```
import cv2
import numpy as np
from matplotlib import pyplot as plt
from PIL import Image
import os


# Load the image (make sure 'image.jpg' is uploaded to the Colab session)
img_path = '/content/drive/MyDrive/Computer Vision/Sample.jpg'
if not os.path.exists(img_path):
    print("Please upload 'image.jpg' to your Colab session.")
else:
# Load in grayscale
   image = cv2.imread(img_path, cv2.IMREAD_GRAYSCALE)


# 1. Global Thresholding
ret1, thresh_global = cv2.threshold(image, 127, 255, cv2.THRESH_BINARY)
# 2. Adaptive Mean Thresholding
thresh_adapt_mean = cv2.adaptiveThreshold(image, 255,
cv2.ADAPTIVE_THRESH_MEAN_C, cv2.THRESH_BINARY, 11, 2)
# 3. Adaptive Gaussian Thresholding
thresh_adapt_gauss = cv2.adaptiveThreshold(image, 255,
cv2.ADAPTIVE_THRESH_GAUSSIAN_C, cv2.THRESH_BINARY, 11, 2)
# 4. Otsu's Binarization
ret2, thresh_otsu = cv2.threshold(image, 0, 255, cv2.THRESH_BINARY +
cv2.THRESH_OTSU)


# Display results
titles = ['Original Image', 'Global Thresholding (v=127)',

'Adaptive Mean Thresholding', 'Adaptive Gaussian Thresholding',
"Otsu's Binarization"]

images = [image, thresh_global, thresh_adapt_mean,

thresh_adapt_gauss, thresh_otsu]

plt.figure(figsize=(12, 8))
for i in range(5):
    plt.subplot(2, 3, i + 1)
    plt.imshow(images[i], cmap='gray')
    plt.title(titles[i])
    plt.axis('off')
plt.tight_layout()
plt.show()
```

Original Image

Global Thresholding (v=127)

Adaptive Mean Thresholding

Adaptive Gaussian Thresholding

Otsu's Binarization