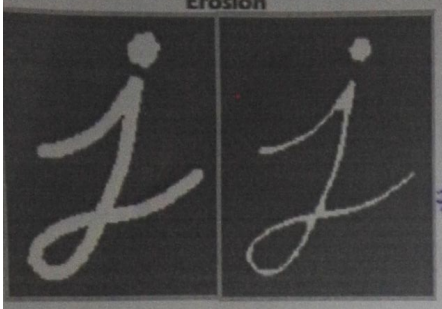
# Morphological Transformations

They are based on image shape. Normally used in Binary images, but color images can also be used.

Erosion



kernel = np.ones((a,b), np.uint8)  (size of the neighborhood aeria pixels to be calculated)

erosion = cv2.erode(img, kernel, iterations=2)  (reeeatations)

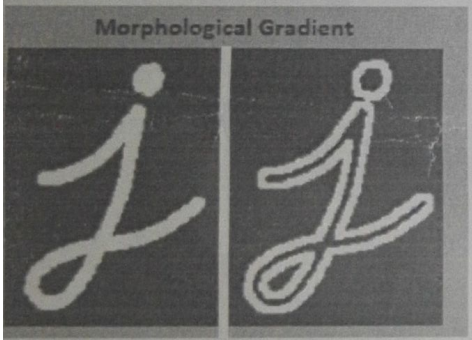
# the more iterations you have, the more slim the image will be.

Dilation

dilation = cv2.dilate(img, kernel, iterations = 2)

# the more iterations, the bigger the image.

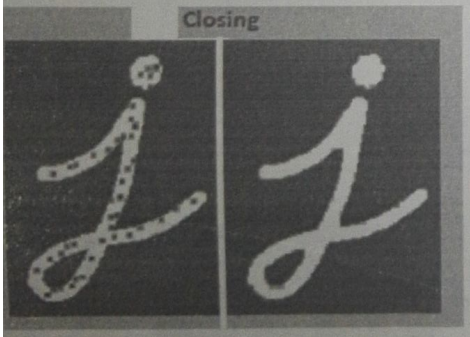
Morphological Gradient



The difference between dilation and erosion

gradient = cv2.morphologyEx(img, cv2.MORPH_GRADIENT, kernel)

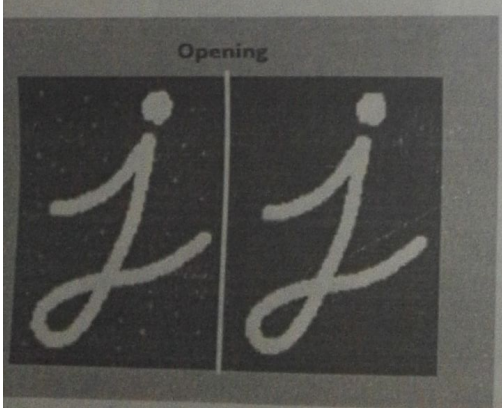
Closing



It is Dilation and then Erosion. That way, you can close small holes inside the foreground objects, or small black points on the object.

closing = cv2.MorphologyEx(img, cv2.MORPH_CLOSE, kernel)

Opening



It is Erosion and then Dilation. That way, you can remove noise.

opening = cv2.morphologyEx(img, cv2.MORPH_OPEN, kernel)