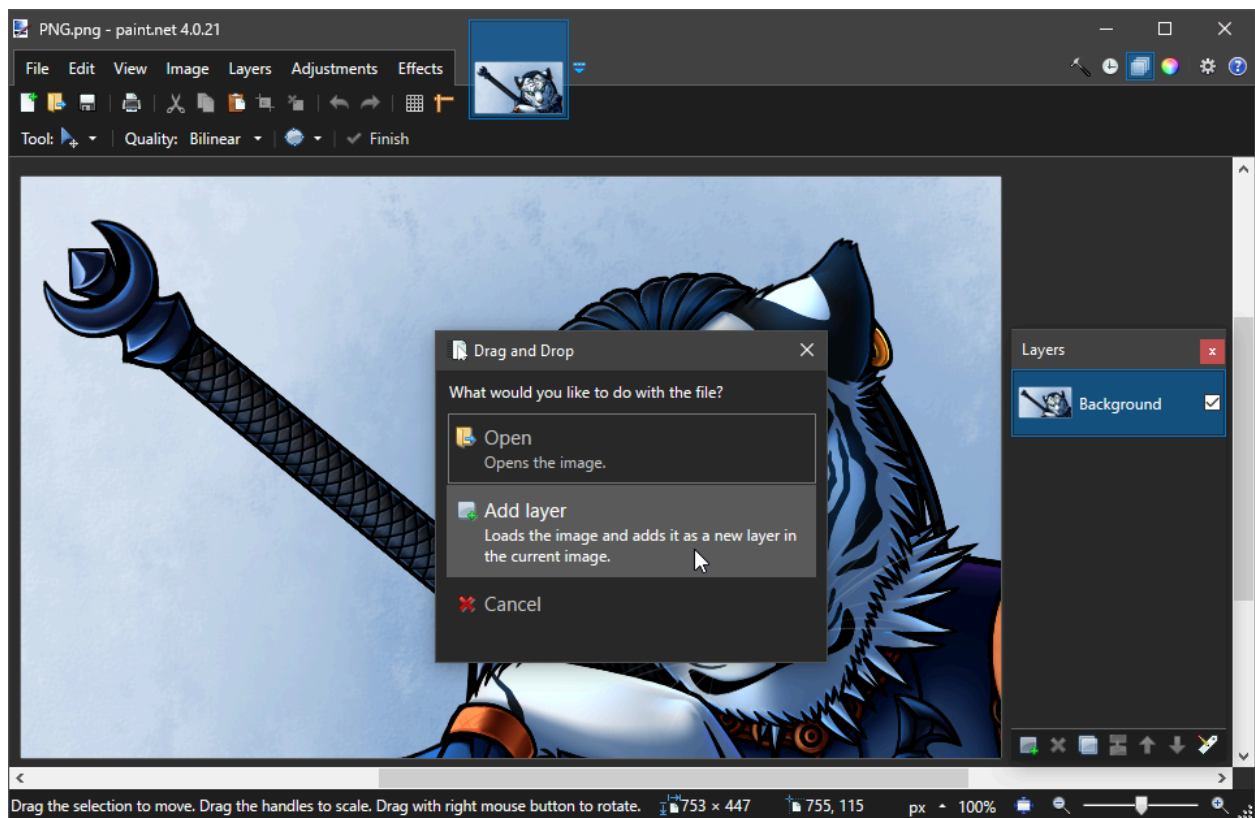This tutorial assumes you've already downloaded and installed Paint.net. If you haven't done so yet then do it before continuing.

This tutorial will work similar for all other image editing or art programs that support layers, and different layer modes.

Step 1: Download both images. For demonstration purposes we will be using PNG.png and JPG 100.png from the e621:Image Quality wiki.

Step 2: Open Paint.net and simply drag and drop the first image (PNG.png) into it.

Step 3: Drag and drop the second image (JPG 100.png) into the window. You should receive a pop up box like the one below:
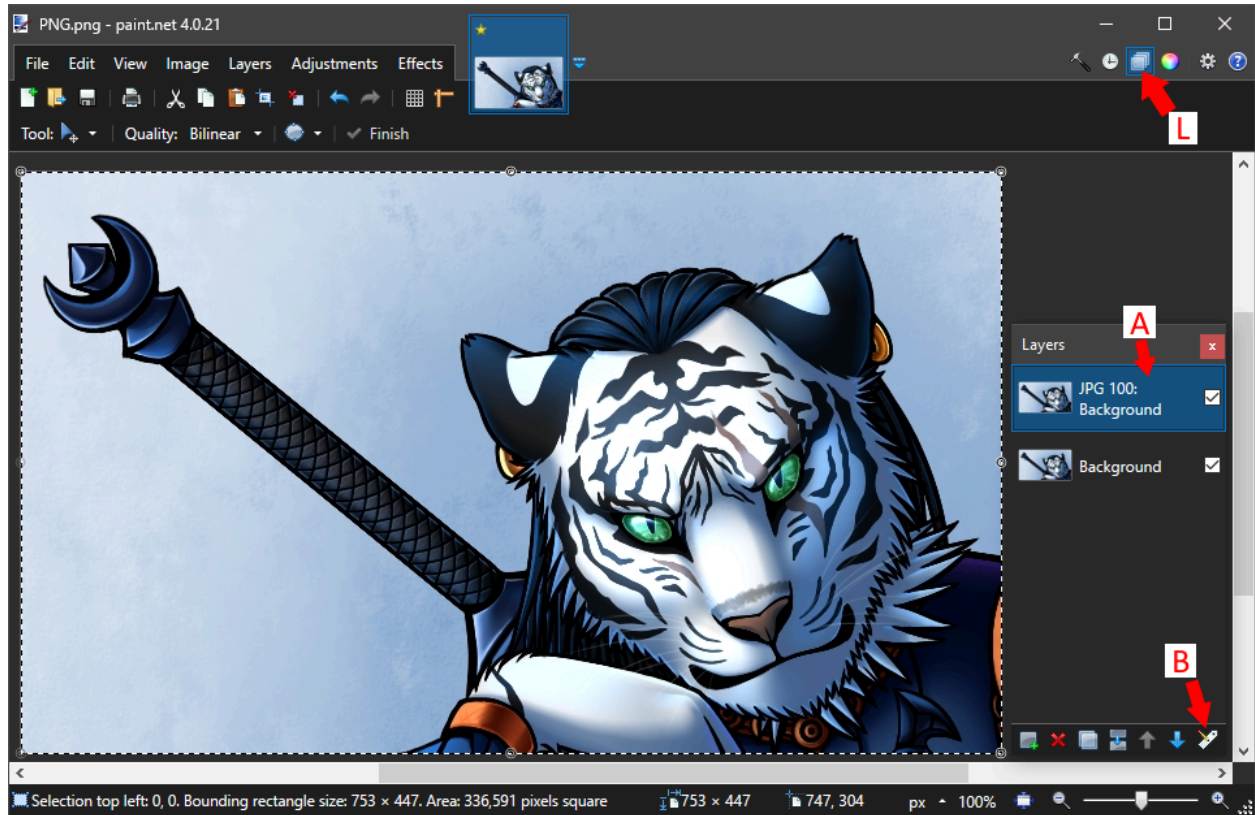
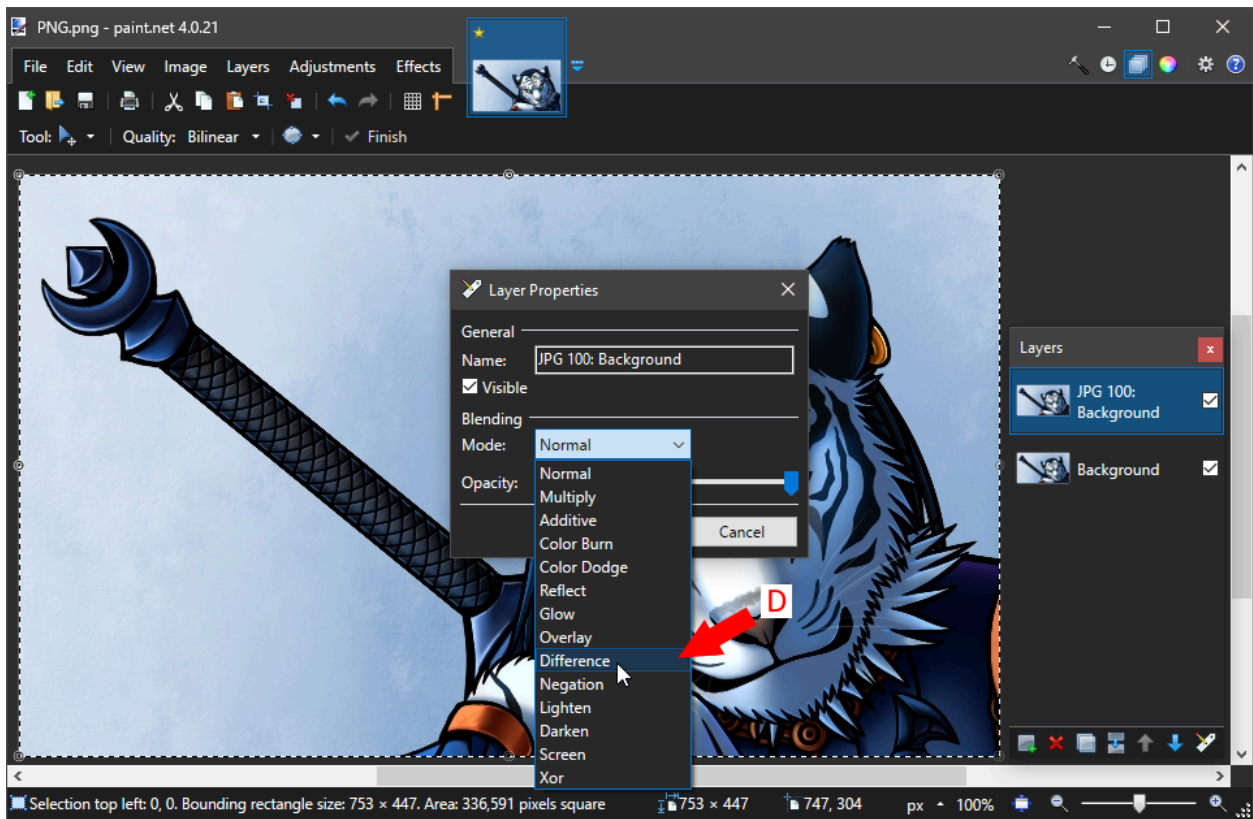

Select the highlighted "Add Layer".

Step 4: Locate the "Layers" Box and highlight the upper Layer (marked with "A" in the screenshot below).

If you can't find the "Layers" Box toggle them on by clicking on the Symbol marked with "L" on the below screenshot.

Once you have highlighted the correct layer click the Properties Button (marked with "B" on the screenshot).

Step 5: In newly opened Layer Properties Window locate the Mode Drop Down Box ("C") and change it from "Normal" to "Difference" ("D"). Then Click Okay.

PNG.png - paint.net 4.0.21

File Edit View Image Layers Adjustments Effects
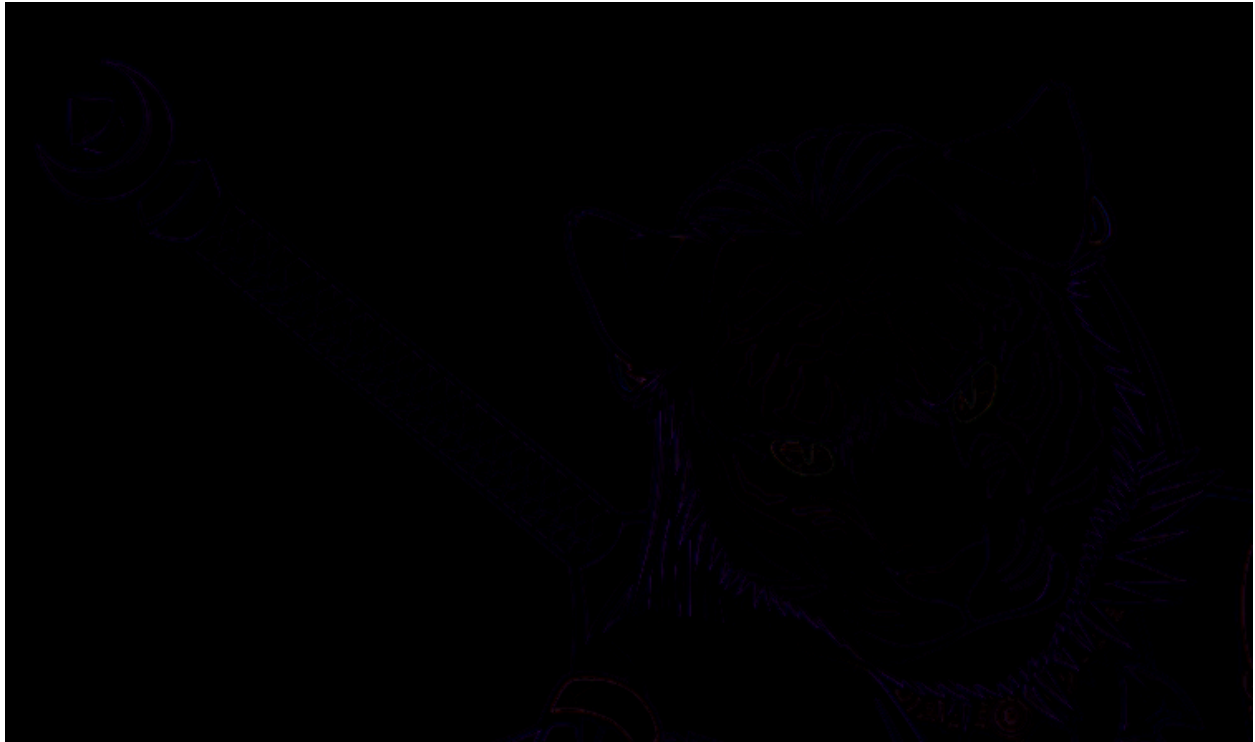
Tool: | Quality: Bilinear | Finish

Layer Properties

General

Name: JPG 100: Background

☑ Visible

C

Blending
Mode: Normal

Opacity: 255

OK   Cancel

Layers

JPG 100:
Background

Background

Selection top left: 0, 0. Bounding rectangle size: 753 × 447. Area: 336,591 pixels square   753 × 447   747, 304   px   100%

PNG.png - paint.net 4.0.21

File Edit View Image Layers Adjustments Effects

Tool: | Quality: Bilinear | Finish

Layer Properties

General

Name: JPG 100: Background

☑ Visible

Blending
Mode: Normal

Opacity:

Cancel

Normal
Multiply
Additive
Color Burn
Color Dodge
Reflect
Glow
Overlay   D
Difference
Negation
Lighten
Darken
Screen
Xor

Layers

JPG 100:
Background

Background

Selection top left: 0, 0. Bounding rectangle size: 753 × 447. Area: 336,591 pixels square   753 × 447   747, 304   px   100%

Step 6: The resulting image should now be dark with a slightly colored outlines in it (pictured below). Those colored spots are the differences between the two images, and are attributed solely to the JPG compression.

Full image can be found [here](#).

If there is <u>any</u> color visible that means the two images are visually distinct, even if the human eye can't see the differences very easily. This is the only reliable way to find even small differences between two otherwise identical images.