LetsGrowMore Data Science Internship

Beginner Level - TASK 4

Image to Pencil Sketch with Python:

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Importing Libraries

In [19]:
```
import cv2
import matplotlib.pyplot as plt
```

Read the image in RBG format

In [20]:
```
RGB_image = cv2.cvtColor(image, cv2.COLOR_BGR2RGB)
plt.imshow(RGB_image)
plt.title('Original Image of Plane')
plt.axis('off')
plt.show()
```

Converting the image to GrayScale Image

In [21]:
```
Grayscale_image = cv2.cvtColor(image, cv2.COLOR_BGR2GRAY)
cv2.imshow("New Plane", Grayscale_image)
cv2.waitKey()
```

Out[21]:
```
-1
```

Inversion of the Grayscale image

In [22]:
```
Inverted_image = 255 - Grayscale_image
cv2.imshow("Inverted GreyScale Plane", Inverted_image)
cv2.waitKey()
```

Out[22]:
```
-1
```

Blurring the Inverted Grayscale

In [23]:
```
blurred = cv2.GaussianBlur(Inverted_image, (51, 51), 0)
cv2.imshow("Blur InvertedGreyscale",blurred)
cv2.waitKey(0)
```

Out[23]:
```
-1
```

Inverting the blurred Inverted Grayscale

In [24]:
```
Inverted_blurred = 255 - blurred
cv2.imshow("Inverting the Blur Inverted Greyscale", Inverted_image)
cv2.waitKey(0)
```

Out[24]:
```
-1
```

Create the pencil sketch by mixing the grayscale image with the inverted blurry image.

This can be done by dividing the grayscale image by the inverted blurry image.

In [25]:
```
pencil_sketch = cv2.divide(Grayscale_image, Inverted_blurred, scale=256)
cv2.imshow("Sketch", pencil_sketch)
cv2.waitKey(0)
```

Out[25]:
```
-1
```

Displaying both the original image and the pencil sketch

In [26]:
```
cv2.imshow("Original Image", image)
cv2.imshow("pencil sketch", pencil_sketch)
cv2.waitKey(0)
```

Out[26]:
```
-1
```

THANK YOU