for both the Width and Height options (1 is the default value for the Width and Height so you may not need to change it):



Change the Style option to Fixed Ratio, then set both the Width and Height to 1.
This forces the selection into a width to height aspect ratio of $1: 1$, which means the width and height of our selection will always be equal to each other, which means we can now easily draw out a perfect square. I'll click with my mouse in the top left corner of the tile to begin my selection, just as I did previously, and with my mouse button still down, I'll drag towards the bottom right corner of the tile. This time, thanks to the options I set in the Options Bar, my selection outline is constrained to a square:


No matter how large of a selection I draw, it remains a perfect square.

Once again, there's no need to start over if you didn't begin your selection in the right spot. Just hold down your spacebar, drag the selection to its new location, then release the spacebar and continue dragging out the rest of the selection.

To complete the selection, I'll release my mouse button, and we can see in the document window that the square tile in the center is now selected, ready for whatever I decide to do with it:


The only problem with using this method to force the selection into a square is that the options in the Options Bar are "sticky", meaning they don't automatically switch back to their default settings the next time you go to use the tool. I can't even begin to tell you how many times I've tried to drag out a rectangular selection only to have the selection constrained to a square or some other aspect ratio because I forgot to change the Style option back to Normal. So, before we go any further, let's change it back to Normal right now:


## 

A much better way to constrain a selection to a square with the Rectangular Marquee Tool is with a simple keyboard shortcut. Click on the starting point and begin dragging out a rectangular selection as you normally would, then hold down your Shift key as you continue to drag. As soon as you press the Shift key, you'll see the selection outline jump to a perfect square. Keep holding the Shift key down until you're finished drawing the selection. Release your mouse button to complete the selection, then release the Shift key.

The order you do things here is important. If you release your Shift key before releasing your mouse button to complete the selection, your selection outline will jump back into a rectangular shape and you'll have to press and hold the Shift key again to switch back to the square. Also, if you hold the Shift key down before clicking to begin your selection, you'll enter the Add to Selection mode, which isn't something we need to get into here but it could give you unexpected results if you already have one selection active and try to start a new one. So remember, to constrain the selection to a square with the keyboard shortcut, first click to set a starting point and begin dragging, then hold down the Shift key. Release your mouse button to complete the selection, then release the Shift key.

Next, we'll learn how to drag a rectangular or square selection out from its center!

## Drawing Selections From The Center

Up to this point, we've been starting all of our rectangular or square selections from the top left corner of whatever it was that we were selecting, and in most cases that works just fine. But there's no rule that says you must always start in the top left corner. In fact, Photoshop gives us a simple keyboard shortcut that allows us to drag selections out from their center rather than from a corner.

Click on your starting point in the center of the area you need to select with the Rectangular Marquee Tool and begin dragging out your selection, then hold down your Alt (Win) / Option (Mac) key and continue dragging. As soon as you add the Alt / Option key, your selection outline will begin extending out in all directions from the point you initially clicked on. Continue dragging the selection out from its center, release your mouse button to complete the selection, then release your Alt / Option key:


Once again, the order you do things here is important. If you release your Alt / Option key before releasing your mouse button to complete the selection, the selection outline will jump back to its default behavior of extending out from the corner. You'll need to press and hold the Alt / Option key again to switch it back to the center. Also, if you press and hold Alt / Option before clicking to set a start point, you'll enter the Subtract from Selection mode which we won't get into here but can cause unexpected results if you already have one selection active and try to start a new one. The correct order for drawing rectangular selections from the center is to click to set a starting point and begin dragging, then hold down Alt / Option and continue dragging. Release your mouse button to complete the selection, then release your Alt / Option key.

You can drag out a square selection from its center as well. Simply add the Shift key to the keyboard shortcut. Click in the center of the square object or area you need to select and begin dragging out the selection, then hold down Shift+Alt (Win) / Shift+Option (Mac) which will snap the selection outline into a perfect square and force the selection to extend out in all directions from the point you clicked on. When you're done, release your mouse button, then release the Shift and Alt / Option keys.

## Quickly Remove A Selection

When you're done with a selection and no longer need it, you can deselect it by going up to the Select menu at the top of the screen and choosing Deselect as we saw earlier, or you can use the keyboard shortcut Ctrl+D (Win) / Command+D (Mac). Or, for an even faster way to deselect a rectangular or square selection, simply click anywhere inside the document window while you still have the Rectangular Marquee Tool active.

