Task01_image_processing_ChulminYeum

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1 Task 01: Introduction of Digital Image Processing

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1.1 Before you start

- Make sure that this code is running on the directory where this file present.
- You need the following library installed in your environments
  - matplotlib
  - Pillow
  - opencv-python

1.2 Table of Contents

1.3 Image Size

[ ]:
```
import matplotlib.pyplot as plt
from PIL import Image

# directory of sample images
sampImgDir = 'img'

# image filename
filenameImg = f'{sampImgDir}/car1.jpg'

# read an image
img = Image.open(filenameImg)

# show the image
```

```
plt.imshow(img)
plt.axis('off')  # to hide axes
plt.show()

# Obtain image dimensions
w, h = img.size  # This returns (width, height) contrary to MATLAB's (height, width)
c = len(img.getbands())

print(f'width: {w}, height: {h}, and channel(depth): {c}')

# Using PIL to check if the image is RGB or grayscale
if img.mode == 'RGB':
    c = 3
else:
    c = 1
print(f'width: {w}, height: {h}, and channel(depth): {c}')
```

```
width: 3504, height: 2336, and channel(depth): 3
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```

Q1: Please run this code with 'cameraman.tif' in the 'img' folder. What's the resolution of 'cameraman.tif'? Please write a code to find these answers.

Anwer for Q1

The wdith and height of the image are 1000 and 2000 pixel.

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