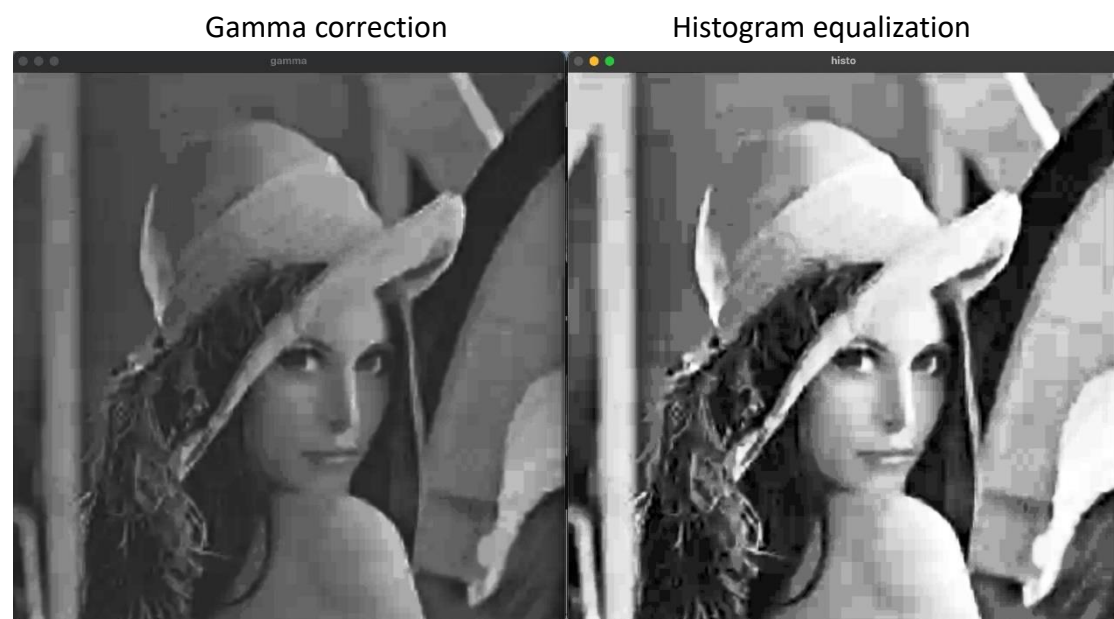


Problem 1.

Because the two coordinate axes are independent to each other, purely manipulating one of them will not affect to the other.

Problem 2.



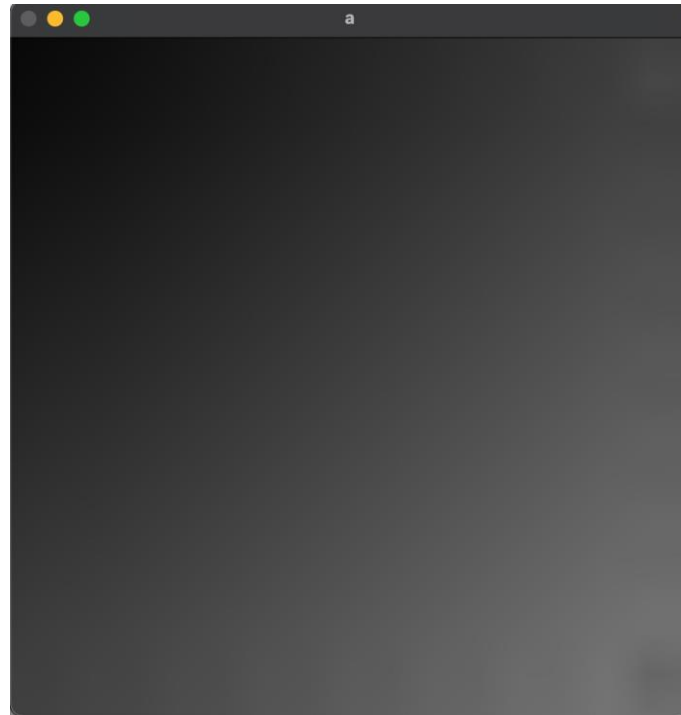
I use the approaching method to find a proper value of **gamma**, the outcome was 5, but apparently there is a better gamma value to find.

Problem 3.



Bilinear transformation, result of **scaling value 0.75**, **rotation 15 degrees**.

Problem 4.



Gaussian blurring takes lots of time on processing, this is my best result.

The root cause of the corner edge shadow could be lack of information.

Unlike the center of the image, corners and edge don't have enough reference to blur the pixel itself, so they keep the original color a lot obviously.