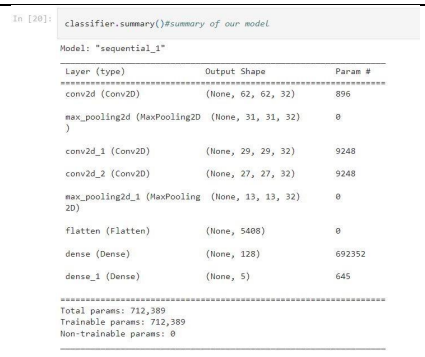
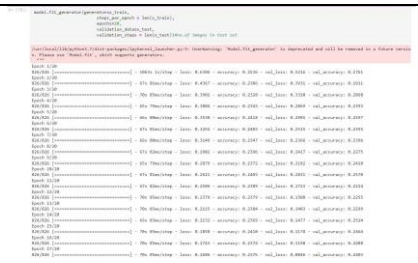
Project Development Phase
Model Performance Test

Date	15 November 2022
Team ID	PNT2022TMID10523
Project Name	Project - AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	Total params: 712,389 Trainable params:712,389 Non-trainable params: 0	
2.	Accuracy	Training Accuracy – 96.75 Validation Accuracy – 97.85	

Model Summary

In [20]:
```
classifier.summary()#summary of our model
```

```
Model: "sequential_1"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 conv2d (Conv2D)             (None, 62, 62, 32)        896

 max_pooling2d (MaxPooling2D  (None, 31, 31, 32)       0
 )

 conv2d_1 (Conv2D)           (None, 29, 29, 32)        9248

 conv2d_2 (Conv2D)           (None, 27, 27, 32)        9248

 max_pooling2d_1 (MaxPooling  (None, 13, 13, 32)       0
 2D)

 flatten (Flatten)           (None, 5408)              0

 dense (Dense)               (None, 128)               692352

 dense_1 (Dense)             (None, 5)                 645

=================================================================
Total params: 712,389
Trainable params: 712,389
Non-trainable params: 0
_________________________________________________________________
```

Accuracy

In [38]:
```
model.fit_generator(generator=x_train,
                    steps_per_epoch = len(x_train),
                    epochs=20,
                    validation_data=x_test,
                    validation_steps = len(x_test))#no.of images in test set
```

```
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:5: UserWarning: `Model.fit_generator` is deprecated and will be removed in a future versio
n. Please use `Model.fit`, which supports generators.
  """
Epoch 1/20
826/826 [==============================] - 1063s 1s/step - loss: 0.6306 - accuracy: 0.2536 - val_loss: 0.5216 - val_accuracy: 0.1761
Epoch 2/20
826/826 [==============================] - 67s 81ms/step - loss: 0.4367 - accuracy: 0.2386 - val_loss: 0.3931 - val_accuracy: 0.1911
Epoch 3/20
826/826 [==============================] - 70s 85ms/step - loss: 0.3902 - accuracy: 0.2328 - val_loss: 0.3320 - val_accuracy: 0.2868
Epoch 4/20
826/826 [==============================] - 65s 79ms/step - loss: 0.3804 - accuracy: 0.2343 - val_loss: 0.2869 - val_accuracy: 0.2393
Epoch 5/20
826/826 [==============================] - 66s 80ms/step - loss: 0.3530 - accuracy: 0.2418 - val_loss: 0.2985 - val_accuracy: 0.2597
Epoch 6/20
826/826 [==============================] - 67s 81ms/step - loss: 0.3254 - accuracy: 0.2403 - val_loss: 0.2515 - val_accuracy: 0.2355
Epoch 7/20
826/826 [==============================] - 66s 80ms/step - loss: 0.3149 - accuracy: 0.2347 - val_loss: 0.2366 - val_accuracy: 0.2396
Epoch 8/20
826/826 [==============================] - 67s 82ms/step - loss: 0.2902 - accuracy: 0.2396 - val_loss: 0.2417 - val_accuracy: 0.2275
Epoch 9/20
826/826 [==============================] - 65s 79ms/step - loss: 0.2879 - accuracy: 0.2372 - val_loss: 0.2182 - val_accuracy: 0.2410
Epoch 10/20
826/826 [==============================] - 67s 81ms/step - loss: 0.2621 - accuracy: 0.2403 - val_loss: 0.2831 - val_accuracy: 0.2570
Epoch 11/20
826/826 [==============================] - 67s 82ms/step - loss: 0.2506 - accuracy: 0.2389 - val_loss: 0.1723 - val_accuracy: 0.2214
Epoch 12/20
826/826 [==============================] - 70s 85ms/step - loss: 0.2379 - accuracy: 0.2379 - val_loss: 0.1508 - val_accuracy: 0.2255
Epoch 13/20
826/826 [==============================] - 70s 85ms/step - loss: 0.2115 - accuracy: 0.2384 - val_loss: 0.1403 - val_accuracy: 0.2299
Epoch 14/20
826/826 [==============================] - 69s 83ms/step - loss: 0.2132 - accuracy: 0.2369 - val_loss: 0.1477 - val_accuracy: 0.2524
Epoch 15/20
826/826 [==============================] - 70s 85ms/step - loss: 0.1858 - accuracy: 0.2410 - val_loss: 0.1178 - val_accuracy: 0.2464
Epoch 16/20
826/826 [==============================] - 70s 85ms/step - loss: 0.1743 - accuracy: 0.2374 - val_loss: 0.1150 - val_accuracy: 0.2488
Epoch 17/20
826/826 [==============================] - 70s 85ms/step - loss: 0.1686 - accuracy: 0.2376 - val_loss: 0.0846 - val_accuracy: 0.2403
```