```
C:\Users\Lenovo\AppData\Local\Programs\Python\Python39\python.exe D:/2022-Automated-test/FaceRecognition/faceRecognition/train_model.py
2022-12-01 16:01:39.405756: I tensorflow/core/platform/cpu_feature_guard.cc:193] This TensorFlow binary is optimized with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations:  AVX  AVX2
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
C:\Users\Lenovo\AppData\Local\Programs\Python\Python39\lib\site-packages\keras\optimizers\optimizer_v2\gradient_descent.py:114: UserWarning: The `lr` argument is deprecated, use `learning_rate` instead.
  super().__init__(name, **kwargs)
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 conv2d (Conv2D)             (None, 1, 128, 32)        102432

 activation (Activation)     (None, 1, 128, 32)        0

 max_pooling2d (MaxPooling2D  (None, 1, 64, 32)        0
 )

 dropout (Dropout)           (None, 1, 64, 32)         0

```

```
18
19  conv2d_1 (Conv2D)           (None, 1, 64, 64
   )         51264
20
21  activation_1 (Activation)   (None, 1, 64, 64
   )         0
22
23  max_pooling2d_1 (MaxPooling  (None, 1, 32, 64
   )        0
24  2D
   )
25
26  dropout_1 (Dropout)         (None, 1, 32, 64
   )         0
27
28  conv2d_2 (Conv2D)           (None, 1, 32, 64
   )         102464
29
30  activation_2 (Activation)   (None, 1, 32, 64
   )         0
31
32  max_pooling2d_2 (MaxPooling  (None, 1, 16, 64
   )        0
33  2D
   )
34
35  dropout_2 (Dropout)         (None, 1, 16, 64
   )         0
36
37  conv2d_3 (Conv2D)           (None, 1, 16, 64
   )         102464
```

```
38
39  activation_3 (Activation)   (None, 1, 16, 64
   )          0
40
41  max_pooling2d_3 (MaxPooling  (None, 1, 8, 64
   )          0
42  2D
   )

43
44  dropout_3 (Dropout)         (None, 1, 8, 64
   )           0
45
46  flatten (Flatten)           (None, 512
   )                0
47
48  dense (Dense)               (None, 512
   )                262656
49
50  activation_4 (Activation)   (None, 512
   )                0
51
52  dropout_4 (Dropout)         (None, 512
   )                0
53
54  dense_1 (Dense)             (None, 4
   )                  2052
55
56  activation_5 (Activation)   (None, 4
   )                  0
57
```

```
58 =================================================================
   ============
59 Total params: 623,332
60 Trainable params: 623,332
61 Non-trainable params: 0
62 _________________________________________________________________
   ____________
63 Epoch 1/20
64 23/23 [==============================] - 2s 32ms/step
    - loss: 1.3850 - accuracy: 0.2570
65 Epoch 2/20
66 23/23 [==============================] - 1s 43ms/step
    - loss: 1.3833 - accuracy: 0.2933
67 Epoch 3/20
68 23/23 [==============================] - 1s 43ms/step
    - loss: 1.3864 - accuracy: 0.2709
69 Epoch 4/20
70 23/23 [==============================] - 1s 41ms/step
    - loss: 1.3820 - accuracy: 0.2849
71 Epoch 5/20
72 23/23 [==============================] - 1s 45ms/step
    - loss: 1.3802 - accuracy: 0.2821
73 Epoch 6/20
74 23/23 [==============================] - 1s 43ms/step
    - loss: 1.3761 - accuracy: 0.2849
75 Epoch 7/20
76 23/23 [==============================] - 1s 41ms/step
    - loss: 1.3645 - accuracy: 0.3268
77 Epoch 8/20
78 23/23 [==============================] - 1s 44ms/step
    - loss: 1.3402 - accuracy: 0.3799
79 Epoch 9/20
80 23/23 [==============================] - 1s 47ms/step
    - loss: 1.3350 - accuracy: 0.3966
81 Epoch 10/20
82 23/23 [==============================] - 1s 42ms/step
    - loss: 1.3144 - accuracy: 0.3911
83 Epoch 11/20
84 23/23 [==============================] - 1s 45ms/step
    - loss: 1.3017 - accuracy: 0.4022
85 Epoch 12/20
```

```
 86 23/23 [==============================] - 1s 42ms/
    step - loss: 1.3192 - accuracy: 0.3883
 87 Epoch 13/20
 88 23/23 [==============================] - 1s 42ms/
    step - loss: 1.3008 - accuracy: 0.3771
 89 Epoch 14/20
 90 23/23 [==============================] - 1s 43ms/
    step - loss: 1.2788 - accuracy: 0.3966
 91 Epoch 15/20
 92 23/23 [==============================] - 1s 45ms/
    step - loss: 1.2589 - accuracy: 0.4022
 93 Epoch 16/20
 94 23/23 [==============================] - 1s 40ms/
    step - loss: 1.2432 - accuracy: 0.4246
 95 Epoch 17/20
 96 23/23 [==============================] - 1s 45ms/
    step - loss: 1.2629 - accuracy: 0.4218
 97 Epoch 18/20
 98 23/23 [==============================] - 1s 55ms/
    step - loss: 1.2626 - accuracy: 0.4050
 99 Epoch 19/20
100 23/23 [==============================] - 1s 48ms/
    step - loss: 1.2371 - accuracy: 0.4246
101 Epoch 20/20
102 23/23 [==============================] - 1s 43ms/
    step - loss: 1.2312 - accuracy: 0.4134
103
104 Testing---------------
105 3/3 [==============================] - 0s 14ms/step
     - loss: 1.1676 - accuracy: 0.4444
106 test loss; 1.1675547361373901
107 test accuracy: 0.4444444477558136
108 Model Saved.
109
110 Process finished with exit code 0
111
```