Digital Asset Development: Lab Session 1 – Image Editing with Adobe Photoshop CS6

Introduction

This is the first lab session of the Digital Asset Development module, and is an opportunity for you to get some practice using Adobe Photoshop, one of the main software tools we will be using on the module. It is essential for later work that you are able to use basic Photoshop tools speedily and confidently. Note that there are a range of versions of Photoshop installed across the various uni labs, and there are both major and minor differences between these. However, the same basic operations are all available in all versions of Photoshop and can largely be accessed using the same options, so for these exercises it is not really important which version you use.

If you are unfamiliar with Photoshop, there are some basic introductory videos available to view on Moodle. These cover the interface layout, tools for exploring an image, and the various selection tools used in the following exercises. If you feel comfortable in your Photoshop knowledge, you may skip the video lessons.

The Photoshop Interface

When you start up Photoshop, the interface should appear something like the screenshot below.
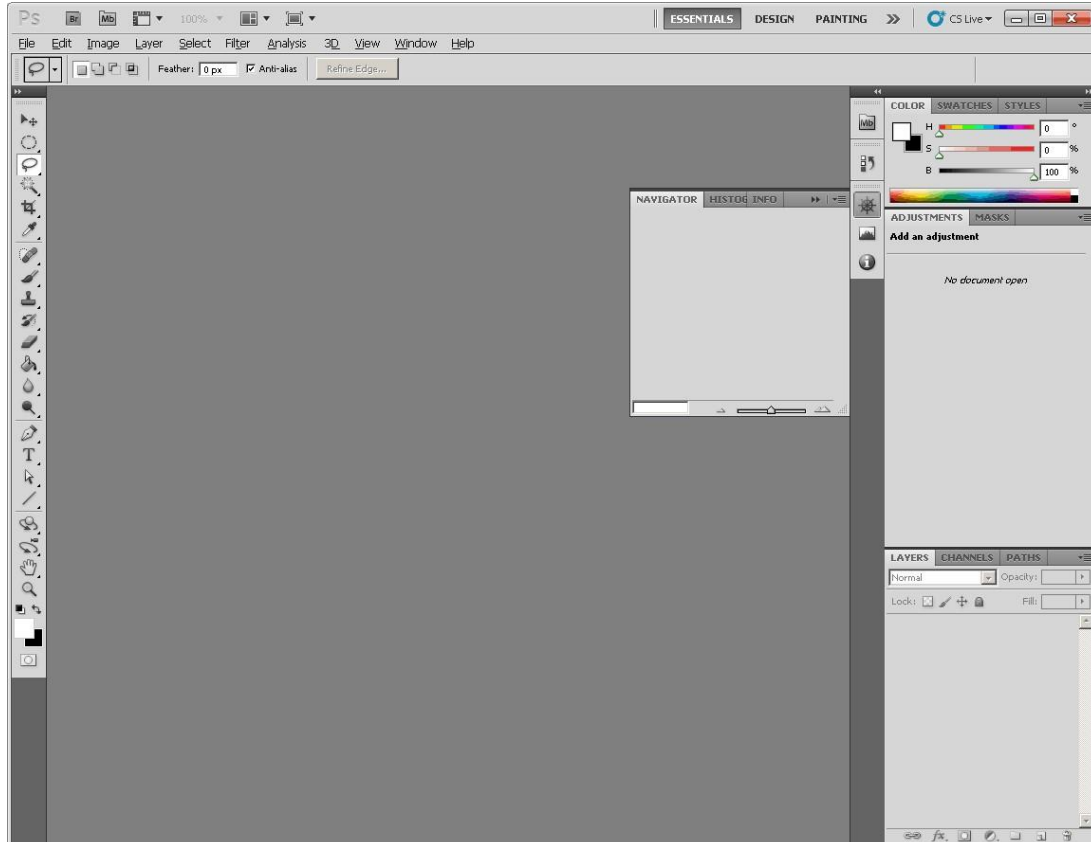
Fig 1: Photoshop CS5.1 opening screen

This shows the standard Photoshop layout, though the details of your view may be different depending on your version. On the left edge is the Toolbox, which gives access to the main functional operations, such as those for selecting parts of an image, painting and drawing, or adding text. The bar above the work area but below the main menu is context-sensitive - the controls shown will change depending on the currently active tool (in the image above it is the Lasso tool). On the right is an array of additional panels which relate to specific areas of functionality such as layers, channels and colour selection (among many others).

The key to effective use of Photoshop, as with most such packages, is a good knowledge of the available toolset. Place your mouse over the tool icons to see the name of each – most of them give a fairly good idea of what the tool does. Some tools have a small down arrow in the corner of the icon. Clicking and holding on such tools will open a popout menu showing the different versions of the tool (e.g. the Lasso tool has additional Polygonal Lasso and Magnetic Lasso versions). The letters in brackets after the tool tip are the keyboard shortcuts for the tool (e.g. L for Lasso).

Basic Operations

Download the file *select.jpg* from the Moodle folder, along with the other files for this lab, and open it in Photoshop. This first exercise will use the basic selection tools to select and manipulate specific elements of the image. From the Toolbox, pick the rectangular version of the Marquee tool and select the body of the railroad carriage on the middle shelf. To improve the accuracy of your selection, zoom in by pressing *Ctrl-+* (you can zoom back out with *Ctrl-*□) and try again if necessary.

Fig 2: the partially selected railroad carriage

We will alter this so as to select the complete carriage and none of the background. You can add to a selection by holding down the Shift key, and subtract from one by holding down Alt. Switch to the Elliptical Marquee and while holding down Shift, click and drag to add the base of each of the wheels to the selection. Change to the Polygonal Lasso tool, and using the Shift and Alt keys in turn, add to and subtract from your selection until it looks like the picture below. Zooming in close makes the selection much more accurate, so get used to using the zoom keyboard shortcuts.

Fig 3: the final selected carriage

When you have the carriage selected, do Ctrl-C then Ctrl-V to copy and paste it onto a new layer. You will see no change except in the Layers panel on the right of the interface, where a new layer should appear containing just the carriage. Click on this layer's entry in the panel to ensure it is the active layer – a rectangle will appear around the carriage. This indicates that the carriage bitmap can be moved and manipulated as a separate element. Drag it down to the lower left of the image and scale it (by dragging on the rectangle's handles) so it fits in the gap in the corner. You may need to doubleclick inside the rectangle to accept the rescaling and be able to switch layers.

Fig 4: repositioned and scaled carriage

Note that in the layers panel you can turn a layer invisible by clicking on the eye icon next to the thumbnail, and use the Opacity slider to vary its transparency. You will learn much more on the use of layers over the coming weeks.

We'll now look at a different form of selection using the Magic Wand tool, which is found directly beneath the Marquee. With the Magic Wand active, click on the yellow hair of the doll – you may need to click on the Background layer first to make it active again. The Magic Wand selects areas based on their similarity of colour. In the Properties panel, adjust the tolerance value up and down to get a feel for how the size of the selected area changes. Use the Shift key to fill out your selection till it includes all the hair. Note that it is much easier to select an irregular area like this with the Magic Wand than by using the Lasso tool to draw around it (try it and see!).

Once the hair is selected, copy and paste it into a new layer, and move it so it is on the head of the middle doll. From the Image menu choose Adjustments > Hue/Saturation, and play around with the sliders to alter the appearance of the doll's hair.

Repeat the copy and paste to add hair to the third doll. Experiment with the various filters available via the Filter menu to alter the appearance of the hair. You don't need to become an expert on all the filters, but it is useful to know what the general headings refer to.

Framing and Titling the Image
Go to Image > Canvas Size and resize to 600x500 pixels. The original image is now surrounded by a border. Use the Rectangular Marquee to select the original image area, and then choose Select > Inverse (keyboard shortcut Shift-Ctrl-I) to select just the border. In the Toolbox select the Paint Bucket tool, and then click on the foreground chip at the base of the Toolbox. This will bring up the colour picker to enable you to select a new colour for painting or drawing. Choose a bright colour from the picker and then click in the selected border area of the canvas to fill it.

Use the Text tool to add a title along the lower part of the border. The Text tool is denoted by the T in the Toolbox, and you need to click on the image to choose your starting point for typing. You can use the context-sensitive options to choose font, size and style for your text. Experiment with these to see the possibilities on offer. Save the image as a Photoshop document if you want to practice more with it later.

Cloning and Feathering

This is a quick exercise to illustrate one of the most useful of image editing tools, the Clone Stamp (often called the Rubber Stamp tool). Open the image *fruit.jpg*, and select the Clone Stamp tool. Zoom in on the pear at the top right. We will use the tool to remove the blemish on the fruit. Hold down the Alt key and click somewhere close to the blemish (try and find a spot where the colour and brightness levels are as close a match as possible). Set the brush size to something around or just below 10 and paint on the blemish, which you should see being replaced with unblemished skin.

You may need several attempts at this to get a good result. It is a very useful skill to practice, as practically every published photograph you will see has been subjected to it many times over.

Another useful technique, especially when combining images on multiple layers is *feathering*. This is where the border of a selection fades out to transparency instead of having a hard edge. Select the Elliptical Marquee and choose Feather from the Edge options. Set the Feather value to around 25; then use the Marquee to select the yellow rose on the left of the image. Copy the selection, press Ctrl-N to open a new image, and paste the rose in. You should see the edge of it fades gradually. Repeat the process with different Feather settings.

Compositing Exercise

Finally, here's a chance to put all the above together on a single task. Use the following list of images:

 foreground.jpg background.jpg callisto.jpg earth.gif fractal.gif

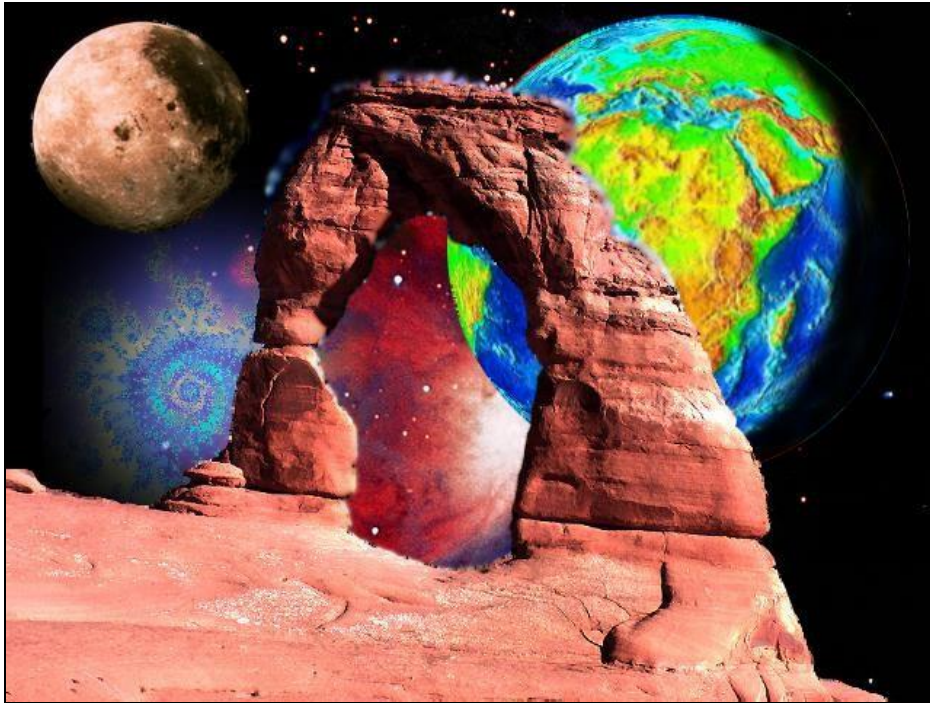And combine them to produce something a bit like the file *composite.jpg*.

Fig 5: composite image

You have already covered pretty well all the techniques needed to do this, though you needn't restrict yourself only to tools you've already used. As a final addition, add some penguins to the foreground from the file *penguins.jpg*.

<u>Further Work</u>

- Over the coming week take some time to experiment with as many of the other Photoshop tools and functions as you can. Download images from the web and modify them in various ways – for example, by cloning a person out of a picture while leaving the background intact, or using filters to alter the character of a scene. These types of operation should be second nature to you by the end of the module.