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

# Load the image in grayscale
image = cv2.imread('/content/do_nawab-100x100.png', cv2.IMREAD_GRAYSCALE)

# Check if image is loaded properly
if image is None:
    print("Error: Could not load image.")
    exit()

# Apply Sobel operator to find gradients in the x and y directions
gradient_x = cv2.Sobel(image, cv2.CV_64F, 1, 0, ksize=3)  # Gradient in x direction
gradient_y = cv2.Sobel(image, cv2.CV_64F, 0, 1, ksize=3)  # Gradient in y direction

# Compute the magnitude of the gradient
gradient_magnitude = cv2.magnitude(gradient_x, gradient_y)

# Convert the result to uint8 for visualization
gradient_magnitude = np.uint8(np.absolute(gradient_magnitude))

# Display the original and gradient images
plt.figure(figsize=(10, 5))

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

plt.subplot(1, 3, 2)
plt.title('Gradient in X direction')
plt.imshow(gradient_x, cmap='gray')

plt.subplot(1, 3, 3)
plt.title('Gradient Magnitude')
plt.imshow(gradient_magnitude, cmap='gray')

plt.show()
```