Image Preprocessing

Apply Image Data Generator Functionality To Trainset And Testset

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This function will return batches of images from the subdirectories 'apples', 'banana', 'orange', 'pineapple', 'watermelon' together with labels 0 to 4{'apples': 0, 'banana': 1, 'orange': 2, 'pineapple': 3, 'watermelon': 4}

FIRST LOADING OUR DATA AND PERFORMING DATA AUGMENTATION:

```
[ ] #performing data agumentation to train data
    x_train = train_datagen.flow_from_directory(
        r'/content/drive/MyDrive/Colab Notebooks/Dataset/TRAIN_SET',
        target_size=(64, 64),batch_size=5,color_mode='rgb',class_mode='sparse')
    #performing data agumentation to test data
    x_test = test_datagen.flow_from_directory(
        r'/content/drive/MyDrive/Colab Notebooks/Dataset/TEST_SET',
        target_size=(64, 64),batch_size=5,color_mode='rgb',class_mode='sparse')

    Found 2626 images belonging to 5 classes.
    Found 1055 images belonging to 5 classes.
```

We notice that 2626 images are belonging to 5 classes for training and 1055 images belong to 5 classes for testing purpose.

```
[ ] print(x_train.class_indices)#checking the number of classes

    {'APPLES': 0, 'BANANA': 1, 'ORANGE': 2, 'PINEAPPLE': 3, 'WATERMELON': 4}

[ ] print(x_test.class_indices)#checking the number of classes

    {'APPLES': 0, 'BANANA': 1, 'ORANGE': 2, 'PINEAPPLE': 3, 'WATERMELON': 4}

[ ] from collections import Counter as c
    c(x_train .labels)

    Counter({0: 606, 1: 445, 2: 479, 3: 621, 4: 475})
```

Here we are checking the number of classes in train and test data and counting the number of images in each class of train set data by using the counter function.