

# Assignment-8

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## Result

After using the morphological operation different results are obtained. The result for using erosion, dilation, opening and closing operation is given below as follows. Here three different kernels are used. The result is obtained for all the kernels.

## Erosion

In theory, erosion erodes away the boundary of objects. That means if an object is shown in white color and the background color is black, then the white color is eroded and so the object becomes thinner. Now in practical, as the object is shown in black color and the background color is white, the white color is decreased. So, the border of the object becomes thicker as it is in black color.

## Dilation

In theory, dilation is opposite to erosion. That means if an object is shown in white color and the background color is black, then the white color is increased and so the object becomes thicker. Now in practical, as the object is shown in black color and the background color is white, the white color is increased. So, the border of the object becomes thinner as it is in black color.

## Opening

In theory, opening operation is got using an erosion operation followed by a dilation operation. That means after decreasing the border of the object, then the border is somewhat increased. In practical, as the object is defined in opposite to the conventional way, it is seen that at first the border of the object is increased at first in erosion operation, then for dilation operation the border of the object is decreased.

## Closing

In theory, closing operation is got using an dilation operation followed by a erosion operation. That means after increasing the border of the object, then the border is somewhat decreased. In practical, as the object is defined in opposite to the conventional way, it is seen that at first the border of the object is decreased at first in dilation operation, then for erosion operation the border of the object is increased.

## Figure



Figure 1: Output of Morphological Operation for kernel1

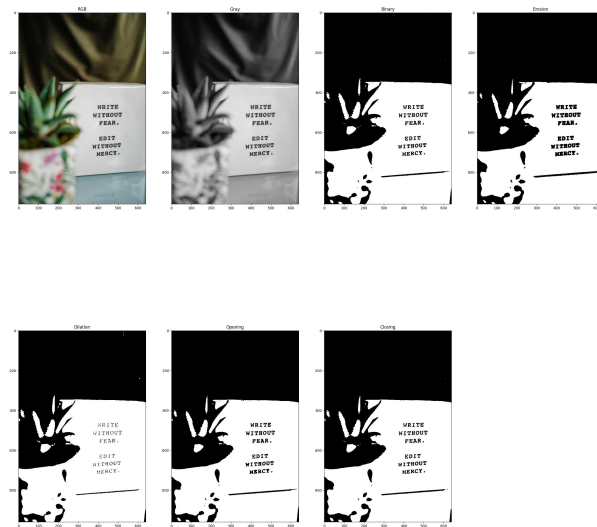


Figure 2: Output of Morphological Operation for kernel2

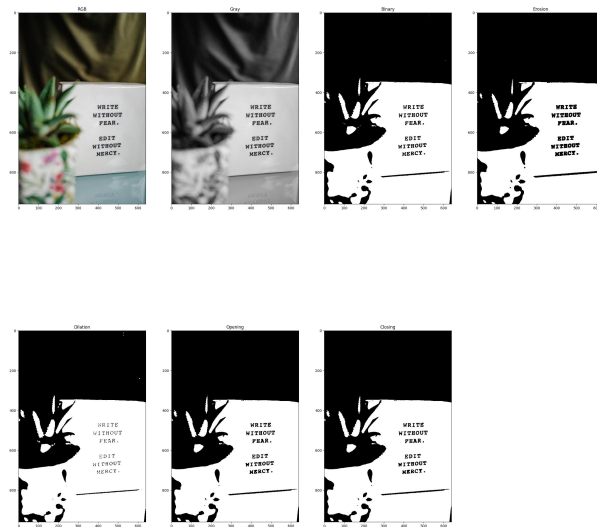


Figure 3: Output of Morphological Operation for kernel3