Source Code :

```
import cv2
import numpy as np
import matplotlib.pyplot as plt

# Read the image
img = cv2.imread('noisysalterpepper.png', 0)

m, n = img.shape

# Develop Averaging filter(3, 3) mask
mask = np.ones([3, 3], dtype = int)
mask = mask / 9

# Convolve the 3X3 mask over the image
img_new = np.zeros([m, n])

for i in range(1, m-1):
  for j in range(1, n-1):
    temp = img[i-1, j-1]*mask[0, 0]+img[i-1, j]*mask[0, 1]+img[i-1, j + 1]*mask[0,
2]+img[i, j-1]*mask[1, 0]+ img[i, j]*mask[1, 1]+img[i, j + 1]*mask[1, 2]+img[i + 1,
j-1]*mask[2, 0]+img[i + 1, j]*mask[2, 1]+img[i + 1, j + 1]*mask[2, 2]

    img_new[i, j]= temp

img_new = img_new.astype(np.uint8)

# Read the image
img_noisy1 = cv2.imread('noisysalterpepper.png', 0)

# Obtain the number of rows and columns
# of the image
m, n = img_noisy1.shape

# Traverse the image. For every 3X3 area,
# find the median of the pixels and
# replace the center pixel by the median
img_new1 = np.zeros([m, n])

for i in range(1, m-1):
  for j in range(1, n-1):
    temp = [img_noisy1[i-1, j-1],
      img_noisy1[i-1, j],
      img_noisy1[i-1, j + 1],
      img_noisy1[i, j-1],
```

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            img_noisy1[i, j],
            img_noisy1[i, j + 1],
            img_noisy1[i + 1, j-1],
            img_noisy1[i + 1, j],
            img_noisy1[i + 1, j + 1]]

        temp = sorted(temp)
        img_new1[i, j]= temp[4]

img_new1 = img_new1.astype(np.uint8)
plt.figure(figsize=(15, 8))
plt.subplot(121), plt.imshow(img_new, cmap='gray'), plt.title("Low Pass SPatial
Domain Filtering to observe the blurring effect")
plt.subplot(122), plt.imshow(img_new1, cmap='gray'), plt.title("Median Spatial
Domain Filtering ")
plt.show()
```

Output :