GIMP: An Introductory Tutorial

Copy Images to your Desktop

For this tutorial, download the *GIMP Workshop* folder to your computer's desktop. This folder contains the image files that you will use.
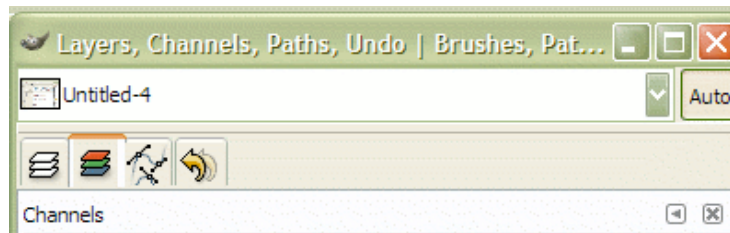
Start GIMP

To start GIMP, click on the Start Menu. Select "All Programs," then "GIMP" and "GIMP 2."

When you start GIMP, two windows appear: the Toolbox window, which gives you access to the many tools you will use:

To begin this tutorial, select "File," then "Open" from the Toolbox, and open the file "Chicago.jpg" found in the *GIMP Workshop* folder. Note that if you wanted to begin with a blank canvas, you would select "File," then "New" from the Toolbox window's menu.

and the Layers, Channels, Paths, Undo window, which lets you access and manipulate these image/file management tools, and access the Undo history:

Note that the image file opens in a window between the Toolbox and the Layers, Channels, Paths, Undo window. Note also the selections in the toolbar along the top of that window: File, Edit, Select, View, etc.

If, for whatever reason, the Layers, Channels, Paths, Undo window doesn't open automatically when you start GIMP, you can access these windows by choosing "File" from the Toolbox window. Select "Dialogs," then select "Layers," "Channels," "Paths," or "Undo History."
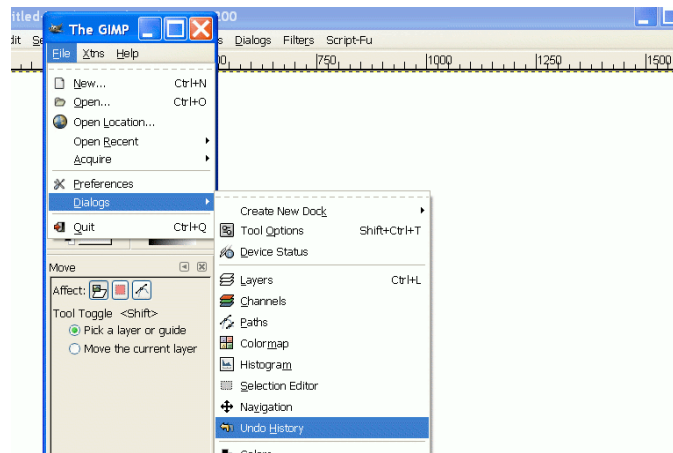
Transform the Image

Select "Image" from the image window's toolbar. Note the many options available; you can scale the image size or crop the image, for example. First, flip the image of the Chicago skyline. Select "Transform" from the drop-down menu, and then "Flip Horizontally."
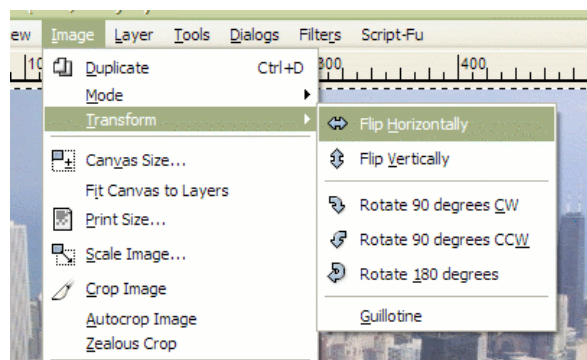

Save Your Work in the .XCF Format

GIMP allows you to save your work in many popular image file formats, such as .jpg or .gif. GIMP also has its own file format, .xcf, which allows you to save information about layers, channels or paths, so you can work with your file later (the .xcf format in GIMP is similar to the .psd format in Adobe's Photoshop). When you begin a project, you should save your work in this .xcf format.

From the "File" menu, select "Save As" from the dropdown menu in the toolbar. Select a name for the file ("Tutorial"), and choose where you would like to save the file on your computer (for this tutorial, you can save to the desktop).

Click "+ Select File Type (By Extension)" at the bottom of the "Save Image" window.
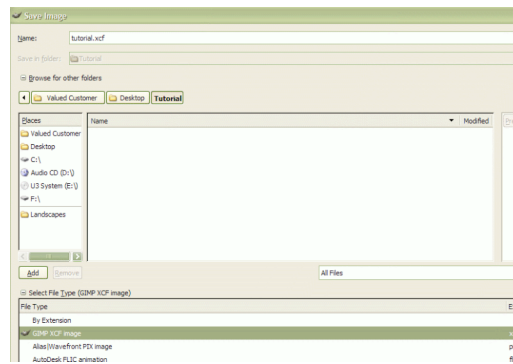
Select "GIMP XCF Image" from the menu, then "Save."

Use Filters

Using filters in GIMP can be fun and effective. To practice, add a flare to the Chicago skyline.

Select "Filters" from the image window toolbar. Note how very many *options* you have at this point. In order to take full advantage of the filters, you should spend plenty of time playing with them. To add the flare, select "Light Effects," then "FlareFX."
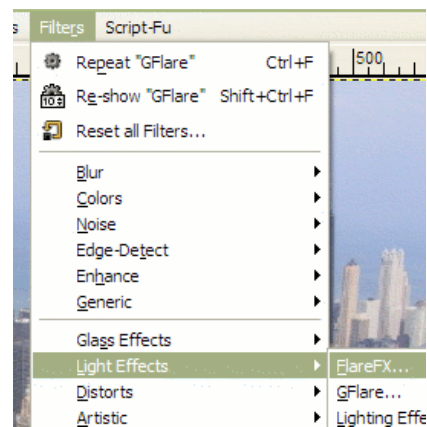

Choose where along the Chicago skyline you'd like the flare and click "OK." Continue to experiment. Save your work.

Undo History

One advantage to working with GIMP is the ability to "undo" what you've tried but don't like. Note the icons available in the Layers, Channels, Paths, Undo window:
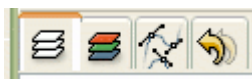
Click on the fourth icon, the yellow arrow, to get the Undo History (you can also access the Undo History by selecting "File" from the Toolbox menu, then "Dialogs" and "Undo History"). So far, you have opened your image, flipped it horizontally, and added a flare. In order to remove the flare (the last step you completed), click the left-facing yellow arrow underneath the Undo History. This removes the flare from the Chicago skyline.
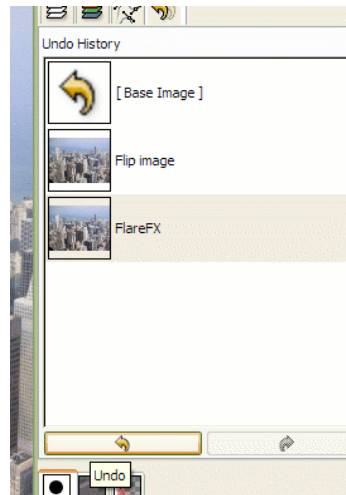
Remember: as you experiment with GIMP, you can always undo what you've done.

Adding Layers

You can use the layers function in GIMP to overlay images on top of each other. There are a few different ways to select which parts of an image you want to copy.

Open the file "Crowd.jpg" from the *GIMP Workshop* folder.

In the Toolbox, select the scissors icon on the first row, to "select shapes from image":
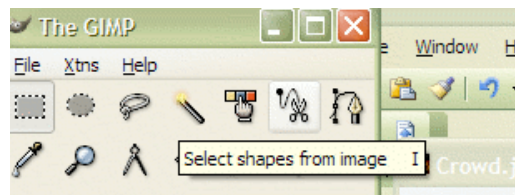

This tool allows you to use your mouse clicks to trace around a selection which you will then copy and move. Use your mouse to carefully click along the edge of the crowd. Note that as you click, the selection automatically snaps along the line of contrast.
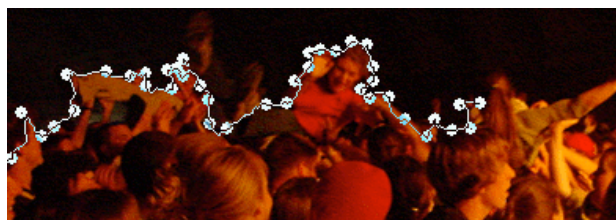
When you get to the far edge of the crowd, click 1) in the lower right corner, then 2) the lower left corner, and then 3) on the dot representing the first mouse click you made, in order to select the entire crowd.

When you are finished, click once inside the selection, which will be surrounded by a moving, dotted line (referred to as "marching ants").

From the image window toolbar, select "Edit," then "Copy" to copy the selection to the clipboard. Switch to the Tutorial.xcf window, and select "Edit," then "Paste."
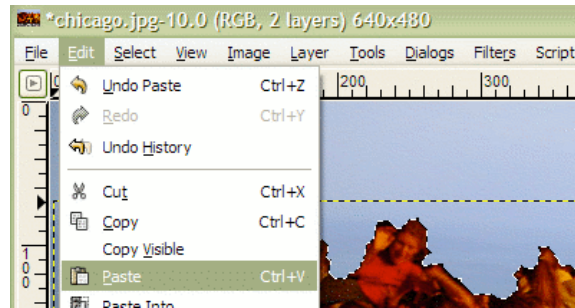

The crowd image now floats over the top of the Chicago skyline. Select the Move tool in the Toolbox (the four-way arrow icon), then click and drag the selected area of the crowd image to the bottom half of the image window, *but do not click the unselected area yet*.

Working with Layers

If you were to click on the Chicago skyline, you would merge the crowd and the skyline into one layer. Remember, GIMP allows you to work with different layers in your project. This function can prove useful because layers allow you to apply changes to only one portion of an image, leaving the others untouched.

To put the crowd image into its own layer, select the "Layers" icon from the menu in the Layers, Channels, Paths, Undo window. Note that the crowd is a "Floating Selection," over the "Background." Select the "New Layer" icon at the bottom of the window.
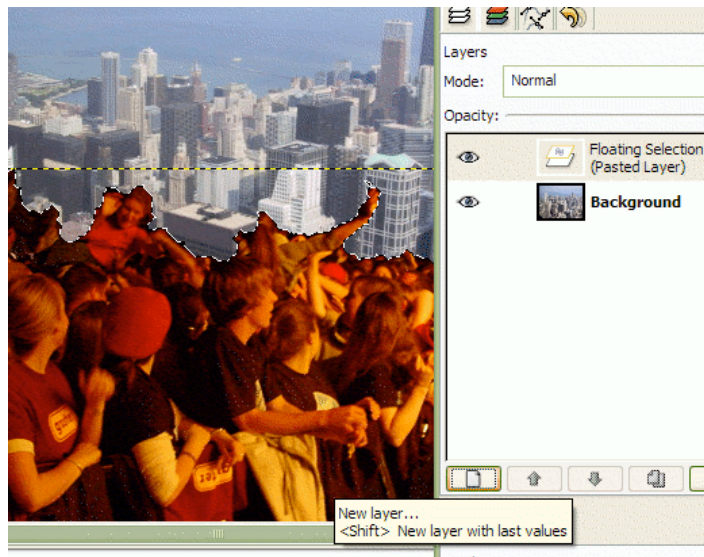

Note that the boundaries of a layer don't necessary match the boundaries of the image. When you cut and paste a new layer, that new layer is sized just large enough to contain the pasted image. The main reason this matters is because you can't do anything to a layer outside its boundaries; you can't act on what doesn't exist.

To extend the boundaries of the crowd layer, make sure that layer is selected in the Layers, Channels, Paths, Undo window. In the image window, select "Layer" from the toolbar, then select "Layer to Image Size" in the dropdown menu.

Rename this layer something descriptive, like "Crowd Scene," by double-clicking on the name of the layer. As you work with GIMP, you will find it easier to manage complex files if you make it a habit to name your layers. Save your work.

Scaling the Size of Layers

Sometimes, you will need to change the size or scale of an image you have imported into a new layer. Select "Layers" from the toolbar in the Tutorial.xcf window. Make certain that the "Crowd Scene" layer is selected, then choose "Scale Layer" from the dropdown menu.
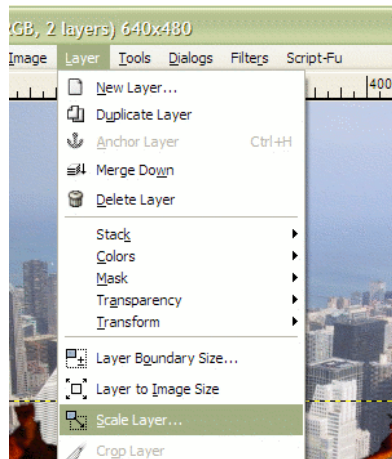
Note that the original image (Chicago.jpg) was 640 pixels by 480 pixels. If you want the "Crowd Scene" layer to completely cover the Chicago skyline in the Tutorial.xcf file, you must increase the width of the crowd to over 640 pixels. Change the number in the "Width" window to 670. Note the image of a chain-link next to the two windows; this indicates that the ratios of the image are constrained. Click "Scale." The crowd scene expands to fit beyond the width of the image.

Changing Opacity

In the Layers window, note the sliding scale for opacity. Be sure that the "Crowd Scene" layer is selected, and slide the mouse along the Opacity scale.
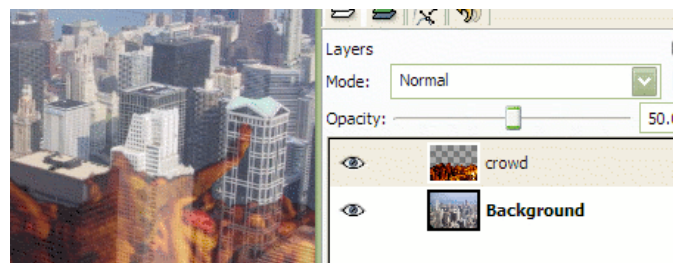

Choose a level of opacity you like for the crowd. Save your work.

Brightness, Contrast and Color

You can also use GIMP to manipulate color levels and brightness/contrast/hue of either layers or the whole image. To change the contrast levels of the crowd scene, choose the "Layer" from the image window toolbar and select "Colors."

Note the many options here. You might experiment with the changes you can make in color balance or hue saturation. Remember, you can always undo any changes you don't like.

Select "Brightness/Contrast" from the dropdown menu.
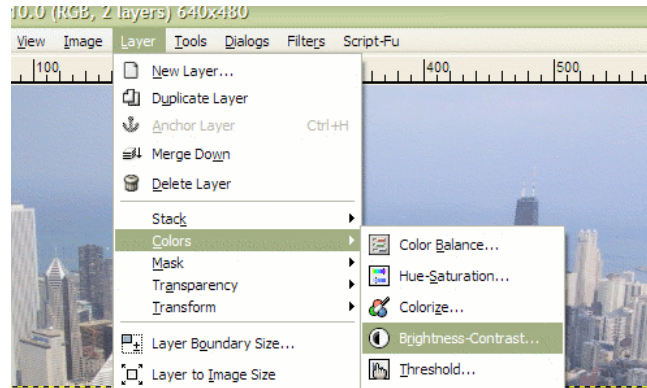
Use your mouse to change the levels. If you like the changes you make, select "OK." If not, select "Cancel" and try some other changes from the dropdown menu. Save your work.

Selecting Contiguous Regions

Another way to select parts of an image to paste into your project is to use the "Select Contiguous Regions" tool.

Open the file Superman.jpg.

Select the icon that looks like a magic wand from the Toolbox. As you hold down your "Shift" key, click your mouse on all the white and green areas of the background behind Superman.
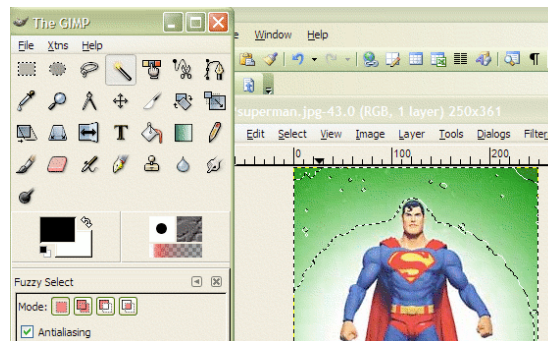

Keep clicking (with the shift key down) on the background behind Superman. As you click, more of the background will be selected. Be sure to click the white area between his legs. After

you have selected everything *but* Superman, Choose "Select" from the image window toolbar, then choose "Invert."

After you have inverted the selection, select "Edit" from the image window toolbar, then "Copy" the Superman image to the clipboard.

Click the Tutorial.xcf window to bring it to the forefront. Select "Edit" from the image window toolbar, then "Paste" the Superman image.

Be sure to select a new layer for Superman in the Layers, Channels, Paths, Undo window, and name that layer "Superman."
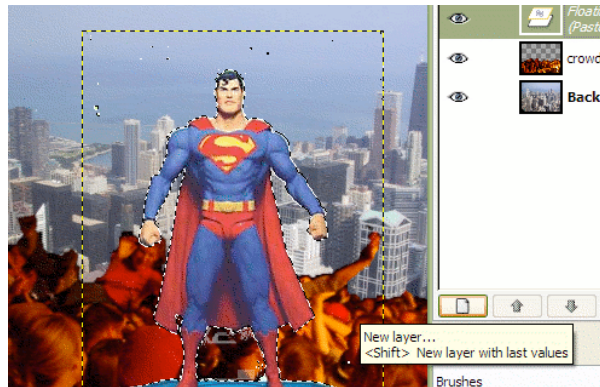

Move the Superman selection to the right of the image. Note that the Superman layer is still in front of the Crowd layer.

Make sure the Superman layer is selected in the Layers, Channels, Paths, Undo window. In the image window, select "Layer" from the toolbar, then select "Layer to Image Size" in the dropdown menu.

Clean Up Pasted Images Using Tools

You might be able to see random pixels of green background that were pasted into your image when you used the Select Contiguous Regions tool to cut and paste the Superman image. You can use the tools in the Toolbox to touch up images.

First, make sure the Superman layer is selected in the Layers, Channels, Paths, Undo window. In the Toolbox window, select the eraser icon.
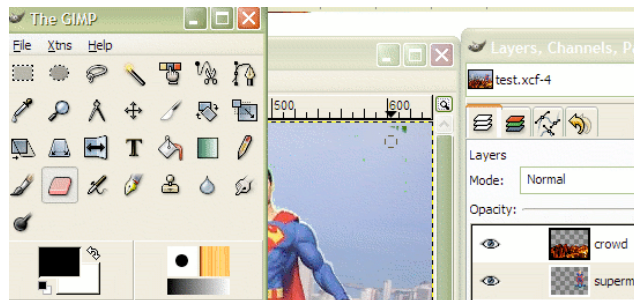
Using your mouse, carefully erase the green pixels from the image. Be careful not to erase any of Superman. Notice that using the eraser tool only affects the selected layer; neither the crowd layer nor the background is altered.

If you have trouble seeing the green pixels on the Superman layer, you can make the other layers invisible by clicking the eyeball icon next to them in the Layers, Channels, Paths, Undo window. You can also zoom in on the image by clicking the magnifying glass icon in the Toolbox.

Note, too, the chain icon next to the eyeball icon. If you select this icon, it will lock the layer and not allow you to make any changes to it. If you have trouble using the tools in the Toolbox to edit your image, make sure the layer you are working with isn't locked in the Layers menu.

Note the other tools in the Toolbox, such as the bucket, the pencil, and the gradient fill tool, which allow you to work with individual pixels in your image. Be sure to experiment. Save your work.

Changing the Order of Layers

Because you have added Superman to the image after you added the crowd, the Superman layer sits above the crowd in the image. To move the Superman layer back (so that people in the crowd appear to be looking at Superman), select the "Layers" tab in the Layers, Channels, Paths, Undo window.


Pick up the Superman layer in the window. Drag it down and drop it between the background (Chicago skyline) and the crowd. Save your work.

Adding Text to Images

You can add text to any image created with GIMP. To do so, click the "Text" icon in the Toolbox. Note that the bottom half of the Toolbox window displays various text editing options.

Click your mouse in the upper-left corner of the image window. The Text Editor window appears. Type, "Superman Rocks!" into the Text Editor window. Note that the text appears over Superman's shoulder, in the Image window.
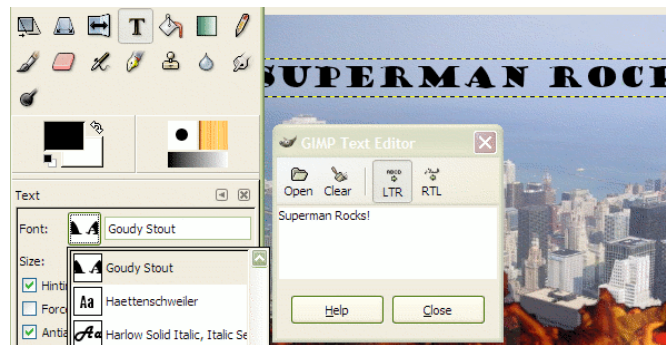
Using your mouse, highlight the text in the Text Editor window. You can now use the text editing tools in the bottom half of the Toolbox to change the font, color, and size of the text.

Select the four-way arrow icon in the Toolbox, which allows you to move layers and selections. Make sure the text layer is selected in the Layers, Channels, Paths, Undo window. When the hand appears over the text, click and move the mouse to move the text.

You can also use filters to transform text. Make sure the text layer is selected in the Layers/Channels/Paths/Undo window. Experiment. Save your work.

Saving Files in Formats Other Than .XCF

As you work on your projects in GIMP, remember it is important to save your work (often) in the .xcf format. When you are completely finished manipulating your image however, you will want to save your project as a JPEG file to turn it into your instructor or share it with others.

When you save your project as a JPEG, you remove information concerning the different layers and channels; you "flatten" the image, which makes it much smaller and compatible with other programs and platforms. Note that saving a JPEG does not replace or remove your original .xcf file. Should you want to revise your work, you can open and edit the .xcf file and save another JPEG when you have finished making changes.

To save your file as a JPEG, select "Save As" from the "File" menu in the image window toolbar.

Name your image and choose where on your computer you will save it.

Choose "Select File Type (By Extension)" at the bottom of the window and select JPEG image. Click save.

A dialog box appears that tells you your image must be exported because the JPEG file format can't handle transparency. Click "Export."
Another dialog box allows you to choose the quality. Accept the default (85) and click "OK."
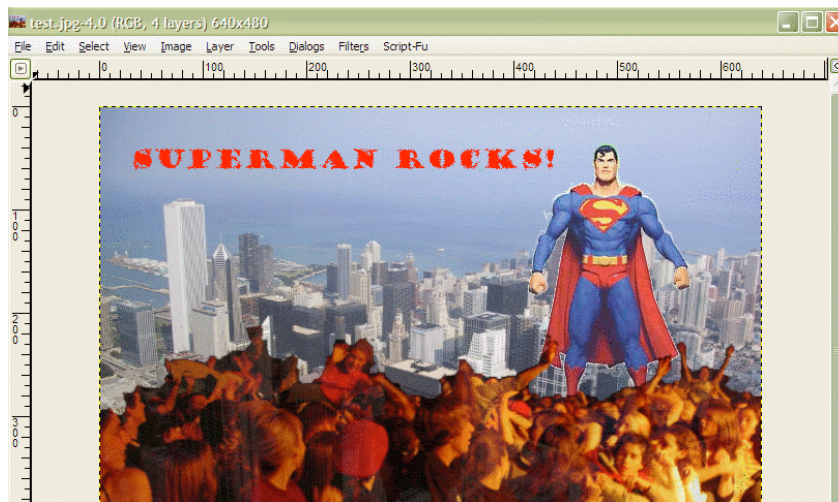
Downloading & Installing GIMP on Your Computer

GIMP (acronym for GNU's Image Manipulation Program—see
http://en.wikipedia.org/wiki/GNU for more information) is a software program very much like
Adobe's Photoshop. You can download and compile GIMP on your home computer by
following directions here:

http://gimp-win.sourceforge.net:80/stable.html

Note that you must run the +GTK 2 Runtime Environment *before* you install GIMP. You should
also download and install the help files.

There are many GIMP resources on the web; if you have questions, Google "GIMP help" for
tutorials and help files.