```python
#sprint2_venuka
#!/usr/bin/env python
# coding: utf-8


# In[1]:



from keras.models import Sequential
from keras.layers import Dense
from keras.layers import Convolution2D
from keras.layers import MaxPooling2D
from keras.layers import Flatten


# In[2]:



from keras.preprocessing.image import ImageDataGenerator
train_datagen = ImageDataGenerator(rescale=1./255,shear_range=0.2,zoom_range=0.2,horizontal_flip=True)
test_datagen = ImageDataGenerator(rescale=1./255)


# In[6]:



x_train = train_datagen.flow_from_directory(r'C:\Users\HP\Desktop\data_set\TRAIN_SET\TRAIN_SET',target_size=(64,64),batch_size=32,class_mode='categorical')

x_test = test_datagen.flow_from_directory(r'C:\Users\HP\Desktop\data_set\TEST_SET-20221101T044129Z-001\TEST_SET',target_size=(64,64),batch_size=32,class_mode='categorical')
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# In[8]:
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x_train.class_indices
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# In[9]:
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model = Sequential()
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# In[10]:
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model.add(Convolution2D(32,(3,3),input_shape = (64,64,3),activation ="relu"))
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# In[11]:
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model.add(MaxPooling2D(pool_size =(2,2)))
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# In[12]:
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```
model.add(Flatten())
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In[14]:

```python
model.add(Dense(units = 128 ,kernel_initializer ="uniform" , activation = "relu"))
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In[15]:

```python
model.add(Dense(units = 5 ,kernel_initializer ="uniform" , activation = "softmax"))
```

In[18]:

```python
model.compile(optimizer = "adam", loss="categorical_crossentropy",metrics = ["accuracy"])
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In[19]:

```python
model.fit_generator(x_train,steps_per_epoch=47,epochs=10,validation_data=x_test
,validation_steps =20)
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In[20]:

```python
model.save("fruit.h5")
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# In[21]:
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get_ipython().system('tar -zcvf image-classification-model_new.tgz fruit.h5')
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# In[ ]:
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# In[ ]:
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