IMPLEMENTATION OF EROSION AND DILATION

AIM:

To implement Erosion and Dilation using Python and OpenCV.

SOFTWARE REQUIRED:

1. Anaconda - Python 3.7
2. OpenCV

ALGORITHM:

Step 1:

Import the necessary packages.

Step 2:

Create the Text using cv2.putText

Step 3:

Create the structuring element.

Step 4:

Erode the image.

Step 5:

Dilate the image.

PROGRAM:

```
/*
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*/



# Import the necessary packages
import cv2
```

```
import numpy as np
import matplotlib.pyplot as plt

# Create the Text using cv2.putText
img1=np.zeros((100,400),dtype='uint8')
font=cv2.FONT_ITALIC
cv2.putText(img1,'Rithu',(5,70),font,2,(255),5,cv2.LINE_AA)
plt.axis('off')
plt.imshow(img1)
plt.show()

# Create the structuring element
kernel=cv2.getStructuringElement(cv2.MORPH_CROSS,(9,9))

# Erode the image
image_erode1=cv2.erode(img1,kernel)
plt.axis('off')
plt.imshow(image_erode1)
plt.show()

# Dilate the image
image_dilate1=cv2.dilate(img1,kernel)
plt.axis('off')
plt.imshow(image_dilate1)
plt.show()
```

OUTPUT:

Display the input Image

Display the Eroded Image

Display the Dilated Image

RESULT:

Thus the generated text image is eroded and dilated using python and OpenCV.