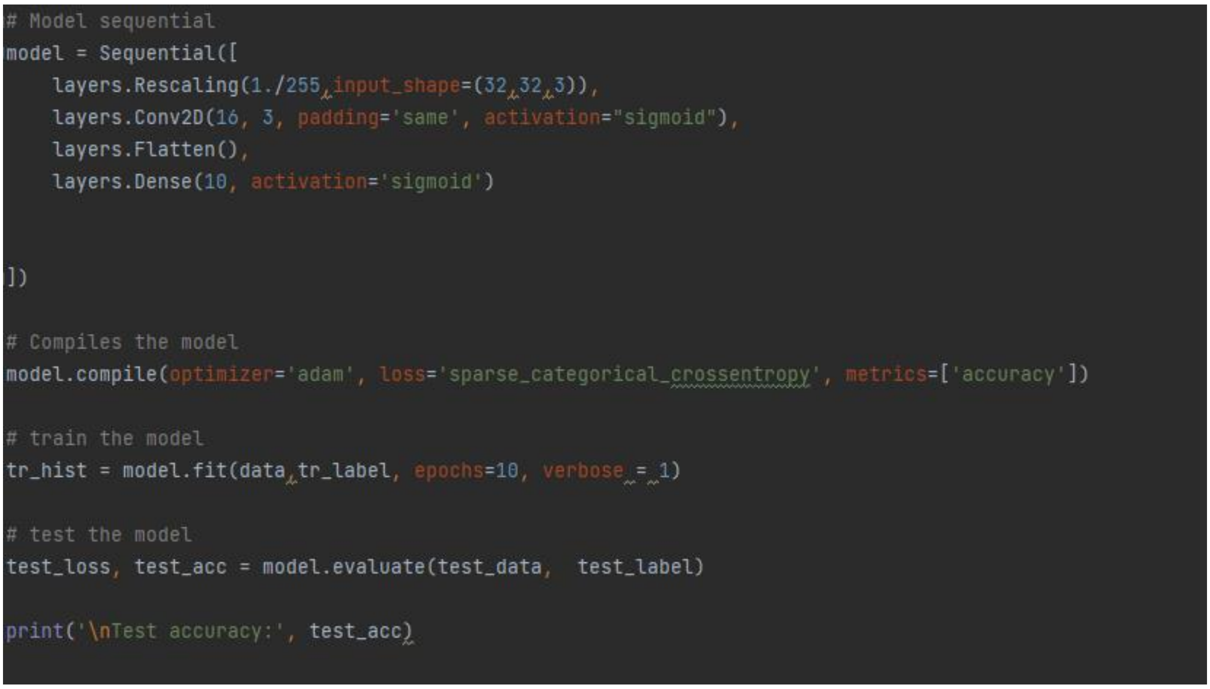
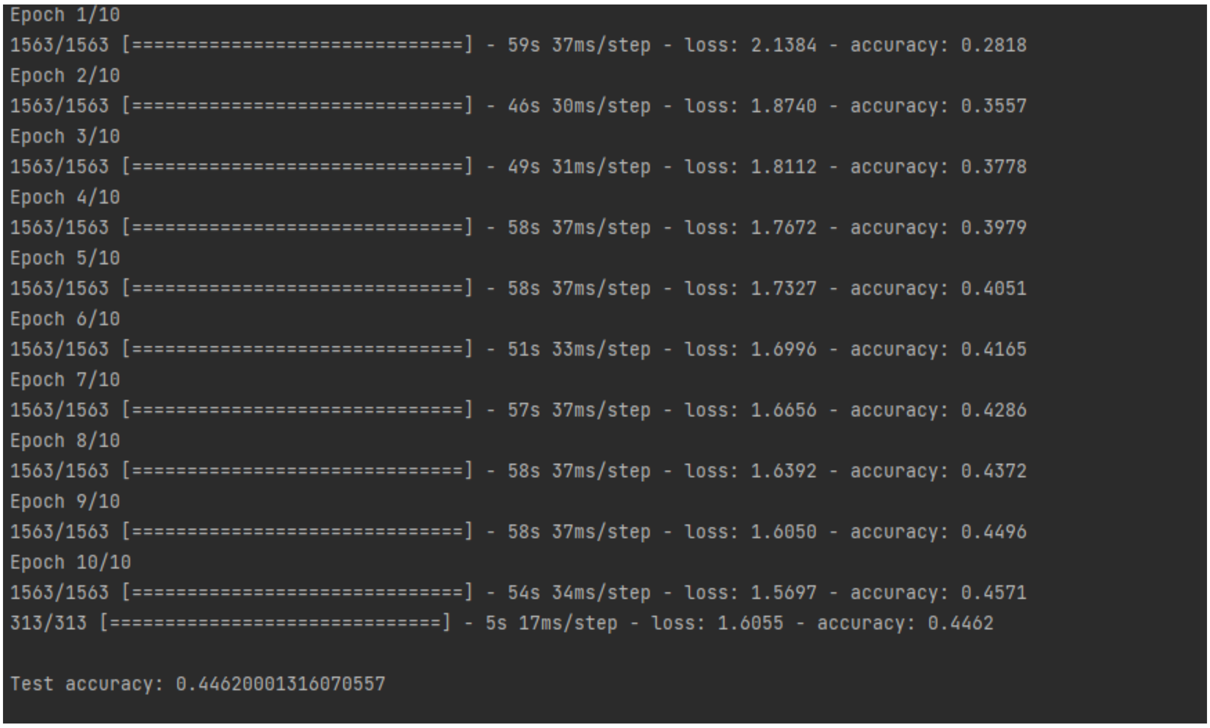


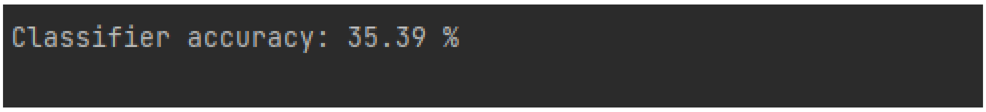
```
# Model sequential
model = Sequential([
    layers.Rescaling(1./255,input_shape=(32,32,3)),
    layers.Conv2D(16, 3, padding='same', activation="sigmoid"),
    layers.Flatten(),
    layers.Dense(10, activation='sigmoid')


])

# Compiles the model
model.compile(optimizer='adam', loss='sparse_categorical_crossentropy', metrics=['accuracy'])

# train the model
tr_hist = model.fit(data,tr_label, epochs=10, verbose = 1)

# test the model
test_loss, test_acc = model.evaluate(test_data,  test_label)

print('\nTest accuracy:', test_acc)
```

My NN accuracy with 10 epochs = 44.6%



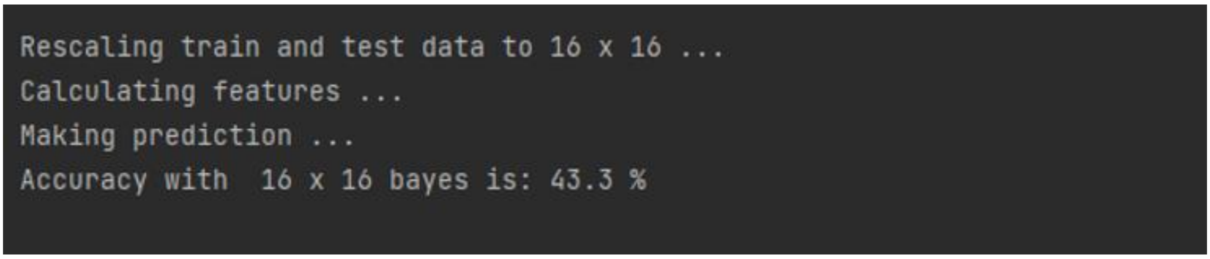
```
Epoch 1/10
1563/1563 [==============================] - 59s 37ms/step - loss: 2.1384 - accuracy: 0.2818
Epoch 2/10
1563/1563 [==============================] - 46s 30ms/step - loss: 1.8740 - accuracy: 0.3557
Epoch 3/10
1563/1563 [==============================] - 49s 31ms/step - loss: 1.8112 - accuracy: 0.3778
Epoch 4/10
1563/1563 [==============================] - 58s 37ms/step - loss: 1.7672 - accuracy: 0.3979
Epoch 5/10
1563/1563 [==============================] - 58s 37ms/step - loss: 1.7327 - accuracy: 0.4051
Epoch 6/10
1563/1563 [==============================] - 51s 33ms/step - loss: 1.6996 - accuracy: 0.4165
Epoch 7/10
1563/1563 [==============================] - 57s 37ms/step - loss: 1.6656 - accuracy: 0.4286
Epoch 8/10
1563/1563 [==============================] - 58s 37ms/step - loss: 1.6392 - accuracy: 0.4372
Epoch 9/10
1563/1563 [==============================] - 58s 37ms/step - loss: 1.6050 - accuracy: 0.4496
Epoch 10/10
1563/1563 [==============================] - 54s 34ms/step - loss: 1.5697 - accuracy: 0.4571
313/313 [==============================] - 5s 17ms/step - loss: 1.6055 - accuracy: 0.4462

Test accuracy: 0.44620001316070557
```

My 1-NN classifier accuracy = 35.39%



```
Classifier accuracy: 35.39 %
```

My Bayes classifier with 16x16 image = 43.3%



```
Rescaling train and test data to 16 x 16 ...
Calculating features ...
Making prediction ...
Accuracy with  16 x 16 bayes is: 43.3 %
```

MODEL	ACCURACY
1-NN	35.4%
BAYES	43.3%
NEURAL NETWORK	44.6%