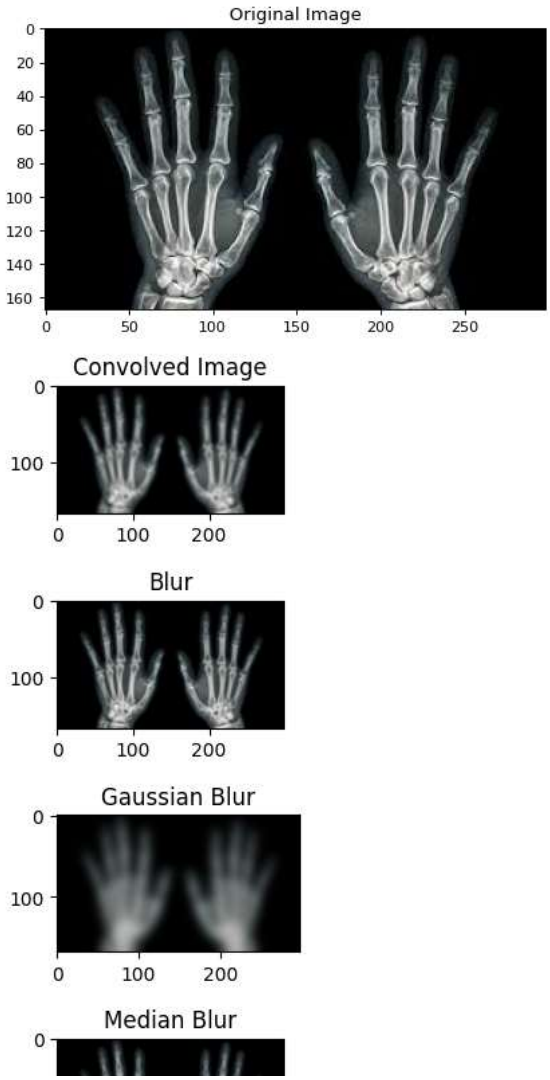
```
!pip install opencv-python matplotlib
```

```
Requirement already satisfied: opencv-python in /usr/local/lib/python3.10/dist-packages (4.10.0.84)
Requirement already satisfied: matplotlib in /usr/local/lib/python3.10/dist-packages (3.7.1)
Requirement already satisfied: numpy>=1.21.2 in /usr/local/lib/python3.10/dist-packages (from opencv-python) (1.26.4)
Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.3.0)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (4.54.1)
Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (1.4.7)
Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (24.1)
Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (10.4.0)
Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (3.1.4)
Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.10/dist-packages (from matplotlib) (2.8.2)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
```

```
import cv2
import matplotlib.pyplot as plt


from google.colab import files


import numpy as np


uploaded = files.upload()
```

Choose Files No file chosen Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable.

```
image = cv2.imread('prac.jfif')


kernel = np.ones((5, 5)) / 25
convImage = cv2.filter2D(image, -1, kernel)


blur = cv2.blur(image, (3, 3))


gaussian = cv2.GaussianBlur(image, (37, 37), 0)


median = cv2.medianBlur(image, 5)


titles = ['Original Image', 'Convolved Image', 'Blur', 'Gaussian Blur', 'Median Blur']
outputs = [image, convImage, blur, gaussian, median]
plt.figure(figsize=(15, 10), dpi=80)
for i in range(5):
  plt.subplot (2, 3, i + 1)
  plt.imshow(outputs[i], cmap='gray')
  plt.title(titles[i])
  plt.tight_layout()
  plt.show()
```


Original Image
Convolved Image
Blur
Gaussian Blur
Median Blur