

10. Perform erosion ,dilation ,opening ,closing

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In [8]: import cv2
import numpy as np
import matplotlib.pyplot as plt
img=cv2.imread("log.png")
binary_image = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
```

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In [5]: kernel = np.ones((5, 5), np.uint8)

#erosion
erosion = cv2.erode(binary_image, kernel, iterations=1)

# Dilation
dilation = cv2.dilate(binary_image, kernel, iterations=1)

# Opening (Erosion followed by Dilation)
opening = cv2.morphologyEx(binary_image, cv2.MORPH_OPEN, kernel)

# Closing (Dilation followed by Erosion)
closing = cv2.morphologyEx(binary_image, cv2.MORPH_CLOSE, kernel)
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In [11]: plt.figure(figsize=(15,10))
plt.subplot(2, 3, 1), plt.imshow(binary_image, cmap='gray'), plt.title('Original Im
plt.subplot(2, 3, 2), plt.imshow(erosion, cmap='gray'), plt.title('Eroded Image')
plt.subplot(2, 3, 3), plt.imshow(dilation, cmap='gray'), plt.title('Dilated Image')
plt.subplot(2, 3, 4), plt.imshow(opening, cmap='gray'), plt.title('Opening')
plt.subplot(2, 3, 6), plt.imshow(closing, cmap='gray'), plt.title('Closing')

plt.tight_layout()
plt.show()
```



