# Using Adobe Photoshop

3 – Painting and Drawing

1 - Creating new Images

Photoshop contains many useful tools for painting and drawing on an image. However, these tools are useful for more than simply painting and drawing lines on an image. They can also be extremely useful for touching up images and for use in special artistic effects on an image. The skills learned in this section will be used frequently in the sections which follow. Most of these exercises will focus on the use of the **Brush** tool with its associated options & techniques. Many of the same options apply to other tools you will discover.
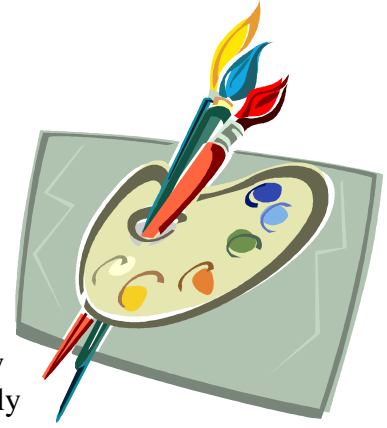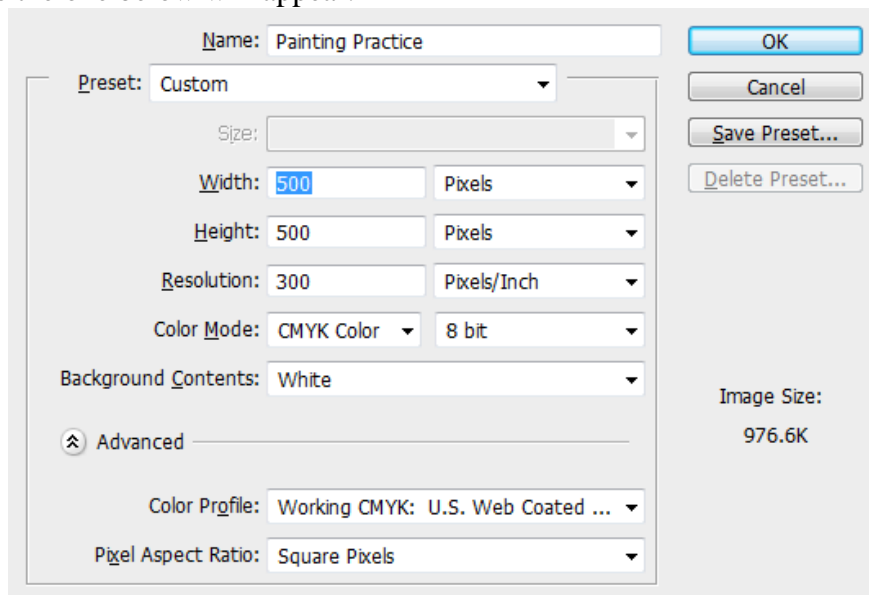
Exercise 1 – Creating a New Canvas
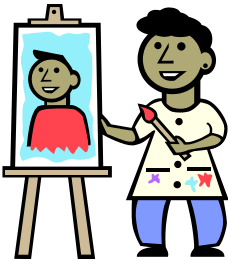
In Photoshop, the term canvas is used to refer to the area occupied by an image. When you create a new image, you are creating a new canvas – ready to create a picture on, just as a painter might grab a blank canvas to paint on. Remember though that it takes more than a paint brush and a blank canvas to make a work of art. Likewise, knowing how to use Photoshop won't make you an artist any more than knowing how to type will make you a poet. It can certainly help you to make good use of your talents though and even improve on them.

1) If you still have any images open in Photoshop, then from the **File** Menu select **Close All** or press **[Ctrl] [Alt] [W]**.

2) Create a new canvas by going to the **File** menu and selecting **New** or by pressing **[Ctrl] [N]**. A dialog like the one below will appear.

Field	Value	
Name:	Painting Practice	
Preset:	Custom	
Size:		
Width:	500	Pixels
Height:	500	Pixels
Resolution:	300	Pixels/Inch
Color Mode:	CMYK Color	8 bit
Background Contents:	White	
Advanced		
Color Profile:	Working CMYK: U.S. Web Coated ...	
Pixel Aspect Ratio:	Square Pixels	

OK / Cancel / Save Preset... / Delete Preset...

Image Size: 976.6K

The **Name** box allows you to specify a name for the image. You can also do this when you save the image.

3) Enter *Painting Practice* in the Name box.

The **Preset** box provides you with certain standard image sizes to choose from. Some of the more common ones in the list are explained below.

| 2 x 3 4 x 6 5 x 7 8 x 10	Standard photo sizes in the **Photo** category. For example, the photo prints you would normally get from a Kodak store would be approximately 4 inches high and 6 inches wide.
640 x 480 800 x 600 1024 x 768	Common screen resolutions in the **Web** category. For example, if you were creating an image to be used as a Windows wallpaper background, you could select a standard screen resolution preset such as 1024 x 768.
PAL D1/DV, 720 x 576 (with guides) PAL D1/DV Square Pix, 768 x 576 (with guides) PAL D1/DV Widescreen, 720 x 576 (with guides) HDTV, 1280 x 720 (with guides) HDTV, 1920 x 1080 (with guides)	TV screen resolutions in the **Film & Video category**. If you were creating a menu for Adobe Encore to use in a DVD, you might use the PAL 720 x 576 preset which is suitable for Australian DVDs.
A4 A3	Standard paper sizes.

4) Leave the **Preset** box on *Custom* which allows you to specify your own image dimensions.
5) Set both the **Width** and the **Height** to *500* with *Pixels* selected as the unit. You can also specify dimensions in other units such as centimetres or inches.
6) Change the **Resolution** to *300* pixels / inch. This is a common setting for images that will be printed.
7) Change the **Color Mode** option to *CMYK Color* if it isn't already. Color Modes are explained in the next section.
8) Leave the **Background Contents** option as *White*.
9) When all of the options are as they appear in the example on the previous page, Click **OK**.

A new image canvas will be created.

Image Name

Current magnification

Image colour mode
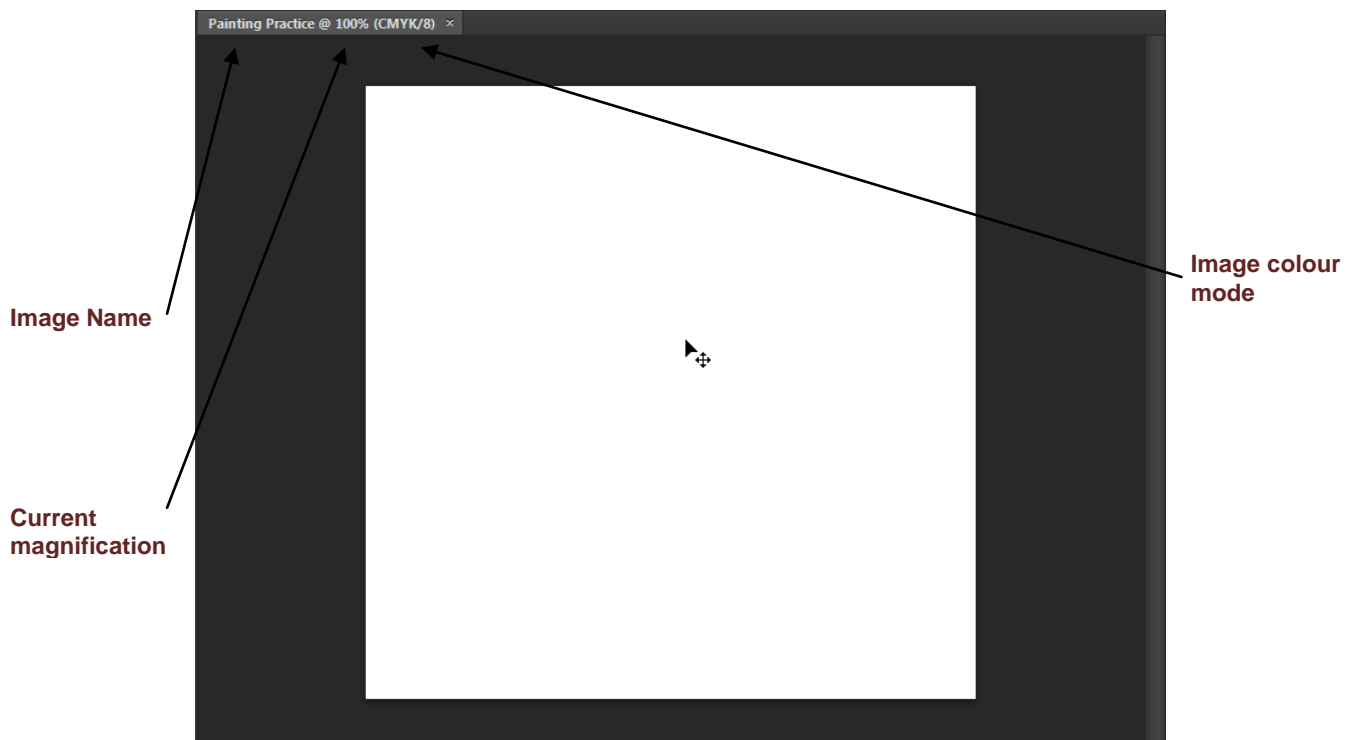
Exercise 2 – Saving an Image

Photoshop is capable of saving images in many different formats. Generally though, it is best to save your work in Photoshop's own **PSD** format and only save a copy in a different format when you're ready to use the completed image elsewhere. This is because **PSD** files remember additional Photoshop specific details about your image such as layer and channel information. Keeping your working copies in this format ensures that you won't lose any information when you save and you can always come back to it when you need to do additional editing.

1) From the **File** menu select **Save as** or press **[Ctrl] [Shift] [S]**.

2) A dialog like the one below will appear. If you specified an image name when you created the file then that name will be filled in already for the filename. Make sure the filename is *Painting Practice*.
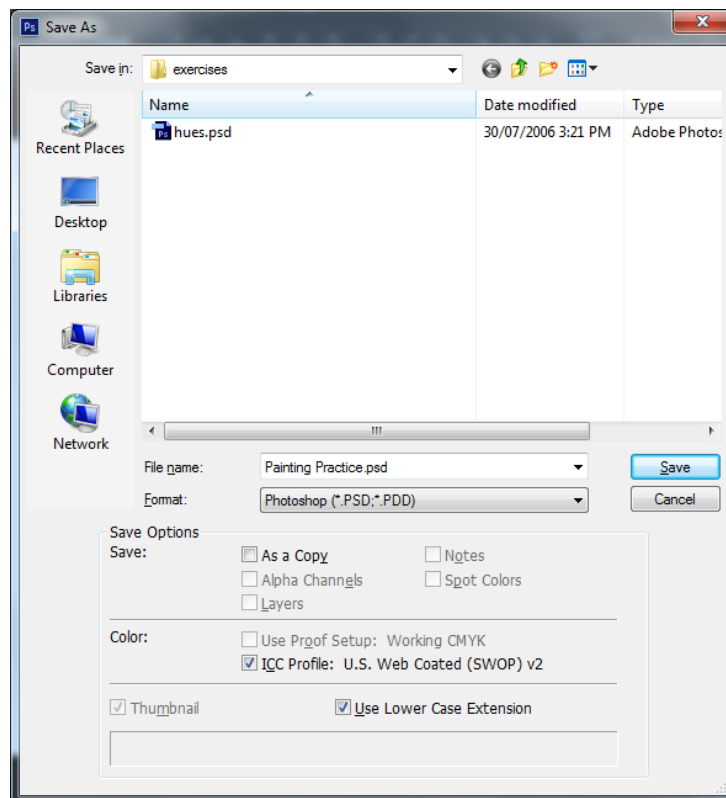
3) Make sure the **Format** is set to *Photoshop *.PSD* which should be the first format in the list. Normally the last format used will be selected by default.

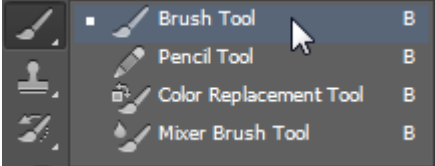
4) Click **Save** to save the image.

From now on you can save changes to the image by pressing **[Ctrl] [S]**. Do it regularly as you work.

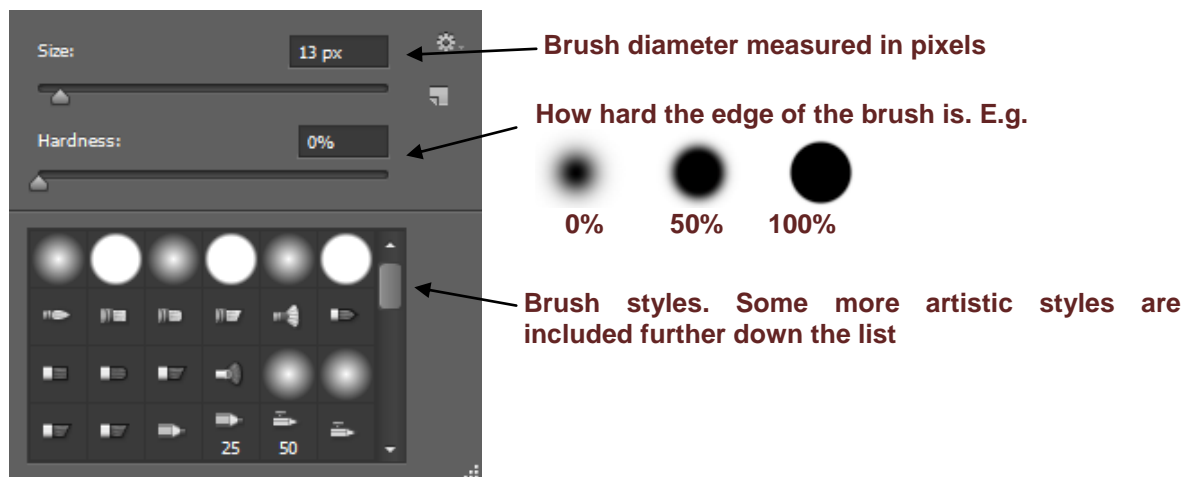| Tip	If you are working on an image that is going to be in a different format, such as a JPEG image for a website, it is still a good idea to keep a copy of your PSD working version. PSD files take up a lot more room on your hard drive but they'll make life a lot easier when you want to go back and make changes to images. Unlike some image formats, you can modify and save a PSD file as much as you want without any decrease in image quality. Some programs, particularly other Adobe programs such as **In Design** can import PSD files directly without needing any conversion and without losing any image data.

2 - Painting

In the following exercises you will become familiar with various features of the brush tool.

Exercise 3 – Using the Brush Tool

1) Locate the **Brush Tool** on the **Tool Palette** (normally on the left of the screen).

2) Click the **Brush Tool** icon or press **[B]** on your keyboard to select the brush tool. When the mouse is over an image with the brush tool selected, your mouse pointer will change to a small circle shape which indicates the size of the brush (We'll change the size in a moment).

3) Notice that the brush tool icon, like many of the icons in the tool palette, has a small triangle in its bottom right corner. This indicates that more than one tool has been grouped together.

4) Hold your mouse button on the Brush tool icon and a shortcut menu will appear as shown to the right.

The menu will indicate that the Brush Tool is grouped with other similar tools. Each tool is useful for different purposes. For instance the brush tool paints soft edged brush strokes while the pencil tool draws hard edged freehand lines. Where more than one tool is grouped, you can select either one by selecting it from the list. You can also cycle through the tools in a group by holding down **[Shift]** while pressing the shortcut key for that group.

5) Press **[Shift] [B]** to switch from the brush tool to the pencil tool.
6) Change back to the **Brush** tool before continuing.
7) On the **Options Palette** (along the top of the screen), locate the brush size options and click the arrow next to the brush size. A list of brush options will appear.

Brush diameter measured in pixels

How hard the edge of the brush is. E.g.

0%   50%   100%

Brush styles. Some more artistic styles are included further down the list

8) Set the **Master Diameter** to *20px* and set the **Hardness** to *100%*.
9) Draw a curved line on the picture.
10) Select the **Pencil** tool.
11) Set the **Master Diameter** to 20px (you can change the **Hardness** option but it has no effect on the **Pencil** tool)
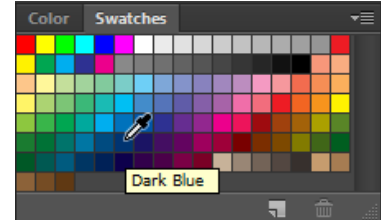12) Draw another curved line on the image to see the difference between the two tools.

Brush Tool ⟶   ⟵ Pencil Tool

13) Change back to the **Brush Tool.**
14) From the **<u>F</u>ile** menu select **Reve<u>r</u>t** or press **[F12]**. This will return the file to the state it was in the last time it was saved, removing the lines.

One quick way to change a brush size is to use the keyboard shortcut. Pressing the right square bracket (**]**) will increase the brush size while the left square bracket (**[**) will decrease the brush size.

15) Move your mouse over the image and try using the square brackets to adjust the brush size. For most of the exercises in this section, the brush size you choose won't be important. Before we continue however, we'll change the brush colour.
16) From the palettes on the right hand side make sure the **Swatches** palette is visible by clicking on its tab or by selecting **Swatches** from the **Window** menu. Click on a dark blue colour as shown to the right.
17) Use the paint brush to create a smiley face similar to the one below (don't worry if it's a bit uneven or lopsided).

18) Save your image so you can revert back to its current state later on.
19) Pick a green colour from the **Swatches** palette. We'll take a look at some of the other painting options.

In the options palette along the top, you can find the blending mode options. **Blending modes** are used a lot in Photoshop to control how colours are combined on your image. If the Mode is set to Normal, then the colour you paint will replace the colour you're painting over. We'll experiment with some of the other blending modes.
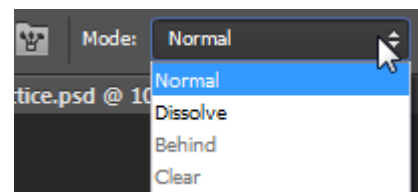
20) Select the *Multiply* mode.

This blending mode multiplies the base colour with the brush colour, producing a darker colour.

21) With the green brush colour and the multiply mode selected, paint over the lines you have already drawn. Where the green paints over the blue, the colour will darken.

22) Try some of the other blending modes to see the effect they have on your brush. If your image becomes a bit too crowded with green paint strokes then try changing the colour you are using or reverting to the saved state. The example below shows the effect of a few different modes. Some of them might not be visible painted on white.
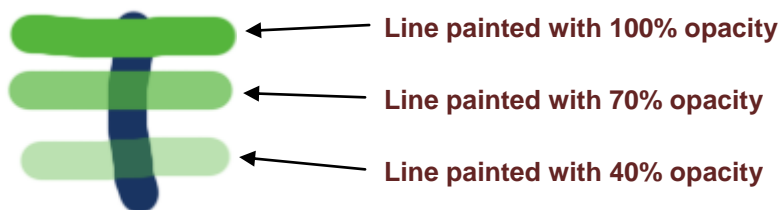

Multiply mode

Lighten mode

Difference mode
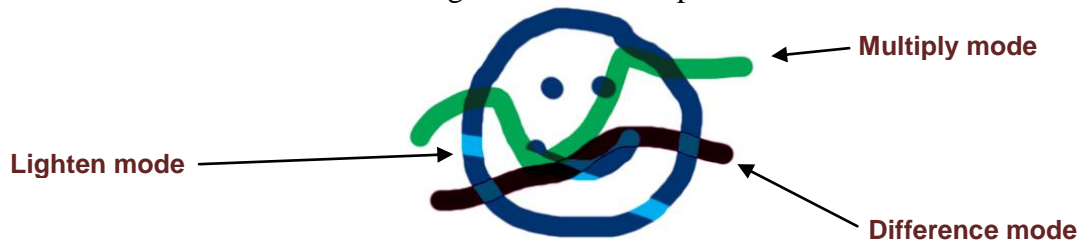
Note   Many advanced techniques in Photoshop make use of blending modes for special visual effects.

The next brush option we'll look at is the **Opacity** option, which is also a common option found in many areas of Photoshop. This setting controls how opaque your painting is when you use the brush. 100% is completely opaque, 0% is completely transparent and anywhere in between will be partially transparent.
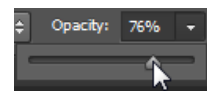
23) Change the opacity setting. The lower the number the more transparent it will be.

24) Paint on the image using different opacity settings to see the effect. You might want to set the **Mode** back to normal first to see the effect of **Opacity** more clearly.

Line painted with 100% opacity

Line painted with 70% opacity

Line painted with 40% opacity

One of the most popular options with the brush is the **Airbrush** option. In earlier versions of Photoshop it was a separate tool but it is now a part of the brush tool settings. With the brush tool in its normal settings, painting will put a constant amount of colour on the canvas. With the airbrush however, the amount of colour will depend on the flow setting and on how long you hold down the mouse. It is intended to act like a real airbrush where paint comes out quicker on higher flow settings.
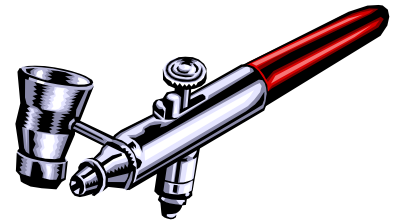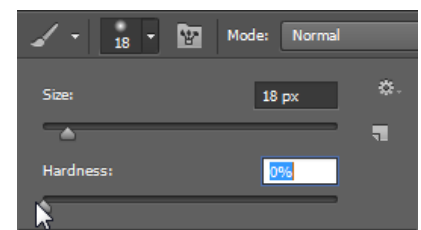
Change the **Opacity** option back to *100%.*

25) Change the brush **Hardness** setting to *0%* as shown to the right.

26) Slick on the **Airbrush** icon in the options palette.

27) Change the **Flow** setting to *60%*.

28) Paint on your image using the airbrush tool. Try faster and slower strokes to see the difference. Adjust the **Flow** setting to see what difference that makes.

With a very low **Flow** setting (less than 10%) Try dragging your mouse back and forth over a certain area in a zigzag pattern to shade it in with the selected colour. This is a very common airbrush technique and is often used for shading and creating shadow effects. The lower the flow setting, the more gradual the shading which can give you a more even effect.

To the right is an example of the airbrush in use. The **Flow** setting has been reduced to 5% with a yellow colour to gently shade in the shape. Then a dark grey colour has been used to create a soft shadow. Revert to the saved version of your image and then practice using the airbrush by trying to duplicate this example. If you don't like the result and want to try again you can revert to the saved version and have another try.

29) Save the changes to the image when you are happy with it.

Exercise 4 – Painting Lines

1) Close the *Painting Practice* image (**[Ctrl] [W]** or **[Ctrl] [F4]**).
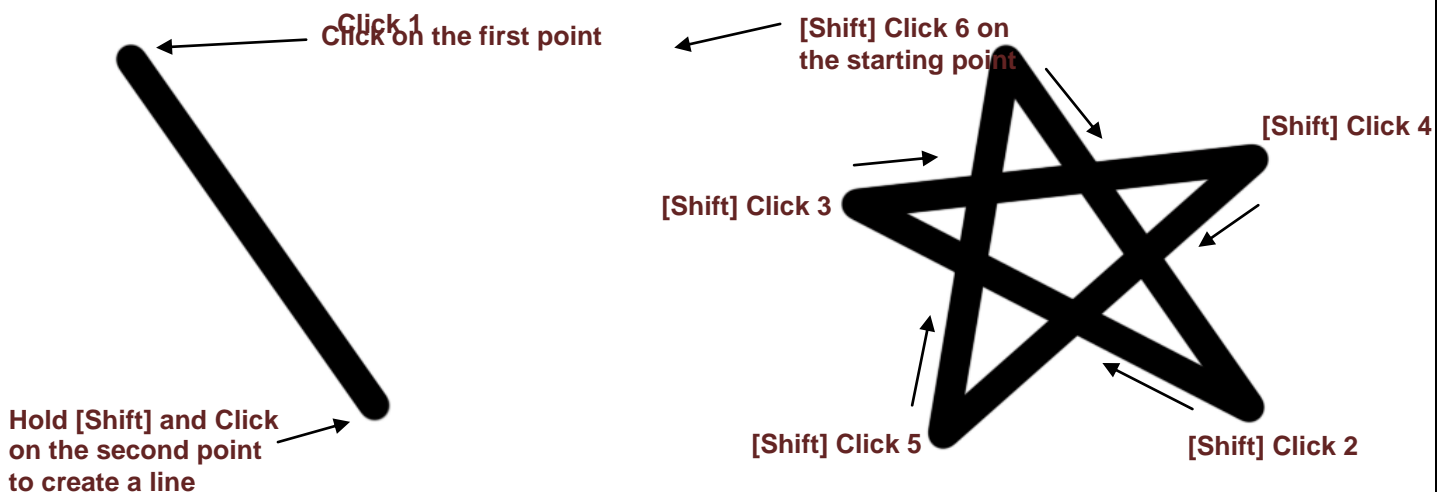2) Create a new canvas **[Ctrl] [N]** *500* pixels wide and *500* pixels high with the name *Lines*.
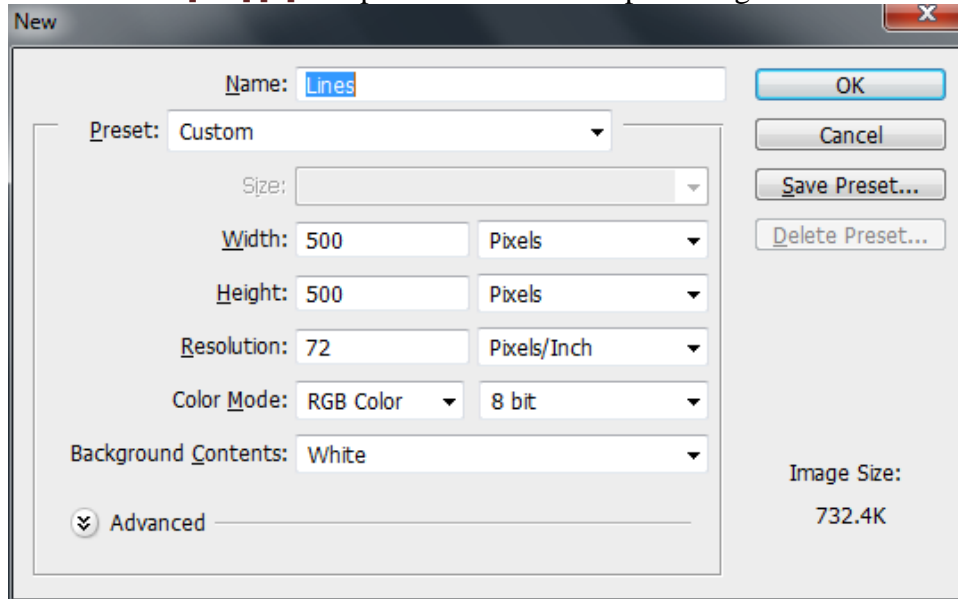
3) Set the brush options as shown below. Note the **Airbrush** is turned off and the brush **Hardness** is set to 100%. Set the colour to black (Press **D** for default colours).

4) Hold down the **[Shift]** key and draw a line. This will restrict the line to a 90% angle (either vertical or horizontal depending upon which direction you dragged in).
5) From the **Edit** menu select **Undo Brush Tool** or press **[Ctrl] [Z]**. This will remove the line you just drew.

You can also use the **[Shift]** key to create straight lines on other angles. To do this, click on the starting point of the line to create a dot. Then while holding shift, click on the point where you want the line to end and a line will be created between the two points. You can hold down **[Shift]** and click again to create another line between the second and third points. This can be continued for as long as you want to create a series of connected lines.

6) Try using the method just described to create the shape shown in the example below.

Click 1
Click on the first point

[Shift] Click 6 on the starting point

[Shift] Click 4

[Shift] Click 3

Hold [Shift] and Click on the second point to create a line

[Shift] Click 5

[Shift] Click 2

Note   Photoshop also has a line tool among its vector shapes which will be explained in a later section.

3 - The History Palette

Photoshop's **History Palette**, keeps a record of the changes you have made to your image. Normally, up to the last 20 changes will be kept but you can increase that number from Photoshop's options. Increasing it too much might place a lot of strain on a slower computer but on most computers you could probably benefit from increasing it a bit.

The history palette allows you to return to any of the previous steps, discarding any changes that have been made since that point. In addition, you can use the **History Brush** tool to return only small sections of the image to an earlier state. This is useful if you want to undo changes to part of the image without losing changes that you have made in another part of the image.

Exercise 5 – Using the History Palette

1) Close the *Lines* image, saving changes, and re-open the *Painting Practice* image.
2) Select a colour and use the **Brush Tool** to paint a line across the image.
3) Select a different colour and paint another line across the image.

4) Press **[F12]** to revert the file to its saved state.
5) Display the **History Palette** by clicking the icon to the right of your image or by selecting **History** from the **Window** menu.
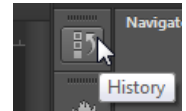
The **History Palette** will list the changes that have been made since you opened the image. Notice that even revert is one of the steps which means that it is possible to return to how the image was *before* you used the revert command. You can drag the bottom of the History palette to resize it so you can see more steps.

6) Try clicking on some of the different steps to see the image return to those states. When you have tried each one, click on the last step (Revert) to return to that step.
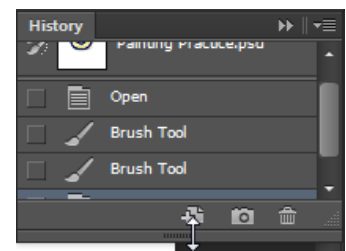
Note   If you return to an earlier step and then make another change, all of the history steps after the one you returned to will be lost.

If you need to hide the History palette, you can click the ▶▶ icon in the top right corner of the palette to hide it until you need it again.

7) Time for a bit of anarchy. Paint all over the image with different colours so that very little, if any, of the original image can be seen.

Remember the History Palette can usually only remember the last 20 steps so don't draw more lines than that.

Some call it anarchy
I call it art

Now we'll use the **History Brush** tool to return only the middle part of the image to its original state, while the rest of the image will retain the multicoloured lines.

8) In the **History Palette**, click on the blank space next to the *Revert* step. You might need to scroll up the list first. A small icon will appear to indicate that this will be the source for the history brush. Any part of the image we paint over with the history brush will return to the way it was at that point in the image history.
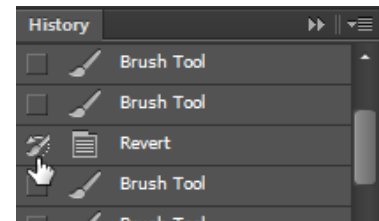
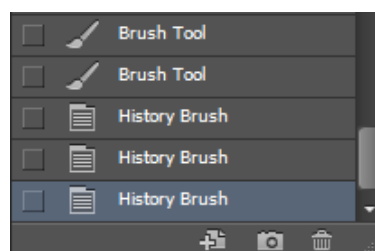9) Click on the **History Brush** icon in the **Tool Palette** or press the **[Y]** key to select it.

10) Set the **History Brush** options as shown below with a large brush **Diameter** and *0% Hardness*.

11) Now paint over the area of the image where your smiley face was and it will begin to reappear.

You'll see that even using the **History Brush** will appear in the history.

12) Save the changes to the image.

Exercise 6 – Freeing Memory by Clearing History

Keeping track of changes in the History can use up a lot of your computer's memory, especially with a large image. If you don't need to keep all of those steps, you can remove them from the history which makes memory available for your computer to use for more important things.

One way of doing it is to clear the history from the **History Palette** options. Like most palettes, the History palette has a menu of options that can be accessed by clicking the triangle symbol in the top right corner of the palette.

Click to open the palette menu

1) Click on the **Palette Menu** icon to see the **Clear History** option but don't select it at the moment. We'll look at other ways of clearing the history.
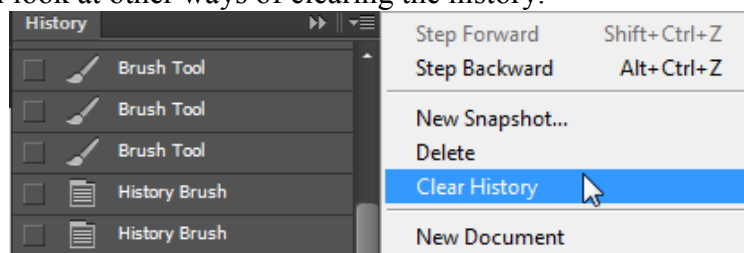
2) From the **Edit** menu select **Purge**. Again we won't select any of these options at the moment but you can see that there are options for clearing the history as well as clearing any copied data from the clipboard which can also free memory. Note that purging the history in this way cannot be undone.
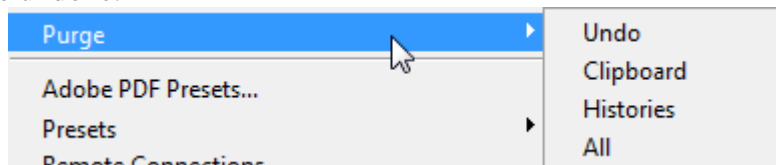
If you only want to remove certain items from the history list you can be a little more selective. We'll delete everything up to the Revert step.

3) Look at the bottom of the **History Palette** and you'll see an icon that looks like a rubbish bin.
4) Move your mouse over the History step before the *Revert* step (probably a Brush Tool step).
5) Drag that step on to the Delete Current State (rubbish bin) icon to delete everything up to that point in the history.

The *Revert* step should now be the first in the list.

Note   If you close an image its history list will not be kept for the next time it's opened.

Tip   Most of the techniques that you have learned in this section for use with the **Brush Tool** can also be used with numerous other tools in the **Tool Palette**, including the **History Brush**.

4 - Shortcuts Learned

Shortcut	Icon	Purpose
[Ctrl] [W]		Close current file
[Ctrl] [Alt] [W]		Close all open files
[Ctrl] [N]		Create a new image
[Ctrl] [Shift] [S]		Save as
[Ctrl] [S]		Save
[B]		Brush tool
[F12]		Revert
[and]		Adjust brush size
[Ctrl] [Z]		Undo
[Y]		History Brush tool