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**Task 1**

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| **Code** |
| import cv2 import numpy as np  image = cv2.imread('1.png', 0)  kernel = np.ones((5, 5), np.uint8) erosion = cv2.erode(image, kernel, iterations=1) dilation = cv2.dilate(erosion, kernel, iterations=1)  cv2.imshow('Input Image', image) cv2.imshow('After Erosion', erosion) cv2.imshow('After Dilation', dilation)  cv2.waitKey(0) |
| **SS** |
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Erosion is useful for removing small white noises and is used to detach two connected objects. While dilation is useful in joining broken parts of an object. In cases like white noise removal erosion is followed by dilation. Because it (erosion) shrinks the object when it removes white noise. So the object area increases.

**Task 2**

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| **Code** |
| import cv2 import numpy as np  image = cv2.imread('2.png', 0)  kernel = np.ones((6, 6), np.uint8) ret, thresh = cv2.threshold(image, 60, 255, cv2.THRESH\_BINARY) erosion = cv2.erode(thresh, kernel, iterations=2) dilation = cv2.dilate(erosion, kernel, iterations=2)  cv2.imshow('Input Image', image) cv2.imshow('Output Image', dilation)  cv2.waitKey(0) |
| **SS** |
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