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Erosi

```python
import cv2

image = cv2.imread('cery.jpeg')
cv2.imshow("Original", image)

#.erosion
for i in range(0, 3):
    eroded = cv2.erode(image.copy(), None, iterations = i + 1)
    cv2.imshow(f"Erosi {i+1} kali", eroded)
    cv2.waitKey(0)
```

Dilasi

```python
import cv2

image = cv2.imread('cery.jpeg')
cv2.imshow("Original", image)

#.dilation
for i in range(0, 3):
    dilated = cv2.dilate(image.copy(), None, iterations = i + 1)
    cv2.imshow(f"Dilasi {i+1} kali", dilated)
    cv2.waitKey(0)
```

Opening

```python
import cv2

image = cv2.imread('cery.jpeg')
cv2.imshow("Original", image)

kernelSizes = [(3,3), (5,5), (7,7)]

for kernelSizes in kernelSizes:
    kernel = cv2.getStructuringElement(cv2.MORPH_RECT, kernelSizes)
    opening = cv2.morphologyEx(image, cv2.MORPH_OPEN, kernel)
    cv2.imshow(f"Opening : ({kernelSizes[0]}, {kernelSizes[1]}", opening)
    cv2.waitKey(0)
```

Closing

```python
import cv2

image = cv2.imread('cery.jpeg')
cv2.imshow("Original", image)

kernelSizes = [(3,3), (5,5), (7,7)]

# Closing
for kernelSizes in kernelSizes:
    kernel = cv2.getStructuringElement(cv2.MORPH_RECT, kernelSizes)
    opening = cv2.morphologyEx(image, cv2.MORPH_OPEN, kernel)
    cv2.imshow(f"Closing : ({kernelSizes[0]}, {kernelSizes[1]}", opening)
    cv2.waitKey(0)
```

Boundary extraction

```python
import cv2
import numpy as np

img = cv2.imread('cery.jpeg',0)
kernel = np.ones((15,15), np.uint8)

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

cv2.imshow('original', img)
cv2.imshow('output', closing)
cv2.waitKey(0)
cv2.destroyAllWindows()
```

Hit or miss

```python
import cv2 as cv
import numpy as np
input_image = np.array((
    [0, 0, 0, 0, 0, 0, 0, 0],
    [0, 255, 255, 255, 0, 0, 0, 255],
    [0, 255, 255, 255, 0, 0, 0, 0],
    [0, 255, 255, 255, 0, 255, 0, 0],
    [0, 0, 255, 0, 0, 0, 0, 0],
    [0, 0, 255, 0, 0, 255, 255, 0],
    [0,255, 0, 255, 0, 0, 255, 0],
    [0, 255, 255, 255, 0, 0, 0, 0]), dtype="uint8")
kernel = np.array((
        [0, 1, 0],
        [1, -1, 1],
        [0, 1, 0]), dtype="int")
output_image = cv.morphologyEx(input_image, cv.MORPH_HITMISS, kernel)
rate = 50
kernel = (kernel + 1) * 127
kernel = np.uint8(kernel)
kernel = cv.resize(kernel, None, fx = rate, fy = rate, interpolation =
cv.INTER_NEAREST)
cv.imshow("kernel", kernel)
```

```python
cv.moveWindow("kernel", 0, 0)
input_image = cv.resize(input_image, None, fx = rate, fy = rate,
interpolation = cv.INTER_NEAREST)
cv.imshow("Original", input_image)
cv.moveWindow("Original", 0, 200)
output_image = cv.resize(output_image, None , fx = rate, fy = rate,
interpolation = cv.INTER_NEAREST)
cv.imshow("Hit or Miss", output_image)
cv.moveWindow("Hit or Miss", 500, 200)
cv.waitKey(0)
cv.destroyAllWindows()
```