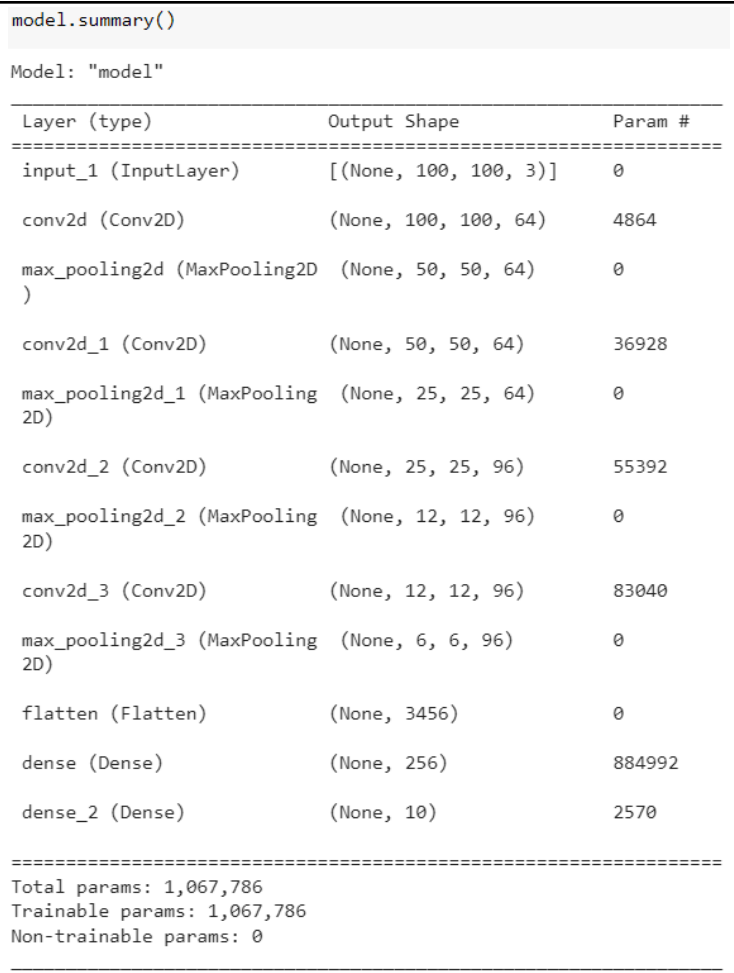
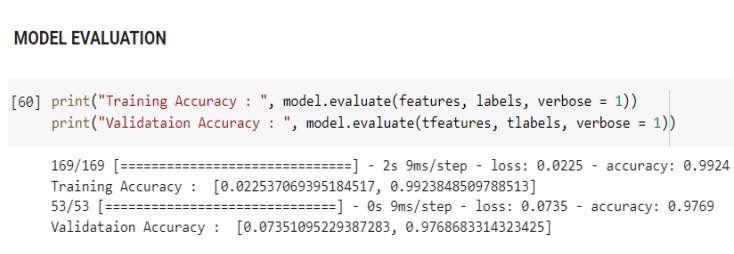


## Project Development Phase Model Performance Test

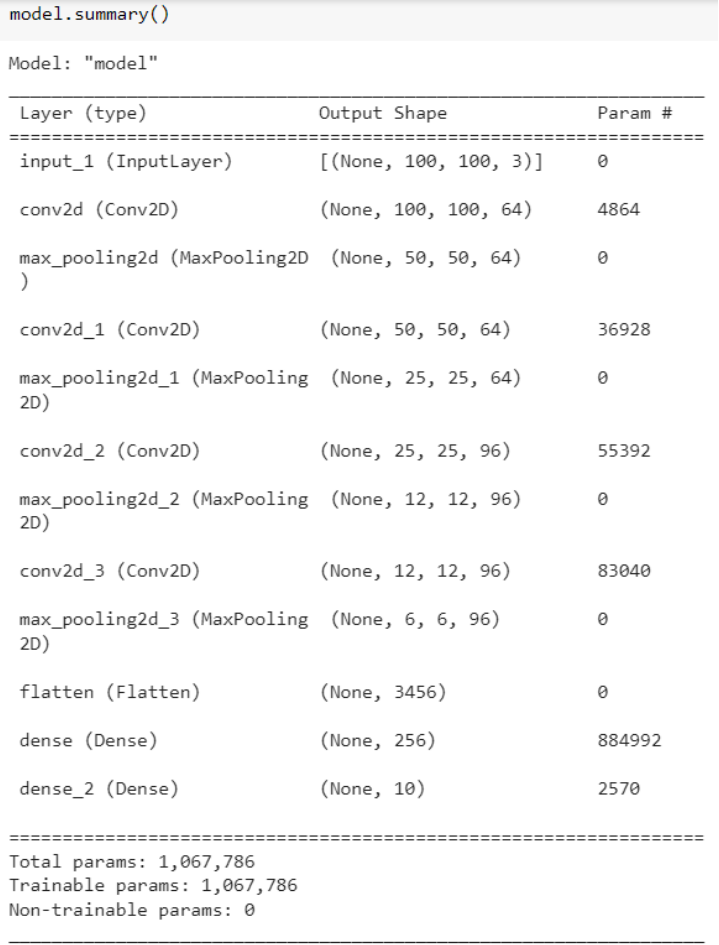
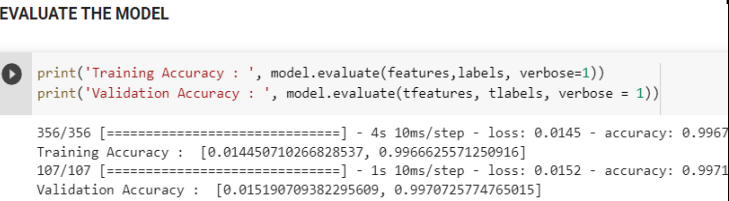
|               |  |
|---------------|--|
| Date          | 13 November 2022   |
| Team ID       | PNT2022TMID21470   |
| Project Name  | Fertilizers Recommendation System For Disease Prediction |
| Maximum Marks | 10 Marks   |

### Model Performance Testing: Fruit Leaf Model:

| S.No. | Parameter           | Values   | Screenshot  |
|-------|---------------------|--|---|
| 1.    | Fruit Model Summary | Total params - 1,06,786<br>Trainable Params - 1,06,786<br>Non Trainable Params - 0 |  <pre> model.summary()  Model: "model"  Layer (type)                 Output Shape              Param # ----- input_1 (InputLayer)         [(None, 100, 100, 3)]    0 conv2d (Conv2D)              (None, 100, 100, 64)     4864 max_pooling2d (MaxPooling2D) (None, 50, 50, 64)       0 conv2d_1 (Conv2D)            (None, 50, 50, 64)       36928 max_pooling2d_1 (MaxPooling2D) (None, 25, 25, 64)       0 conv2d_2 (Conv2D)            (None, 25, 25, 96)       55392 max_pooling2d_2 (MaxPooling2D) (None, 12, 12, 96)       0 conv2d_3 (Conv2D)            (None, 12, 12, 96)       83040 max_pooling2d_3 (MaxPooling2D) (None, 6, 6, 96)         0 flatten (Flatten)            (None, 3456)              0 dense (Dense)                (None, 256)               884992 dense_2 (Dense)              (None, 10)                2570  Total params: 1,067,786 Trainable params: 1,067,786 Non-trainable params: 0           </pre> |
| 2.    | Accuracy            | Training Accuracy - 0.99<br><br>Validation Accuracy - 0.97                         |  <pre> MODEL EVALUATION  [60] print("Training Accuracy : ", model.evaluate(features, labels, verbose = 1))     print("Validataion Accuracy : ", model.evaluate(tfeatures, tlabels, verbose = 1))  169/169 [=====] - 2s 9ms/step - loss: 0.0225 - accuracy: 0.9924 Training Accuracy : [0.022537069395184517, 0.9923848509788513] 53/53 [=====] - 0s 9ms/step - loss: 0.0735 - accuracy: 0.9769 Validataion Accuracy : [0.07351095229387283, 0.9768683314323425]           </pre>  |

## Vegetable Leaf Model

### Fruit Leaf Model:

| S.No. | Parameter           | Values   | Screenshot  |
|-------|---------------------|--|---|
| 3.    | Fruit Model Summary | Total params - 1,06,786<br>Trainable Params - 1,06,786<br>Non Trainable Params - 0 |  <pre> model.summary()  Model: "model" _____ Layer (type)                 Output Shape              Param # ----- input_1 (InputLayer)        [(None, 100, 100, 3)]    0 conv2d (Conv2D)              (None, 100, 100, 64)     4864 max_pooling2d (MaxPooling2D) (None, 50, 50, 64)       0 conv2d_1 (Conv2D)            (None, 50, 50, 64)      36928 max_pooling2d_1 (MaxPooling2D) (None, 25, 25, 64)       0 conv2d_2 (Conv2D)            (None, 25, 25, 96)      55392 max_pooling2d_2 (MaxPooling2D) (None, 12, 12, 96)       0 conv2d_3 (Conv2D)            (None, 12, 12, 96)      83040 max_pooling2d_3 (MaxPooling2D) (None, 6, 6, 96)        0 flatten (Flatten)            (None, 3456)             0 dense (Dense)                 (None, 256)              884992 dense_2 (Dense)               (None, 10)               2570 _____ Total params: 1,067,786 Trainable params: 1,067,786 Non-trainable params: 0           </pre> |
| 4.    | Accuracy            | Training Accuracy - 0.996<br><br>Validation Accuracy - 0.997                       |  <pre> EVALUATE THE MODEL  print('Training Accuracy : ', model.evaluate(features,labels, verbose=1)) print('Validation Accuracy : ', model.evaluate(tfeatures, tlabels, verbose = 1))  356/356 [=====] - 4s 10ms/step - loss: 0.0145 - accuracy: 0.9967 Training Accuracy : [0.014450710266828537, 0.9966625571250916] 107/107 [=====] - 1s 10ms/step - loss: 0.0152 - accuracy: 0.9971 Validation Accuracy : [0.015190709382295609, 0.9970725774765015]           </pre>   |