**Q1: Mention any 6 difference between GIMP and Photoshop software.**

A1: GIMP is a FREE image editing software whereas Photoshop is a PAID image editing software.

* GIMP and Photoshop both contains numerous plugins, but photoshop plugins are designed by the famous photo brands like Phase One, Kodak, and more.
* GIMP contains fewer tools while Photoshop contains a lot of tools.
* You cannot use GIMP to edit pictures on the smartphone while Photoshop can be used to edit pictures on the smartphone.
* As GIMP is communal software, standards are not classified on the other hand, Photoshop runs on industrial standards.
* GIMP is used for general purposes, and Photoshop is used professionally.

**Q2: How to export a GIMP raw file to PNG format? Write all the steps.**

A2:The regular file format for images produced in GIMP is XCF, which isn't suitable for use outside of the graphics program. When you've finished working on an image in GIMP, you should save it to a standard format such as PNG.

1. The [regular file format](https://www.lifewire.com/native-file-format-1701755) for images produced in [GIMP](https://www.lifewire.com/the-gimp-review-1701606) is [XCF](https://www.lifewire.com/xcf-file-2622449), which isn't suitable for use outside of the graphics program. When you've finished working on an image in GIMP, you should save it to a standard format such as [PNG](https://www.lifewire.com/png-file-2622803).
2. Select File > Export As.
3. Click on Select File Type (above the Help button).
4. Select PNG Image from the list, then select Export.
5. Adjust the settings to your liking, then select Export again.
6. The PNG file will be saved in the same location as the original XCF file.

**Q3: What are smart objects? Do we have them in GIMP?**

A3: This sounds like GIMP’s version of “Smart Objects” – the popular Photoshop feature that allows you to “link” a different file to your composition, then have that file live update in your current composition any time you make changes to it. This has many applications – especially in the world of creating universal templates that can be updated with your own design (by simply replacing the “linked image” with your own design, then re-saving that image). This is huge. Photoshop’s well-established “Smart Objects” feature. In Photoshop, not only can you link a layer from one composition to a layer or image from another composition, but you can also link vector objects from Adobe Illustrator as a layer in Photoshop, and edit that vector object essentially in real-time in either program and have the quality of the vector object remain intact.

Well, GIMP’s “linked layers” will do the exact same thing – using Open Source alternatives, of course. This feature will be integrated with Inkscape so that, for example, you can link a vector composition to a GIMP layer, and have the GIMP layer scale up without quality loss the way any vector object would in Inskcape. This is mind-blowing. You could also make updates to the vector file in Inkscape, and those changes would then refresh inside of the linked layer in GIMP. It would essentially create a dynamic link between the two programs.If GIMP can successfully get linked layers to work in a stable release version of GIMP, the internet, myself included, will lose its mind. And, once again, GIMP will have successfully taken a bite out of Adobe’s photo editing software lead (still without charging its users a dime).

**Q4: What are filters?**

A4: In Adobe Photoshop, filters are individual algorithms (or behind the scenes calculations) that alter the appearance of an image. For example, a simple filter might blur a selection, while an advanced filter could make a photograph look like a hand-drawn sketch. You can use filters to clean up or retouch your photos, apply special art effects that give your image the appearance of a sketch or impressionistic painting, or create unique transformations using distortions and lighting effects. The filters provided by Adobe appear in the Filter menu. Select a layer that contains content you want to change. Go to the menu bar and choose Filter > Filter Gallery. Try the different filters and adjust their settings for the desired result.

A software routine that changes the appearance of an image or part of an image by altering the shades and colors of the pixels in some manner. Filters are used to increase brightness and contrast as well as to add a wide variety of textures, tones and special effects to a picture.Filters are systems or elements used to remove substances such as dust or dirt, or electronic signals, etc., as they pass through filtering media or devices. Filters are available for filtering air or gases, fluids, as well as electrical and optical phenomena.

**Q5: How can we use filters in GIMP? Write all the steps.**

A5: A filter is a plug-in that modifies the appearance of an image, in most cases just the active layer of the image. OR for a more technical explanation, a filter is a special kind of tool designed to take an input layer or image, apply a mathematical algorithm to it, and return the input layer or image in a modified format. For example, there are filters to help you distort your image as much as you like. There are filters that turn your basic drawing into an artistic sketch. You can apply lighting effects to your image. And there's plenty more filters for all sorts of other effects.

1. Select the Brush Tool
2. Click the “Brush” icon on the main toolbar.
3. This selects the brush as our current tool. The brush icon is the one that looks like this:The brush icon in GIMP
4. Draw Something
5. Creating a new image in GIMP
6. Draw a little stick man on your blank image.
7. Don’t worry if it doesn’t look very good. We’ll be adding some effects to it next anyway.
8. Add a Filter
9. Selecting the fractal trace filter in GIMP
10. Now comes the fun part! We’re about to add some filters for some special effects.
11. Select Filters > Map > Fractal Trace.
12. Add a Filter
13. Applying a fractal trace filter in GIMP
14. A dialog will open that enables you to change the settings for this filter. Experiment with the settings, you will see them being updated in the little preview box.
15. Once you’re happy with your effect, click OK
16. So within a few minutes, we have created our own strange little stick man and then warped him until we can’t even recognize him!
17. After applying a fractal trace filter in GIMP
18. Experiment!
19. Don’t be afraid to experiment. You can always revert back to a previous state by clicking Edit > Undo or using Ctrl+Z.
20. Here’s what the image looks like after applying another effect. This time I’ve added the “Page Curl” filter to the image:
21. After applying a page curl filter in GIMP

**Q6: Differentiate between monochrome and polychrome light?**

A6: Monochrome photography is any photography that utilizes differing amounts of light instead of different colors to capture and represent images. Whereas standard color photography (known as polychrome) displays colors from across the spectrum, monochrome photography takes only one single color and uses a range of tones of that color.
This is the case in black and white photography, which uses varying shades of neutral gray instead of the actual colors of the objects photographed. Monochrome is not exclusively black and white, however. It can be achieved using varying shades of other colors like sepia or cyan. Monochrome photography can be captured with both traditional film-based cameras as well as dedicated digital cameras and smartphone cameras capturing digital images.

* While both have their advantages, it is generally understood that digital photography provides more flexibility, particularly in post-processing, when it comes to monochrome photography. This is because of editing software like Photoshop and other popular programs that allow photographers to manipulate the image as much after it has been captured as in framing before the picture is taken.
* Digital photography allows far more flexibility with monochrome as it allows for images to be converted to and from monochrome at will
* Digital photography also allows for different monochromatic colors to be substituted in. This means you can go from gray to sepia to cyan until you find the perfect monotone hue.
* There is room for manipulation within traditional film photography but it does not allow the same editing possibilities as digital photography.
* Monochrome photos are best captured and manipulated through digital photography.

**Q7: What is HDR?**

A7: In photography and videography, HDR or high-dynamic-range imaging is the set of techniques used to reproduce a greater range of luminosity than that which is possible with standard photographic techniques. Standard techniques allow differentiation only within a certain range of brightness. Outside this range, no features are visible because in the brighter areas everything appears pure white, and pure black in the darker areas. The ratio between the maximum and the minimum of the tonal value in an image is known as the dynamic range. HDR is useful for recording many real-world scenes containing very bright, direct sunlight to extreme shade, or very faint nebulae. High-dynamic-range (HDR) images are often created by capturing and then combining several different, narrower range, exposures of the same subject matter.

The two primary types of HDR images are computer renderings and images resulting from merging multiple low-dynamic-range (LDR)[5] or standard-dynamic-range (SDR)photographs. HDR images can also be acquired using special image sensors, such as an oversampled binary image sensor. Due to the limitations of printing and display contrast, the extended luminosity range of input HDR images has to be compressed to be made visible. The method of rendering an HDR image to a standard monitor or printing device is called tone mapping. This method reduces the overall contrast of an HDR image to facilitate display on devices or printouts with lower dynamic range, and can be applied to produce images with preserved local contrast (or exaggerated for artistic effect).

“HDR” may refer to the overall process, to the HDR imaging process, or to HDR imaging represented on a low-dynamic-range display such as a screen or standard .jpg image.

**Q8: Mention any 5 tools in GIMP?**

A8: GIMP provides a comprehensive toolbox for performing basic tasks such as selections, drawings, color picker, and many more. It provides many tools within its toolbox.

A tool is a way of operating on images. It indicates the specified action on hovering the cursor over the icon. A toolbox has several icons; each icon is a separate tool. To activate a tool, left-click on it or use key shortcuts.

[GIMP](https://www.javatpoint.com/gimp) offers the following tools:

1. Selection tools
2. Paint tools
3. Transform tools
4. Color tools
5. Other tools

A particular tool can be activated by clicking on a specific icon in the toolbox. GIMP does not provide direct tool icons for tools such as color tools that can be selected from the color menu or by navigating to tools -> Colors. But, every tool can be activated by stroking shortcut keys, which is unique for every tool.

We can add our frequently used tools in the toolbox. By default, every tool is not shown in the toolbox, but the toolbox can be customized using the tool menu.

Before diving in each tool in detail, let’s look at the GIMP user interface and toolbox: GIMP looks like a typical photo editing software

**Q9: How can we sharpen an image in GIMP?**

A9: Sharpening a snapshot in GIMP is quick and easy: simply select the Filters > Enhance > Sharpen command from the main menu. A “Sharpen” dialog box pops up (see Picture 3) showing a single “Sharpness” slider to control the amount of sharpening to be applied, and a thumbnail to preview the effect visually. Right-click in the blurred/edges image window and Select -> All. Right-click again and select Edit -> Copy. (Alternatively you can use keyboard shortcuts Ctrl+A and Ctrl+C in succession). In the Layers dialog, make sure the Sharpening Mask channel is selected. However, they are less prone to edge-related artefacts than unsharp masking (see below). In The GIMP, the Sharpen tool is found in the Filters drop-down menu. Click on Enhance and select Sharpen. The trick when using this tool lies in knowing where to stop – and this will vary with different images.

**Q10: What are the benefits of using layers in GIMP?**

A10: Layers are an important Layers are an important part of creating images in GIMP. If you’re familiar with Adobe Photoshop, you’ll know what I mean. Layers provide you with the ability to separate different parts of your image, so that you can manipulate each part separately to the rest of your image

Layers give you more control and flexibility over your image compositions.
Layers enable you to stack images on top of other images — all within the same image. Therefore, you can have multiple layers of images, stacked on top of each other. But most importantly, each layer can be transparent or semi-transparent as required. Therefore, despite having layers on top of others, you are still able to see the other layers beneath them. If we didn't have layers, our life would be so much more difficult. Layers enable you to add and remove parts to your image without affecting the rest of the image. They help you experiment with different effects. If you find that something doesn't work, you can just delete the layer (or hide it) - the rest of the image is still intact.