C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Scripts\python.exe
C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\mobilenetML.py

2023-12-13 01:23:11.647293: I tensorflow/core/util/port.cc:113] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.

WARNING:tensorflow:From C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Lib\site-packages\keras\src\losses.py:2976: The name tf.losses.sparse_softmax_cross_entropy is deprecated. Please use tf.compat.v1.losses.sparse_softmax_cross_entropy instead.

WARNING:tensorflow:`input_shape` is undefined or non-square, or `rows` is not in [128, 160, 192, 224]. Weights for input shape (224, 224) will be loaded as the default.

WARNING:tensorflow:From C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Lib\site-packages\keras\src\backend.py:1398: The name tf.executing_eagerly_outside_functions is deprecated. Please use tf.compat.v1.executing_eagerly_outside_functions instead.

2023-12-13 01:23:13.841503: I tensorflow/core/platform/cpu_feature_guard.cc:182] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.

To enable the following instructions: SSE SSE2 SSE3 SSE4.1 SSE4.2 AVX2 AVX_VNNI FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.

WARNING:tensorflow:From C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Lib\site-packages\keras\src\layers\normalization\batch_normalization.py:979: The name tf.nn.fused_batch_norm is deprecated. Please use tf.compat.v1.nn.fused_batch_norm instead.

Found 928 images belonging to 4 classes.

Found 448 images belonging to 4 classes.

Epoch 1/10

WARNING:tensorflow:From C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Lib\site-packages\keras\src\utils\tf_utils.py:492: The name tf.ragged.RaggedTensorValue is deprecated. Please use tf.compat.v1.ragged.RaggedTensorValue instead.

WARNING:tensorflow:From C:\Users\Gunag\PycharmProjects\AlexnetArchitecure\venv\Lib\site-packages\keras\src\engine\base_layer_utils.py:384: The name tf.executing_eagerly_outside_functions is deprecated. Please use tf.compat.v1.executing_eagerly_outside_functions instead.

29/29 [==============================] - 16s 519ms/step - loss: 7.4448 - accuracy: 0.4763

Epoch 2/10

29/29 [==============================] - 15s 513ms/step - loss: 0.7836 - accuracy: 0.6756

Epoch 3/10

29/29 [==============================] - 15s 510ms/step - loss: 0.6115 - accuracy: 0.7403

Epoch 4/10

29/29 [==============================] - 15s 509ms/step - loss: 0.5605 - accuracy: 0.7780

Epoch 5/10

29/29 [==============================] - 15s 507ms/step - loss: 0.4275 - accuracy: 0.8330

Epoch 6/10

29/29 [==============================] - 15s 507ms/step - loss: 0.4939 - accuracy: 0.7985

Epoch 7/10

29/29 [==============================] - 15s 510ms/step - loss: 0.4664 - accuracy: 0.8082

Epoch 8/10

29/29 [==============================] - 15s 508ms/step - loss: 0.4023 - accuracy: 0.8233

Epoch 9/10

29/29 [==============================] - 15s 508ms/step - loss: 0.3179 - accuracy: 0.8696

Epoch 10/10

29/29 [==============================] - 15s 507ms/step - loss: 0.3328 - accuracy: 0.8416

14/14 [==============================] - 7s 491ms/step - loss: 0.1387 - accuracy: 0.9821

Test Loss: 0.1387

Test Accuracy(build softmax layer): 0.9981

29/29 [==============================] - 15s 505ms/step

14/14 [==============================] - 7s 494ms/step

Softmax Classifier Accuracy: 0.9988

SVM Classifier Accuracy: 0.8821

Naive Bayes Classifier Accuracy: 0.2299

k-NN Classifier Accuracy: 0.8501

Decision Tree Classifier Accuracy: 0.9431

Random Forest Classifier Accuracy: 0.8989

Ensemble Classifier Accuracy: 0.9879

Process finished with exit code 0

Confusion matrix of above ensembled proposed architecture on the prediction of disease