IMPORT THE LIBRARIES

```python
from tensorflow.keras.preprocessing.image import ImageDataGenerator
```
Python

```python
train_datagen=ImageDataGenerator(rescale=1./255,zoom_range=0.2,horizontal_flip=True,vertical_flip=False)
```
Python

```python
test_datagen=ImageDataGenerator(rescale=1./255)
```
Python

```python
x_train=train_datagen.flow_from_directory(r"/content/drive/MyDrive/Fertilizers_Recommendation_ System_For_Disease_ Prediction/Dataset Plant Disease/fruit-dataset/fruit-dataset/train",target_size=(
                                          class_mode='categorical',batch_size=24)
```
Python

```
Found 5384 images belonging to 6 classes.
```

```python
x_test=test_datagen.flow_from_directory(r'/content/drive/MyDrive/Fertilizers_Recommendation_ System_For_Disease_ Prediction/Dataset Plant Disease/fruit-dataset/fruit-dataset/test',target_size=(128
                                        class_mode='categorical',batch_size=24)
```
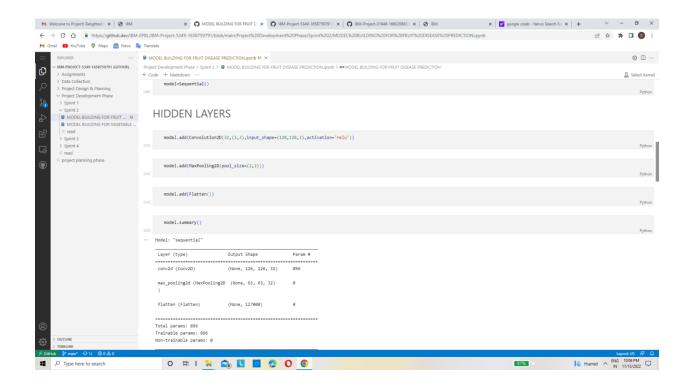Python

```
Found 1686 images belonging to 6 classes.
```

INITIALIZE THE MODEL

ADDING CNN

```python
from tensorflow.keras.models import Sequential
```
[6]   Python

```python
from tensorflow.keras.layers import Dense,Convolution2D,MaxPooling2D,Flatten
```
[7]   Python

```python
model=Sequential()
```
[10]   Python

ADDING DNN

SAVING MODEL

```python
model.save('fdata.h5')
```
[22]

TEST THE MODEL

```python
import numpy as np
```
[23]

```python
from tensorflow.keras.models import load_model
```
[24]

```python
from tensorflow.keras.preprocessing import image
```
[25]

```python
model=load_model('fdata.h5')
```
[26]