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In [1]: # EXPERMENT 02: Simulation and Display of an Image, Negative of an Image (Binary)

# Import necessary libraries
import numpy as np
import matplotlib.pyplot as plt
from skimage import io, color

image = io.imread('C:/Users/Student/Documents/Exp1image.jpg')

# Display the original image
plt.imshow(image)
plt.title("Original Image")
plt.axis('off')
plt.show()

# Convert to grayscale
gray_image = color.rgb2gray(image)

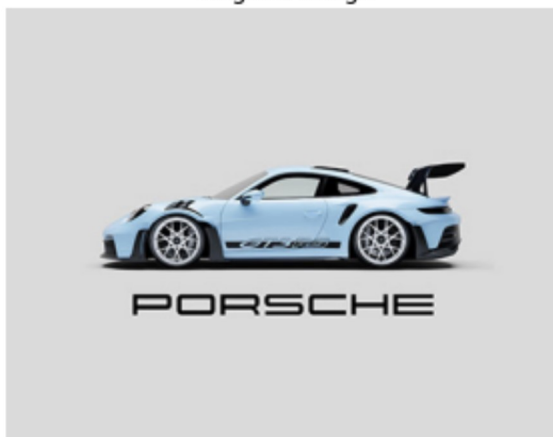
# Invert the grayscale image (negative)
gray_negative = 1 - gray_image

# Convert to binary image (thresholding)
binary_image = gray_image > 0.5 # Simple thresholding
binary_negative = ~binary_image

# Display the grayscale negative
plt.imshow(gray_negative, cmap='gray')
plt.title("Grayscale Negative")
plt.axis('off')
plt.show()

# Display the binary negative
plt.imshow(binary_negative, cmap='gray')
plt.title("Binary Negative")
plt.axis('off')
plt.show()
```

Original Image



Grayscale Negative



Binary Negative



In [ ]: