23). Implement the Top hat technique as a Morphological operation to dilate the foreground regions based on Open CV.

PROGRAM:

```
import cv2

import numpy as np

from matplotlib import pyplot as plt


# Load the grayscale image

image = cv2.imread(r"C:\Users\harik\Downloads\CV LAB\grayscalee.png",
cv2.IMREAD_GRAYSCALE)


# Define a structuring element (kernel)

kernel = cv2.getStructuringElement(cv2.MORPH_RECT, (15, 15))


# Apply the Black Hat morphological operation

blackhat = cv2.morphologyEx(image, cv2.MORPH_BLACKHAT, kernel)


# Optional: Enhance result by adding blackhat to original image

enhanced = cv2.add(image, blackhat)


# Display results

plt.figure(figsize=(12, 6))

plt.subplot(1, 3, 1), plt.title("Original"), plt.imshow(image, cmap='gray'), plt.axis('off')

plt.subplot(1, 3, 2), plt.title("Black Hat"), plt.imshow(blackhat, cmap='gray'), plt.axis('off')

plt.subplot(1, 3, 3), plt.title("Enhanced (Image + Black Hat)"), plt.imshow(enhanced, cmap='gray'),
plt.axis('off')

plt.tight_layout()

plt.show()
```

OUTPUT:

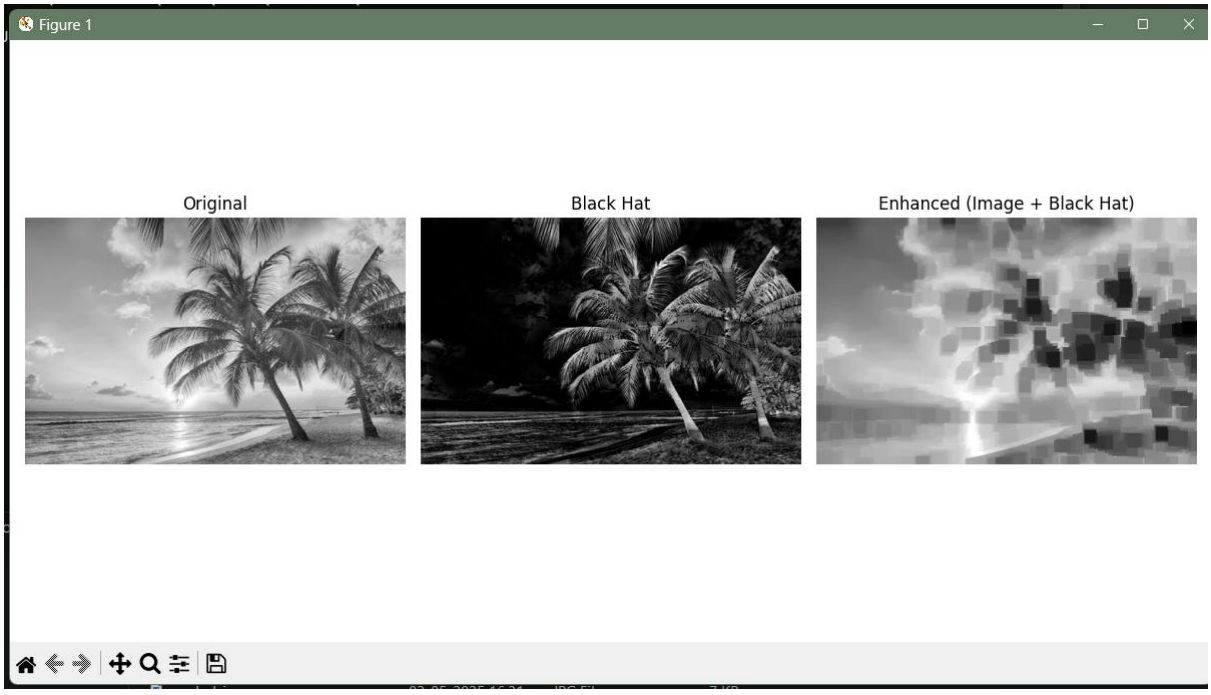
Figure 1
Original
Black Hat
Enhanced (Image + Black Hat)