Demo

Using Inkscape and GIMP: how to pretend to be creative using only technical skills

demo
Live demos have problems (technical bugs, talking while doing, and having nothing to look at afterwards), so this is a recorded demo, using screenshots.

It shows how to use both Inkscape and GIMP to create an illustration for a web page.

For you, this would tick both the drawing (vector graphics) and painting (bitmap graphics) tick boxes.

The subtitle is "how to pretend to be creative, using only technical skills" which is easy for me to demo because I have only technical skills.
For my web site, I've decided to make a cartoon of a fish. It is going to be a big, red, round fish. I'm going to sketch it in Inkscape, and then switch to GIMP to "colour it in". So, I'm going to start up Inkscape.
The rectangle is the page you are creating

Since the picture you are creating is scalable, you don't really care about the page boundaries

But let's stay inside them anyway, so the first task is to zoom in

Use the View/Zoom/Zoom-In menu item, or press the key +, three times (say)

Menu items tell you what their shortcut keys are
To start drawing the fish, I need a circle

It is easy to use a tool to create a perfect circle

But I don't want a perfect circle, I want an 'organic' circle

It needs to look smooth and natural, but not perfect

So I am going to draw it free-hand
For one-off tasks like this, as a non-expert, using a mouse will do

If you are going to do much sketching, you could buy a "graphics tablet" online for about 20-40 pounds

This is what "tablet" used to mean, before tablet computers

There is a learning curve in using the pen on the graphics tablet and, as with a mouse, your hand on the desk is disconnected from what you see on the screen
I struggled with using a graphics tablet, until I realized the secret

The secret is to slide the tip of the pen up and down your middle finger

When you slide it down, it touches the tablet and draws

When you slide it up, you can move your hand over the tablet, with your middle finger touching the surface, but with the pen tip hovering just above the surface
If you want to get rid of the disconnect between hand and screen, you can buy a tablet computer with a stylus.

Beware tablets with poor capacitive screens, meant only for stubby fingers, with stubby styluses.

Get one with a proper digitizer and proper accurate pen.
Freehand drawing

To draw my circle, I need to choose the freehand drawing tool

It's on the left in the middle, and looks like this:

Then move to the start of the circle, press the mouse button or put the pen/stylus down, draw the circle, release
The most brilliant feature of using a drawing tool, instead of (say) sketching with pencil and paper and then scanning in, is **undo**

It takes away stress and allows you to be more adventurous.

I decide that my 'circle' is nowhere near good enough, so I just use the Edit/Undo menu item, or `Ctrl Z` to undo, then I try again.
Fixing

What I've drawn has two problems:

- It doesn't join up
- It isn't smooth enough

But the other brilliant thing about using a tool is that I can fix these problems.

So I decide that it is good enough.
Joining up

To fix the joining up problem, I need to edit my circle.

But what is it?

It is a *path* in the vector graphics sense.

So I need the path editing tool, on the left near the top:
Points

There is a huge number of points being displayed

And they are all on top of each other, so it is very hard to see what is going on

So I need to zoom in (pressing $+$ six times) and use the scroll bars to focus on the gap
Joining points

Now I can see what I am doing

The dotted line is the bounding box of my circle, and I can see points with lines (actually bezier curves) joining them

The next task is to select the two points that I want to join up

Select one by clicking on it, and the other by shift-click
Visibility

It is difficult to demo selecting points; you have to try it.

Points go red when you hover over them, and they go blue/yellow when they've been selected.

There is a confirmation message at the bottom of the screen that two points (nodes) are selected.
Joining points

The buttons for doing things to selected nodes are along the top:

The icons show you what the buttons do, and you can hover over them to get descriptions.

The one I want adds an edge between two selected points:
Checking

To check what I've done, and to prepare for the next stage, I zoom out and switch to the freehand tool to get rid of the display of points.
To do smoothing, I could carry on editing points, edges and slopes

I might do a little bit of that, to fix up the worst bits

But it is not a good idea to do much of it, because it soaks up lots of time

There is an easier way, which is to use the Path/Simplify menu item, or Ctrl L
Overworking

Simplification reduces the number of points

If something isn't smooth enough because it's got too few points, you use interpolation (using a plugin)

You can simplify as many times as you want

But it is easy to simplify too many times

Artists call this overworking; it requires judgement, but undo comes to the rescue

I do several simplify steps to get...
Tail

To do the tail, I sketched another freehand path, smoothed it, edited points to attach it to the body, and smoothed the joins.

In the next picture, the grey bits are a pencil sketch (to get the scale right) imported as a bitmap image.

Most of the body has been removed (covered up with a white rectangle) to focus on the tail.

The black bits are the smoothed and joined up paths.
I am going to leave out a lot of work using similar techniques

I added fins, eyes and a mouth

The final result is shown next
It is time to export the drawing from Inkscape, ready to import it into GIMP

If you use File/Save, you get a bloated SVG file with unwanted extras (this is Inkscape's 'internal' format)

You can use File/Save_As and choose 'Plain SVG' to get a nicer SVG file (this counts as exporting, because it is lossy)

You can then import the paths from the SVG file into GIMP

You can also use File/Export_As_PNG
When you start up GIMP, you may find it has three windows: two tool windows on either side and an image window in the middle.

Some people love this, and some hate it.

If you hate it, use Windows/Single-Window_Mode and (if you want) drag all the tools to one side.

Then loading the image that came from Inkscape gives this:
The chessboard pattern indicates that the black lines are on a transparent background.

The export process has used the bounding box, so there's no margin round the edge of the image.

I use the Image/Canvas_size menu item to add a margin of 20 pixels.

Beware: the size of the image layer hasn't increased, only the background it is shown against.

Use Layer/Layer_to_Image_Size to increase the fish layer to the canvas size.
Duplicate layers

The next task will be to colour in the body of the fish. After we have filled in the outline, we still want the black lines round it, for the cartoon look. So use Layer/Duplicate_Layer to make two copies of the outline.
Colouring in

Now we are ready to colour in the body of the fish, in red

Use the fuzzy select tool (for example) to select the body

Use Select/Grow to increase the selection by one pixel all round, so as to cover the pixels at the edges of the lines

Use the foreground colour tool to change to red

Use the bucket fill tool and click in the body

Choose Select/None to get rid of distractions
You can see that filling the body has covered up the lines

That's a good thing, but now we need to get the lines back

Use the layer dialog to put the other copy of the lines in front of the filled-in copy
We need a white background now, so that we get the full effect.

Use the Layer/New_Layer dialog to create a new white layer.

At this point, everything looks white, because the white layer is in front.

Use the layer dialog to push the white layer to the back.
There are more details to sort out

The fins at the bottom need to be filled in, on the middle layer

Hand painting can be used for scales, eyes, eyebrows, bubbles, movement indicators

The airbrush tool can add some darker patches so that the picture looks less flat
At this point I saved the image in .xcf which preserves the layers.
And I exported to PNG.
Now here's the most important thing:

You don't really think I am creative enough to have come up with this from nothing?

I didn't - the idea comes from a kid's book: "I can draw cartoons"

It is OK to get your ideas from (almost) anywhere, and create an image from scratch using the tools
Here's how I made the screen shots for these slides

I pressed "Print Screen" then in GIMP, used File/Create/From_Clipboard

Then I used the rectangle select tool to roughly select the window, and Image/Crop_to_selection to cut it out

Then I zoomed in and used exact rectangle select and Image/Crop_to_selection again to cut out the window

Then I used Image/Scale_Image to make the image 1024 x 768

Then I exported as PNG