

## Assignment 2

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- Explain how the equation given above increases the contrast of images:

By increasing the brightness of bright parts and decreasing the brightness of dark parts

- **Comment on the effect of increase the structuring element size on the output image:**

- 3\*3 a=1 b=1: smoother than the 9\*9 kernel and the brightness is less and dark parts are less dark
- 9\*9 a=1 b=1: a bit sharper and the contrast is higher

- **Comment on the effect of increasing or decreasing  $a$  and  $b$  on the output image:**

- 3\*3 a=5 b=1: bright parts are brighter but the dark parts are same as the first a=1 b=1 image
- 3\*3 a=1 b=5: dark parts are darker but the bright parts are the same as a=1 b=1 image output
- **Suggest an expression that could decrease the contrast using morphological operators:**

$$I = I + a * (I \ominus B) + b * (I - I \cdot B)$$