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Pseudocode for Histogram Equalization

1. Read an image file ("noisyImage.png") and store it in an "image" variable.
2. Check if the image was read successfully.
- If not, display an error message and exit the program.
3. Convert the image from BGR color space (default for OpenCV) to YCrCb color space and store it in "hist_equalized_image".
4. Split the "hist_equalized_image" into its three channels (Y, Cr, Cb) and store them in a vector named "vec_channels".
5. Apply histogram equalization only to the Y channel (index 0) within the "vec_channels" vector.
6. Merge the three channels back together from "vec_channels" into "hist_equalized_image".
7. Convert the histogram-equalized image back from YCrCb color space to BGR color space and store it in "hist_equalized_image".
8. Define two strings: "windowNameOfOriginalImage" and "windowNameOfHistogramEqualized" to hold window titles.
9. Save the original image ("image") to a file named "original_image.jpg".
10. Save the histogram-equalized image ("hist_equalized_image") to a file named

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"hist_equalized_image.jpg".
11. Create two windows with the names defined in step 8.
12. Display the original image ("image") in the "windowNameOfOriginalImage" window.
13. Display the histogram-equalized image ("hist_equalized_image") in the "windowNameOfHistogramEqualized" window.
14. Wait indefinitely for any key press in either window.
15. Close all open windows.
16. Exit the program successfully.