DIGITAL_IMAGE_PROCESSING_LAB_WORKSHEET_1

Basic concept of digital image processing to read display an image using cv2 , matplotlib, PIL

1.Reading and display of image using PIL

In [15]:

```python
# Importing PIL Module
from PIL import Image
```

In [16]:

```python
# Reading  Image from localfile

img = Image.open('./photoofme.jpg')
```

In [17]:

```python
# Display the Image

img.show()

#this show the image by open image in folder
```

2.Reading and display of image using Matplotlib

2.1 Matlibplot Module

In [4]:

```python
#Import matplotlib module
import matplotlib.pyplot as plt
```
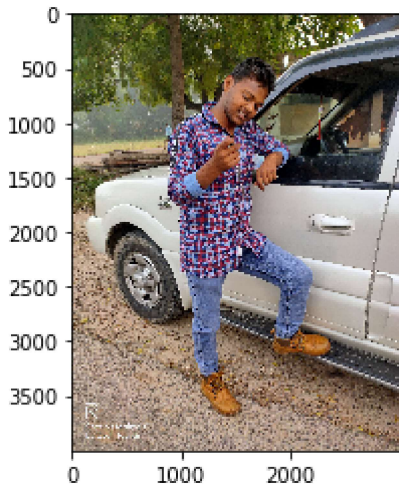
In [5]:

```python
# Reading  Image from localfile

img = plt.imread('./photoofme.jpg')
```

In [6]:

```python
# using matplotlib to display the image

plt.imshow(img)
```

Out[6]:

```
<matplotlib.image.AxesImage at 0x15181729548>
```


2.2 Using Matplotlib Image module

In [7]:

```python
# Import library

import matplotlib.image as mpimg
```
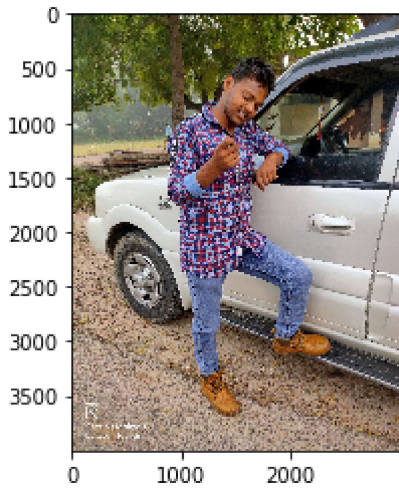
In [8]:

```python
#Read the Image , which is in the same foulder

img = mpimg.imread('./photoofme.jpg')
```

In [9]:

```python
# Displaying the image using matplotlib

plt.imshow(img)
```

Out[9]:

```
<matplotlib.image.AxesImage at 0x15183a35e48>
```


3.READING AND DISPLAY OF IMAGE USING OPEN CV2

In [10]:

```python
# Import OpenCV Module

import cv2 as cv
```

In [11]:

```python
# Read the Image

img = cv.imread('./photoofme.jpg',1)

# RESIZE IMAGE TO FIT IN SCREEN
scale_percent = 20 # percent of original size
width = int(img.shape[1] * scale_percent / 100)
height = int(img.shape[0] * scale_percent / 100)
dim = (width, height)
# resize image
img_res = cv.resize(img, dim, interpolation = cv.INTER_AREA)
```

In [12]:

```python
# Display the image using openCV

cv.imshow('windowTitle', img_res)

#this command show the image in the window page
```

In [13]:

```python
# Display the image until you press any key
cv.waitKey(0)
```

Out[13]:

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THANK YOU FOR READING