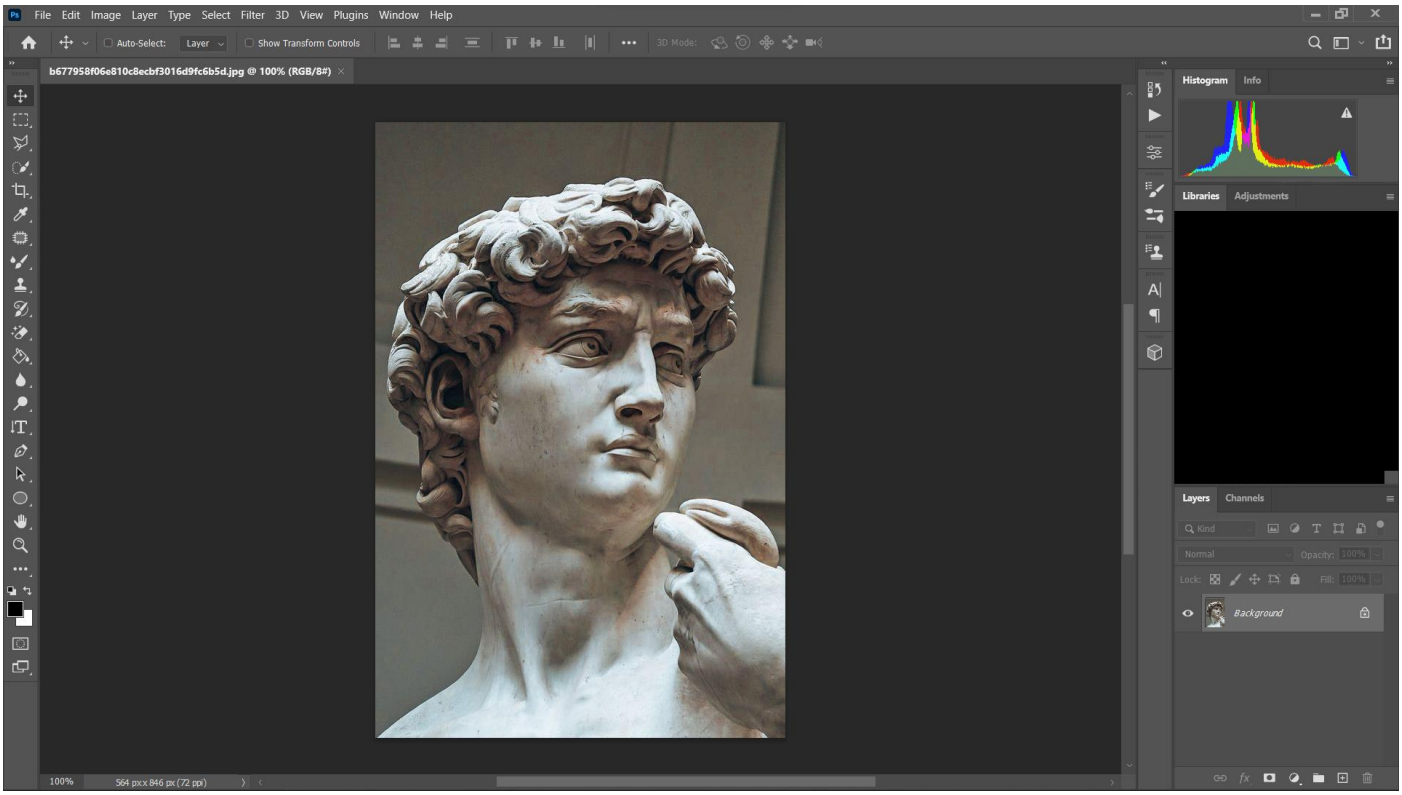
Lab 2: Using Adobe Photoshop Illustrate the dithering technique

Concept:

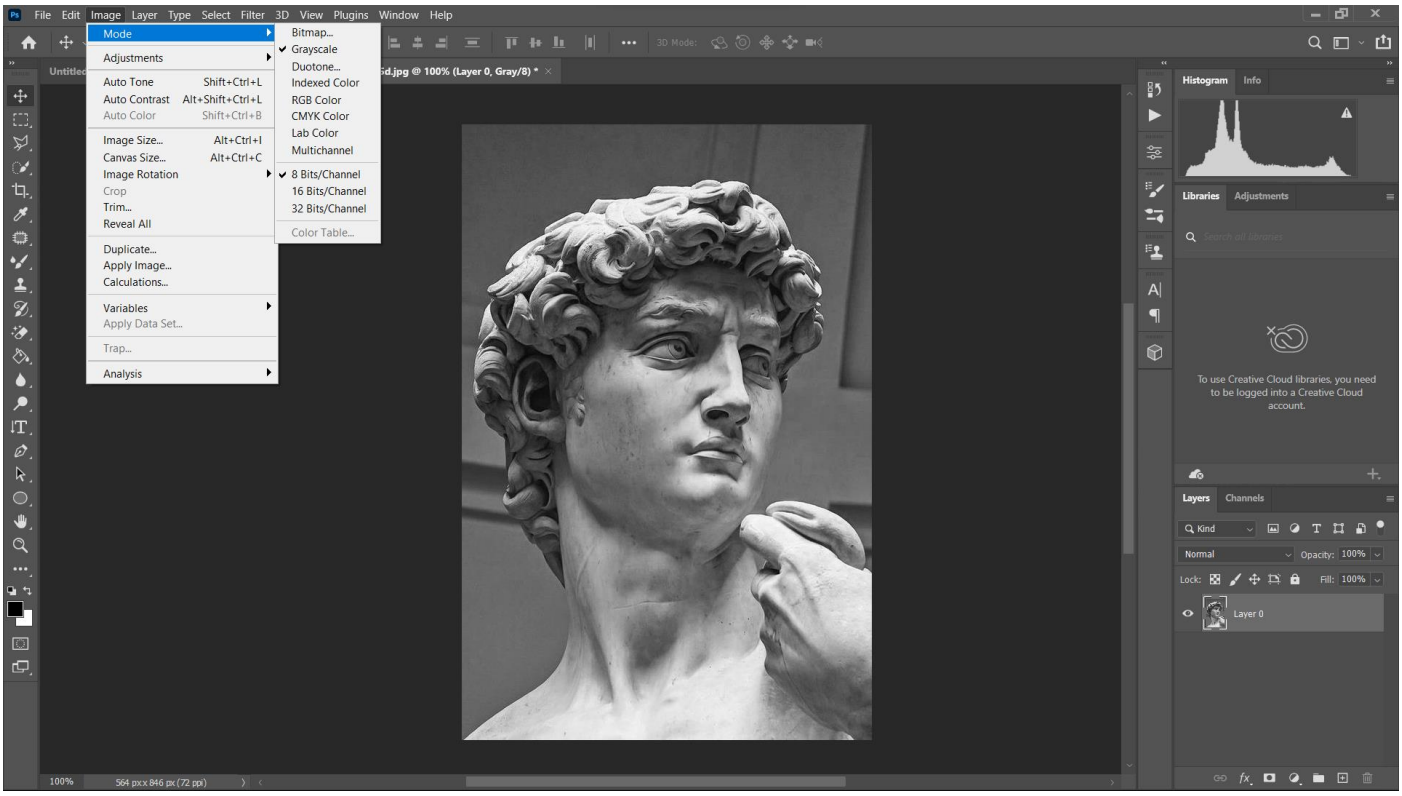
Dithering is a technique used in digital image processing to reduce color banding and create the illusion of greater range of colors than is actually available. Dithering in Photoshop is a technique used to simulate colors or tones that are not available in the chosen color palette by creating patterns of dots or pixels of available colors. This helps in reducing banding or abrupt transitions between colors, especially when reducing the number of colors in an image, such as converting from a high-color image to a lower-color image format like GIF.

Procedure:

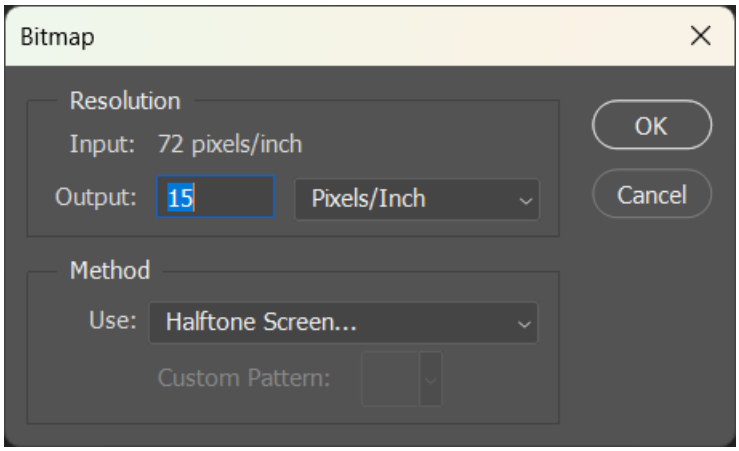
Step 1: First of all open Photoshop and import a Image of your choice from the file section in the menu and click on import, or you can directly open the image with Ctrl + O which will open the files.



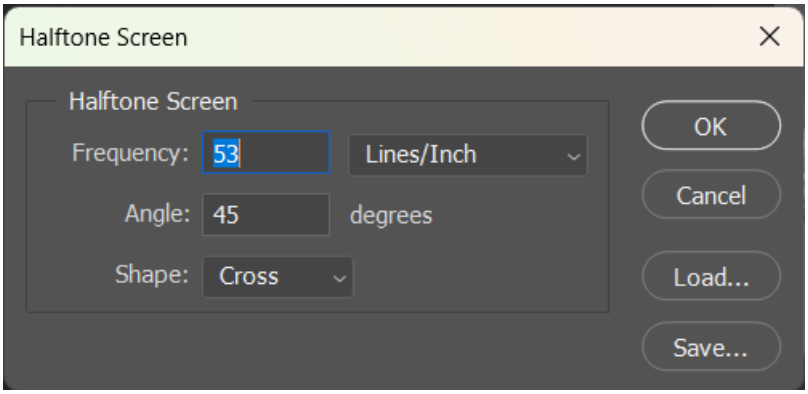
Step 2: In order to convert the image into a bitmap it first need to be converted to a grayscale so go to image mode and grayscale then back to image mode and click on bitmap. This process changes the image to black and white image.



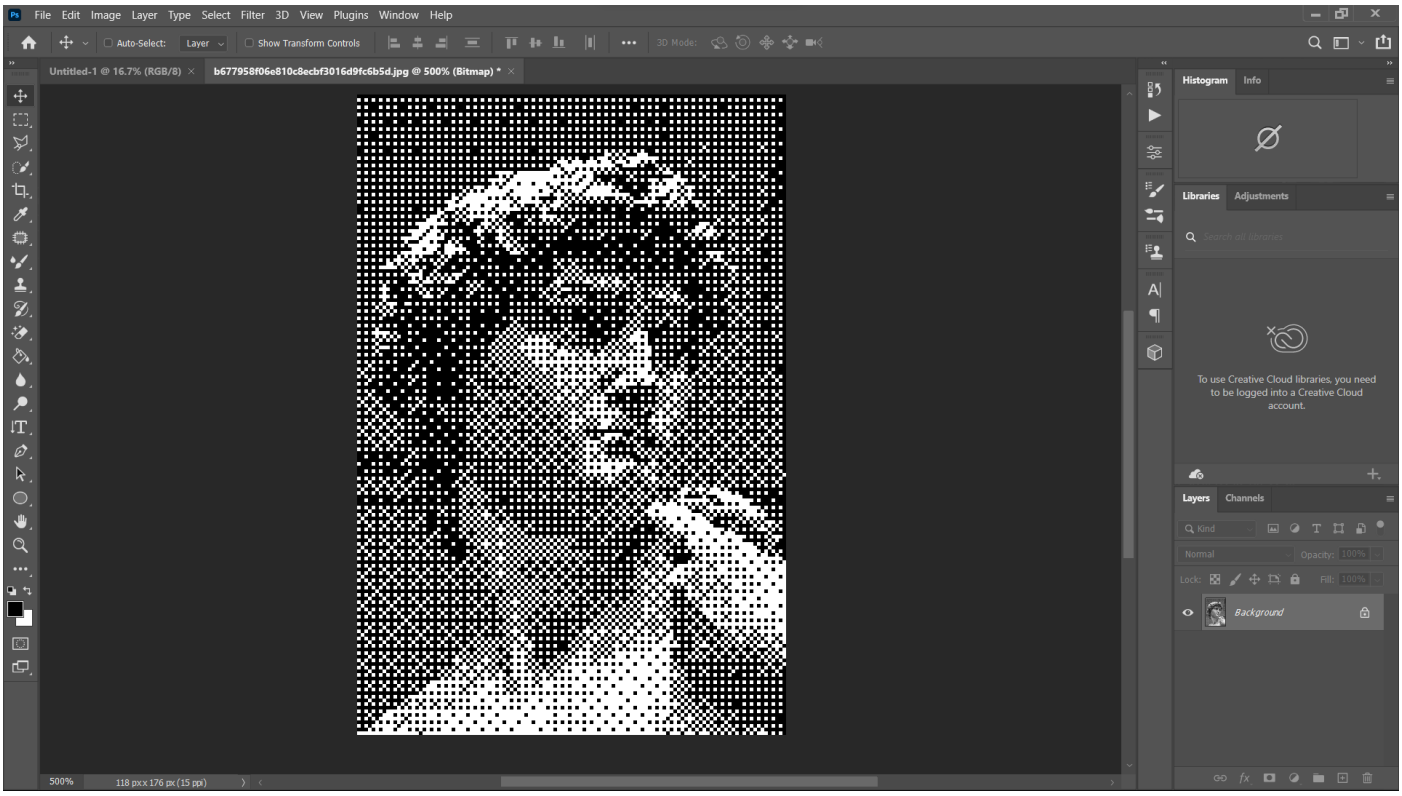
Then a popup will come and set the output detail and method to adjust it to half turn screen press ok.



Then set the Frequency level and set shape to Cross and press OK.



Step 3: Now the Dithered image is ready, you can change the resolution of the image to make the image more detailed from the image size. Now you can Export the file and the image is ready.



Conclusion:

In conclusion, we can say that we can illustrate technique using Adobe Photoshop. Mastering the art of image dithering in Photoshop opens up a world of possibilities for enhancing and optimizing visual content. By following the outlined steps, one can effectively reduce color banding and maintain image quality, even when converting to lower-color formats like GIF or PNG. Understanding the various dithering methods and experimenting with their settings empowers creators to achieve desired effects while preserving the integrity of their images.

Output: