CS6375 - Machine Learning

Assignment 2

Team:

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Dataset used:

Iris Dataset (LINK: https://archive.ics.uci.edu/ml/datasets/iris)

Data Set Information:

Source/ Creator:

R.A. Fisher

Donor:

Michael Marshall (MARSHALL%PLU '@' io.arc.nasa.gov)

This is perhaps the best known database to be found in the pattern recognition literature. Fisher's paper is a classic in the field and is referenced frequently to this day. (See Duda & Hart, for example.) The data set contains 3 classes of 50 instances each, where each class refers to a type of iris plant. One class is linearly separable from the other 2; the latter are NOT linearly separable from each other.

Predicted attribute: class of iris plant.

This is an exceedingly simple domain.

This data differs from the data presented in Fishers article (identified by Steve Chadwick, spchadwick '@' espeedaz.net). The 35th sample should be: 4.9,3.1,1.5,0.2,"Iris-setosa" where the error is in the fourth feature. The 38th sample: 4.9,3.6,1.4,0.1,"Iris-setosa" where the errors are in the second and third features.

Attribute Information:

FEATURES

1. sepal length in cm
2. sepal width in cm
3. petal length in cm
4. petal width in cm
5. class: (TARGET VARIABLE)

-- Iris Setosa -- Iris Versicolour -- Iris Virginica

Relevant Papers:

Fisher,R.A. "The use of multiple measurements in taxonomic problems" Annual Eugenics, 7, Part II, 179-188 (1936); also in "Contributions to Mathematical Statistics" (John Wiley, NY, 1950). [Web Link]

Duda,R.O., & Hart,P.E. (1973) Pattern Classification and Scene Analysis. (Q327.D83) John Wiley & Sons. ISBN 0-471-22361-1. See page 218. [Web Link]

Dasarathy, B.V. (1980) "Nosing Around the Neighborhood: A New System Structure and Classification Rule for Recognition in Partially Exposed Environments". IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. PAMI-2, No. 1, 67-71. [Web Link]

Gates, G.W. (1972) "The Reduced Nearest Neighbor Rule". IEEE Transactions on Information Theory, May 1972, 431-433. [Web Link]

Import Libraries

```
import numpy as np
import pandas as pd
import tensorflow as tf
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import OneHotEncoder, StandardScaler
import warnings
warnings.simplefilter(action='ignore', category=FutureWarning)
warnings.simplefilter(action='ignore', category=DeprecationWarning)
from keras.models import Sequential
from keras.layers import Dense
from keras import optimizers
from keras.callbacks import TensorBoard
plt.style.use('ggplot')

import os
os.environ["TF_CPP_MIN_LOG_LEVEL"] = "2"
import tensorflow as tf
```

Class to define to create, train and evaluate Neural Network

```
class NeuralNet:
    def __init__(self):
        #define column names
        columns = ['SEPAL_LENGTH','SEPAL_WIDTH','PETAL_LENGTH','PETAL_WIDTH','SPECIES']
        #load the dataset
```

```
        self.df = pd.read_csv('https://archive.ics.uci.edu/ml/machine-learning-databases/i

    def preprocess(self):
         #drop missing values
        self.df.dropna( inplace = True )

        #drop duplicates from the dataset
        self.df.drop_duplicates()

        #seperate X and y from dataframe
        X = self.df.iloc[:,:-1]
        y = self.df.iloc[:,-1]

        #encode categorical values
        enc = OneHotEncoder()
        y = enc.fit_transform(y[:, np.newaxis]).toarray()

        #standardize the data
        scaler = StandardScaler()
        X_scaled = scaler.fit_transform(X)

        #split the data set into train and test set
        self.X_train, self.X_test, self.y_train, self.y_test = train_test_split(
            X_scaled, y, test_size=0.2, random_state=42)

        #length of input features and output classes
        self.n_features = X.shape[1]
        self.n_classes = y.shape[1]

    def train_evaluate(self):
        #define the lists for possible activation functions, learning rate and iterations
        activations = ['sigmoid', 'tanh', 'relu'] #NOTE: In keras, Logistic activation is
        learning_rate = [0.01, 0.1]
        iterations = [100, 200]

        #define dictionaries to store the history_callback metrics for the models which we
        hist_train = {}
        hist_test = {}

        #define tensorboard object which is required for callback
        cb = TensorBoard()

        #MODEL WITH TWO HIDDEN LAYER

        #iterate through all the possible activation functions, learning rate and iteratio
        for act in activations:
            for lr in learning_rate:
                for itr in iterations:
                    name = "Model_"+str(act)+"_LR_"+str(lr)+"_Iterations_"+str(itr)+"_HL_2
                    print(name)

                    #create model
                    model = Sequential(name=name) #define sequential model
                    model.add(Dense(3, input_dim=self.n_features, activation= act)) #first
                    model.add(Dense(self.n_classes, activation=act)) #second layer/output
```

```
                opt = tf.keras.optimizers.SGD(learning_rate=lr) #use SGD as the optimi
                model.compile(loss='mean_squared_error',
                              optimizer=opt,
                              metrics=['accuracy']) #use MSE as the loss function and

                #fit the model
                history_callback = model.fit(self.X_train, self.y_train,
                                             epochs=itr,
                                             verbose=2,
                                             validation_data=(self.X_train, self.y
                                             callbacks=[cb])

                #calculate model error on training data to compute train error
                score = model.evaluate(self.X_train, self.y_train, verbose=0)
                print("Activation: "+str(act)+" LR: "+str(lr)+" Itertions: "+str(itr)+
                print("Activation: "+str(act)+" LR: "+str(lr)+" Itertions: "+str(itr)+

                #store the model metrics in the hashmap/dictionary hist_train
                hist_train[model.name] = [history_callback, model]


                history_callback = model.fit(self.X_train, self.y_train,
                                             epochs=itr,
                                             verbose=2,
                                             validation_data=(self.X_test, self.y_
                                             callbacks=[cb])

                #calculate model error on testing data to compute test error
                score = model.evaluate(self.X_test, self.y_test, verbose=0)
                print("Activation: "+str(act)+" LR: "+str(lr)+" Iterations: "+str(itr)
                print("Activation: "+str(act)+" LR: "+str(lr)+" Iterations: "+str(itr)

                #store the model metrics in the hashmap/dictionary hist_test
                hist_test[model.name] = [history_callback, model]

                print("================================================================


    #MODEL WITH THREE HIDDEN LAYERS

    for act in activations:
        for lr in learning_rate:
            for itr in iterations:
                name = "Model_"+str(act)+"_LR_"+str(lr)+"_Iterations_"+str(itr)+"_HL_3
                print(name)
                model = Sequential(name=name)
                model.add(Dense(3, input_dim=self.n_features, activation= act)) #first
                model.add(Dense(4, activation=act)) #second layer
                model.add(Dense(self.n_classes, activation=act)) #third layer

                opt = tf.keras.optimizers.SGD(learning_rate=lr) #use SGD as the optimi
                model.compile(loss='mean_squared_error',
                              optimizer=opt,
                              metrics=['accuracy']) #tweak model on the basis of accur
```

```
            history_callback = model.fit(self.X_train, self.y_train,
                                         epochs=itr,
                                         verbose=2,
                                         validation_data=(self.X_train, self.y
                                         callbacks=[cb])

            #calculate model error on training data to compute train error
            score = model.evaluate(self.X_train, self.y_train, verbose=0)
            print("Activation: "+str(act)+" LR: "+str(lr)+" Itertions: "+str(itr)+
            print("Activation: "+str(act)+" LR: "+str(lr)+" Itertions: "+str(itr)+

            #store the model metrics in the hashmap/dictionary hist_train
            hist_train[model.name] = [history_callback, model]


            history_callback = model.fit(self.X_train, self.y_train,
                                         epochs=itr,
                                         verbose=2,
                                         validation_data=(self.X_test, self.y_
                                         callbacks=[cb])

            #calculate model error on testing data to compute test error
            score = model.evaluate(self.X_test, self.y_test, verbose=0)
            print("Activation: "+str(act)+" LR: "+str(lr)+" Iterations: "+str(itr)
            print("Activation: "+str(act)+" LR: "+str(lr)+" Iterations: "+str(itr)

            #store the model metrics in the hashmap/dictionary hist_test
            hist_test[model.name] = [history_callback, model]

            print("================================================================

    #plot the metrics stored in the hashmap hist_train and hist_test
    fig, (ax1, ax2) = plt.subplots(2, figsize=(30, 30))

    for model_name in hist_train:
        val_accuracy = hist_train[model_name][0].history['val_accuracy']
        val_loss = hist_train[model_name][0].history['val_loss']
        ax1.plot(val_accuracy, label=model_name)
        ax2.plot(val_loss, label=model_name)

    ax1.set_ylabel('Accuracy')
    ax2.set_ylabel('Loss')
    ax2.set_xlabel('Epochs')
    ax1.legend()
    ax2.legend()

    fig, (ax1, ax2) = plt.subplots(2, figsize=(30, 30))

    for model_name in hist_test:
        val_accuracy = hist_test[model_name][0].history['val_accuracy']
        val_loss = hist_test[model_name][0].history['val_loss']
        ax1.plot(val_accuracy, label=model_name)
        ax2.plot(val_loss, label=model_name)
```

```
        ax1.set_ylabel('Accuracy')
        ax2.set_ylabel('Loss')
        ax2.set_xlabel('Epochs')
        ax1.legend()
        ax2.legend()

#create an object of class NeuralNet
nn = NeuralNet()

#call preprocess function
nn.preprocess()

#call train_evaluate function
nn.train_evaluate()
```

Streaming output truncated to the last 5000 lines.

```
4/4 - 0s - loss: 0.2083 - accuracy: 0.6667 - val_loss: 0.2082 - val_accuracy: 0.6667
Epoch 127/200
```

4/4 - 0s - loss: 0.2082 - accuracy: 0.6667 - val_loss: 0.2081 - val_accuracy: 0.6667
Epoch 128/200
4/4 - 0s - loss: 0.2082 - accuracy: 0.6750 - val_loss: 0.2081 - val_accuracy: 0.6667
Epoch 129/200
4/4 - 0s - loss: 0.2081 - accuracy: 0.6750 - val_loss: 0.2080 - val_accuracy: 0.6667
Epoch 130/200
4/4 - 0s - loss: 0.2080 - accuracy: 0.6917 - val_loss: 0.2079 - val_accuracy: 0.6667
Epoch 131/200
4/4 - 0s - loss: 0.2079 - accuracy: 0.6667 - val_loss: 0.2078 - val_accuracy: 0.6667
Epoch 132/200
4/4 - 0s - loss: 0.2079 - accuracy: 0.6750 - val_loss: 0.2078 - val_accuracy: 0.6667
Epoch 133/200
4/4 - 0s - loss: 0.2078 - accuracy: 0.6667 - val_loss: 0.2077 - val_accuracy: 0.6667
Epoch 134/200
4/4 - 0s - loss: 0.2077 - accuracy: 0.6750 - val_loss: 0.2076 - val_accuracy: 0.6667
Epoch 135/200
4/4 - 0s - loss: 0.2076 - accuracy: 0.6750 - val_loss: 0.2075 - val_accuracy: 0.6667
Epoch 136/200
4/4 - 0s - loss: 0.2075 - accuracy: 0.6833 - val_loss: 0.2074 - val_accuracy: 0.6667
Epoch 137/200
4/4 - 0s - loss: 0.2075 - accuracy: 0.6667 - val_loss: 0.2074 - val_accuracy: 0.6667
Epoch 138/200
4/4 - 0s - loss: 0.2074 - accuracy: 0.6667 - val_loss: 0.2073 - val_accuracy: 0.6667
Epoch 139/200
4/4 - 0s - loss: 0.2073 - accuracy: 0.6750 - val_loss: 0.2072 - val_accuracy: 0.6667
Epoch 140/200
4/4 - 0s - loss: 0.2072 - accuracy: 0.6667 - val_loss: 0.2071 - val_accuracy: 0.6333
Epoch 141/200
4/4 - 0s - loss: 0.2071 - accuracy: 0.6750 - val_loss: 0.2070 - val_accuracy: 0.6333
Epoch 142/200
4/4 - 0s - loss: 0.2070 - accuracy: 0.6917 - val_loss: 0.2069 - val_accuracy: 0.6333
Epoch 143/200
4/4 - 0s - loss: 0.2069 - accuracy: 0.6833 - val_loss: 0.2068 - val_accuracy: 0.6333
Epoch 144/200
4/4 - 0s - loss: 0.2068 - accuracy: 0.6917 - val_loss: 0.2067 - val_accuracy: 0.6333
Epoch 145/200
4/4 - 0s - loss: 0.2068 - accuracy: 0.6750 - val_loss: 0.2066 - val_accuracy: 0.6667
Epoch 146/200
4/4 - 0s - loss: 0.2067 - accuracy: 0.6833 - val_loss: 0.2065 - val_accuracy: 0.6667
Epoch 147/200
4/4 - 0s - loss: 0.2066 - accuracy: 0.6833 - val_loss: 0.2064 - val_accuracy: 0.6667
Epoch 148/200
4/4 - 0s - loss: 0.2066 - accuracy: 0.6750 - val_loss: 0.2063 - val_accuracy: 0.6667
Epoch 149/200
4/4 - 0s - loss: 0.2064 - accuracy: 0.6750 - val_loss: 0.2062 - val_accuracy: 0.6667
Epoch 150/200
4/4 - 0s - loss: 0.2063 - accuracy: 0.6750 - val_loss: 0.2061 - val_accuracy: 0.6667
Epoch 151/200
4/4 - 0s - loss: 0.2063 - accuracy: 0.6917 - val_loss: 0.2061 - val_accuracy: 0.6667
Epoch 152/200
4/4 - 0s - loss: 0.2062 - accuracy: 0.6833 - val_loss: 0.2060 - val_accuracy: 0.6667
Epoch 153/200
4/4 - 0s - loss: 0.2061 - accuracy: 0.6750 - val_loss: 0.2059 - val_accuracy: 0.6667
Epoch 154/200
4/4 - 0s - loss: 0.2060 - accuracy: 0.6833 - val_loss: 0.2058 - val_accuracy: 0.6667
Epoch 155/200
4/4 - 0s - loss: 0.2059 - accuracy: 0.6750 - val_loss: 0.2057 - val_accuracy: 0.6667
Epoch 156/200
4/4 - 0s - loss: 0.2058 - accuracy: 0.6917 - val_loss: 0.2056 - val_accuracy: 0.6667
Epoch 157/200
4/4 - 0s - loss: 0.2057 - accuracy: 0.6750 - val_loss: 0.2055 - val_accuracy: 0.6667

4/4 - 0s - loss: 0.2057 - accuracy: 0.6750 - val_loss: 0.2055 - val_accuracy: 0.6667
Epoch 158/200
4/4 - 0s - loss: 0.2056 - accuracy: 0.7000 - val_loss: 0.2054 - val_accuracy: 0.6667
Epoch 159/200
4/4 - 0s - loss: 0.2055 - accuracy: 0.6750 - val_loss: 0.2053 - val_accuracy: 0.6667
Epoch 160/200
4/4 - 0s - loss: 0.2055 - accuracy: 0.6833 - val_loss: 0.2052 - val_accuracy: 0.6667
Epoch 161/200
4/4 - 0s - loss: 0.2053 - accuracy: 0.6750 - val_loss: 0.2051 - val_accuracy: 0.6667
Epoch 162/200
4/4 - 0s - loss: 0.2053 - accuracy: 0.6750 - val_loss: 0.2050 - val_accuracy: 0.6667
Epoch 163/200
4/4 - 0s - loss: 0.2052 - accuracy: 0.6833 - val_loss: 0.2049 - val_accuracy: 0.6667
Epoch 164/200
4/4 - 0s - loss: 0.2051 - accuracy: 0.6750 - val_loss: 0.2048 - val_accuracy: 0.6667
Epoch 165/200
4/4 - 0s - loss: 0.2050 - accuracy: 0.6833 - val_loss: 0.2048 - val_accuracy: 0.6667
Epoch 166/200
4/4 - 0s - loss: 0.2049 - accuracy: 0.6750 - val_loss: 0.2047 - val_accuracy: 0.6667
Epoch 167/200
4/4 - 0s - loss: 0.2048 - accuracy: 0.6833 - val_loss: 0.2045 - val_accuracy: 0.6667
Epoch 168/200
4/4 - 0s - loss: 0.2047 - accuracy: 0.6750 - val_loss: 0.2045 - val_accuracy: 0.6667
Epoch 169/200
4/4 - 0s - loss: 0.2046 - accuracy: 0.6917 - val_loss: 0.2043 - val_accuracy: 0.7000
Epoch 170/200
4/4 - 0s - loss: 0.2046 - accuracy: 0.6917 - val_loss: 0.2042 - val_accuracy: 0.6667
Epoch 171/200
4/4 - 0s - loss: 0.2044 - accuracy: 0.6750 - val_loss: 0.2041 - val_accuracy: 0.6667
Epoch 172/200
4/4 - 0s - loss: 0.2043 - accuracy: 0.6750 - val_loss: 0.2041 - val_accuracy: 0.6667
Epoch 173/200
4/4 - 0s - loss: 0.2042 - accuracy: 0.6667 - val_loss: 0.2039 - val_accuracy: 0.6667
Epoch 174/200
4/4 - 0s - loss: 0.2041 - accuracy: 0.6750 - val_loss: 0.2038 - val_accuracy: 0.7000
Epoch 175/200
4/4 - 0s - loss: 0.2040 - accuracy: 0.6750 - val_loss: 0.2037 - val_accuracy: 0.7000
Epoch 176/200
4/4 - 0s - loss: 0.2039 - accuracy: 0.6833 - val_loss: 0.2036 - val_accuracy: 0.7000
Epoch 177/200
4/4 - 0s - loss: 0.2038 - accuracy: 0.6833 - val_loss: 0.2035 - val_accuracy: 0.7000
Epoch 178/200
4/4 - 0s - loss: 0.2037 - accuracy: 0.7083 - val_loss: 0.2034 - val_accuracy: 0.7000
Epoch 179/200
4/4 - 0s - loss: 0.2036 - accuracy: 0.6833 - val_loss: 0.2033 - val_accuracy: 0.7000
Epoch 180/200
4/4 - 0s - loss: 0.2035 - accuracy: 0.6833 - val_loss: 0.2032 - val_accuracy: 0.7000
Epoch 181/200
4/4 - 0s - loss: 0.2034 - accuracy: 0.6750 - val_loss: 0.2031 - val_accuracy: 0.6667
Epoch 182/200
4/4 - 0s - loss: 0.2034 - accuracy: 0.6833 - val_loss: 0.2030 - val_accuracy: 0.7000
Epoch 183/200
4/4 - 0s - loss: 0.2032 - accuracy: 0.6833 - val_loss: 0.2029 - val_accuracy: 0.7000
Epoch 184/200
4/4 - 0s - loss: 0.2031 - accuracy: 0.6917 - val_loss: 0.2028 - val_accuracy: 0.7000
Epoch 185/200
4/4 - 0s - loss: 0.2031 - accuracy: 0.6833 - val_loss: 0.2027 - val_accuracy: 0.7000
Epoch 186/200
4/4 - 0s - loss: 0.2029 - accuracy: 0.6833 - val_loss: 0.2026 - val_accuracy: 0.7000
Epoch 187/200
4/4 - 0s - loss: 0.2028 - accuracy: 0.6917 - val_loss: 0.2025 - val_accuracy: 0.7000

```
Epoch 188/200
4/4 - 0s - loss: 0.2027 - accuracy: 0.6750 - val_loss: 0.2024 - val_accuracy: 0.7000
Epoch 189/200
4/4 - 0s - loss: 0.2026 - accuracy: 0.6917 - val_loss: 0.2023 - val_accuracy: 0.7000
Epoch 190/200
4/4 - 0s - loss: 0.2025 - accuracy: 0.6667 - val_loss: 0.2022 - val_accuracy: 0.7000
Epoch 191/200
4/4 - 0s - loss: 0.2024 - accuracy: 0.6917 - val_loss: 0.2020 - val_accuracy: 0.7000
Epoch 192/200
4/4 - 0s - loss: 0.2023 - accuracy: 0.7000 - val_loss: 0.2019 - val_accuracy: 0.7000
Epoch 193/200
4/4 - 0s - loss: 0.2022 - accuracy: 0.6833 - val_loss: 0.2018 - val_accuracy: 0.7000
Epoch 194/200
4/4 - 0s - loss: 0.2021 - accuracy: 0.6833 - val_loss: 0.2017 - val_accuracy: 0.7000
Epoch 195/200
4/4 - 0s - loss: 0.2020 - accuracy: 0.6917 - val_loss: 0.2016 - val_accuracy: 0.7000
Epoch 196/200
4/4 - 0s - loss: 0.2018 - accuracy: 0.6833 - val_loss: 0.2015 - val_accuracy: 0.7000
Epoch 197/200
4/4 - 0s - loss: 0.2018 - accuracy: 0.6833 - val_loss: 0.2014 - val_accuracy: 0.7000
Epoch 198/200
4/4 - 0s - loss: 0.2016 - accuracy: 0.6917 - val_loss: 0.2013 - val_accuracy: 0.7000
Epoch 199/200
4/4 - 0s - loss: 0.2016 - accuracy: 0.6833 - val_loss: 0.2012 - val_accuracy: 0.7000
Epoch 200/200
4/4 - 0s - loss: 0.2014 - accuracy: 0.6833 - val_loss: 0.2010 - val_accuracy: 0.7000
Activation: sigmoid LR: 0.1 Iterations: 200 || Test loss: 0.2010464370250702
Activation: sigmoid LR: 0.1 Iterations: 200 || Test Accuracy: 0.699999988079071
================================================================================
Model_tanh_LR_0.01_Iterations_100_HL_3
Epoch 1/100
4/4 - 1s - loss: 0.3166 - accuracy: 0.5500 - val_loss: 0.3078 - val_accuracy: 0.5667
Epoch 2/100
4/4 - 0s - loss: 0.3036 - accuracy: 0.5667 - val_loss: 0.2957 - val_accuracy: 0.6000
Epoch 3/100
4/4 - 0s - loss: 0.2919 - accuracy: 0.6000 - val_loss: 0.2844 - val_accuracy: 0.6000
Epoch 4/100
4/4 - 0s - loss: 0.2808 - accuracy: 0.6000 - val_loss: 0.2741 - val_accuracy: 0.6083
Epoch 5/100
4/4 - 0s - loss: 0.2707 - accuracy: 0.6083 - val_loss: 0.2646 - val_accuracy: 0.6083
Epoch 6/100
4/4 - 0s - loss: 0.2616 - accuracy: 0.6083 - val_loss: 0.2559 - val_accuracy: 0.6167
Epoch 7/100
4/4 - 0s - loss: 0.2531 - accuracy: 0.6333 - val_loss: 0.2478 - val_accuracy: 0.6333
Epoch 8/100
4/4 - 0s - loss: 0.2452 - accuracy: 0.6333 - val_loss: 0.2403 - val_accuracy: 0.6333
Epoch 9/100
4/4 - 0s - loss: 0.2380 - accuracy: 0.6333 - val_loss: 0.2334 - val_accuracy: 0.6333
Epoch 10/100
4/4 - 0s - loss: 0.2313 - accuracy: 0.6333 - val_loss: 0.2271 - val_accuracy: 0.6333
Epoch 11/100
4/4 - 0s - loss: 0.2251 - accuracy: 0.6333 - val_loss: 0.2215 - val_accuracy: 0.6333
Epoch 12/100
4/4 - 0s - loss: 0.2197 - accuracy: 0.6333 - val_loss: 0.2162 - val_accuracy: 0.6417
Epoch 13/100
4/4 - 0s - loss: 0.2145 - accuracy: 0.6417 - val_loss: 0.2114 - val_accuracy: 0.6417
Epoch 14/100
4/4 - 0s - loss: 0.2098 - accuracy: 0.6417 - val_loss: 0.2069 - val_accuracy: 0.6417
Epoch 15/100
4/4 - 0s - loss: 0.2055 - accuracy: 0.6417 - val_loss: 0.2028 - val_accuracy: 0.6417
```

```
Epoch 16/100
4/4 - 0s - loss: 0.2014 - accuracy: 0.6417 - val_loss: 0.1989 - val_accuracy: 0.6417
Epoch 17/100
4/4 - 0s - loss: 0.1977 - accuracy: 0.6417 - val_loss: 0.1953 - val_accuracy: 0.6417
Epoch 18/100
4/4 - 0s - loss: 0.1942 - accuracy: 0.6417 - val_loss: 0.1919 - val_accuracy: 0.6417
Epoch 19/100
4/4 - 0s - loss: 0.1908 - accuracy: 0.6417 - val_loss: 0.1887 - val_accuracy: 0.6417
Epoch 20/100
4/4 - 0s - loss: 0.1877 - accuracy: 0.6417 - val_loss: 0.1858 - val_accuracy: 0.6417
Epoch 21/100
4/4 - 0s - loss: 0.1848 - accuracy: 0.6417 - val_loss: 0.1830 - val_accuracy: 0.6500
Epoch 22/100
4/4 - 0s - loss: 0.1821 - accuracy: 0.6500 - val_loss: 0.1804 - val_accuracy: 0.6500
Epoch 23/100
4/4 - 0s - loss: 0.1796 - accuracy: 0.6500 - val_loss: 0.1780 - val_accuracy: 0.6500
Epoch 24/100
4/4 - 0s - loss: 0.1772 - accuracy: 0.6500 - val_loss: 0.1757 - val_accuracy: 0.6500
Epoch 25/100
4/4 - 0s - loss: 0.1750 - accuracy: 0.6500 - val_loss: 0.1735 - val_accuracy: 0.6500
Epoch 26/100
4/4 - 0s - loss: 0.1728 - accuracy: 0.6500 - val_loss: 0.1715 - val_accuracy: 0.6500
Epoch 27/100
4/4 - 0s - loss: 0.1708 - accuracy: 0.6500 - val_loss: 0.1695 - val_accuracy: 0.6500
Epoch 28/100
4/4 - 0s - loss: 0.1689 - accuracy: 0.6500 - val_loss: 0.1676 - val_accuracy: 0.6500
Epoch 29/100
4/4 - 0s - loss: 0.1671 - accuracy: 0.6500 - val_loss: 0.1659 - val_accuracy: 0.6500
Epoch 30/100
4/4 - 0s - loss: 0.1654 - accuracy: 0.6500 - val_loss: 0.1642 - val_accuracy: 0.6500
Epoch 31/100
4/4 - 0s - loss: 0.1637 - accuracy: 0.6500 - val_loss: 0.1626 - val_accuracy: 0.6500
Epoch 32/100
4/4 - 0s - loss: 0.1621 - accuracy: 0.6500 - val_loss: 0.1611 - val_accuracy: 0.6500
Epoch 33/100
4/4 - 0s - loss: 0.1606 - accuracy: 0.6500 - val_loss: 0.1597 - val_accuracy: 0.6500
Epoch 34/100
4/4 - 0s - loss: 0.1592 - accuracy: 0.6500 - val_loss: 0.1583 - val_accuracy: 0.6500
Epoch 35/100
4/4 - 0s - loss: 0.1579 - accuracy: 0.6500 - val_loss: 0.1570 - val_accuracy: 0.6500
Epoch 36/100
4/4 - 0s - loss: 0.1567 - accuracy: 0.6500 - val_loss: 0.1558 - val_accuracy: 0.6500
Epoch 37/100
4/4 - 0s - loss: 0.1554 - accuracy: 0.6500 - val_loss: 0.1546 - val_accuracy: 0.6500
Epoch 38/100
4/4 - 0s - loss: 0.1543 - accuracy: 0.6500 - val_loss: 0.1535 - val_accuracy: 0.6583
Epoch 39/100
4/4 - 0s - loss: 0.1532 - accuracy: 0.6583 - val_loss: 0.1525 - val_accuracy: 0.6583
Epoch 40/100
4/4 - 0s - loss: 0.1521 - accuracy: 0.6583 - val_loss: 0.1514 - val_accuracy: 0.6583
Epoch 41/100
4/4 - 0s - loss: 0.1512 - accuracy: 0.6583 - val_loss: 0.1505 - val_accuracy: 0.6583
Epoch 42/100
4/4 - 0s - loss: 0.1502 - accuracy: 0.6583 - val_loss: 0.1496 - val_accuracy: 0.6583
Epoch 43/100
4/4 - 0s - loss: 0.1493 - accuracy: 0.6583 - val_loss: 0.1487 - val_accuracy: 0.6583
Epoch 44/100
4/4 - 0s - loss: 0.1484 - accuracy: 0.6583 - val_loss: 0.1479 - val_accuracy: 0.6583
Epoch 45/100
4/4 - 0s - loss: 0.1476 - accuracy: 0.6583 - val_loss: 0.1471 - val_accuracy: 0.6583
Epoch 46/100
```

```
Epoch 46/100
4/4 - 0s - loss: 0.1469 - accuracy: 0.6583 - val_loss: 0.1463 - val_accuracy: 0.6583
Epoch 47/100
4/4 - 0s - loss: 0.1461 - accuracy: 0.6583 - val_loss: 0.1456 - val_accuracy: 0.6583
Epoch 48/100
4/4 - 0s - loss: 0.1454 - accuracy: 0.6583 - val_loss: 0.1449 - val_accuracy: 0.6583
Epoch 49/100
4/4 - 0s - loss: 0.1447 - accuracy: 0.6583 - val_loss: 0.1442 - val_accuracy: 0.6583
Epoch 50/100
4/4 - 0s - loss: 0.1440 - accuracy: 0.6583 - val_loss: 0.1436 - val_accuracy: 0.6583
Epoch 51/100
4/4 - 0s - loss: 0.1434 - accuracy: 0.6583 - val_loss: 0.1429 - val_accuracy: 0.6667
Epoch 52/100
4/4 - 0s - loss: 0.1428 - accuracy: 0.6583 - val_loss: 0.1424 - val_accuracy: 0.6667
Epoch 53/100
4/4 - 0s - loss: 0.1422 - accuracy: 0.6583 - val_loss: 0.1418 - val_accuracy: 0.6667
Epoch 54/100
4/4 - 0s - loss: 0.1416 - accuracy: 0.6667 - val_loss: 0.1413 - val_accuracy: 0.6667
Epoch 55/100
4/4 - 0s - loss: 0.1411 - accuracy: 0.6750 - val_loss: 0.1407 - val_accuracy: 0.6667
Epoch 56/100
4/4 - 0s - loss: 0.1406 - accuracy: 0.6667 - val_loss: 0.1402 - val_accuracy: 0.6750
Epoch 57/100
4/4 - 0s - loss: 0.1401 - accuracy: 0.6750 - val_loss: 0.1398 - val_accuracy: 0.6833
Epoch 58/100
4/4 - 0s - loss: 0.1396 - accuracy: 0.6833 - val_loss: 0.1393 - val_accuracy: 0.6833
Epoch 59/100
4/4 - 0s - loss: 0.1392 - accuracy: 0.6833 - val_loss: 0.1389 - val_accuracy: 0.6833
Epoch 60/100
4/4 - 0s - loss: 0.1388 - accuracy: 0.6833 - val_loss: 0.1385 - val_accuracy: 0.6833
Epoch 61/100
4/4 - 0s - loss: 0.1384 - accuracy: 0.6833 - val_loss: 0.1381 - val_accuracy: 0.6833
Epoch 62/100
4/4 - 0s - loss: 0.1380 - accuracy: 0.6833 - val_loss: 0.1377 - val_accuracy: 0.6833
Epoch 63/100
4/4 - 0s - loss: 0.1376 - accuracy: 0.6833 - val_loss: 0.1373 - val_accuracy: 0.6833
Epoch 64/100
4/4 - 0s - loss: 0.1372 - accuracy: 0.6833 - val_loss: 0.1370 - val_accuracy: 0.6833
Epoch 65/100
4/4 - 0s - loss: 0.1369 - accuracy: 0.6833 - val_loss: 0.1366 - val_accuracy: 0.6833
Epoch 66/100
4/4 - 0s - loss: 0.1365 - accuracy: 0.6833 - val_loss: 0.1363 - val_accuracy: 0.6833
Epoch 67/100
4/4 - 0s - loss: 0.1363 - accuracy: 0.6833 - val_loss: 0.1360 - val_accuracy: 0.6833
Epoch 68/100
4/4 - 0s - loss: 0.1359 - accuracy: 0.6833 - val_loss: 0.1357 - val_accuracy: 0.6833
Epoch 69/100
4/4 - 0s - loss: 0.1356 - accuracy: 0.6833 - val_loss: 0.1354 - val_accuracy: 0.6833
Epoch 70/100
4/4 - 0s - loss: 0.1353 - accuracy: 0.6833 - val_loss: 0.1351 - val_accuracy: 0.6833
Epoch 71/100
4/4 - 0s - loss: 0.1350 - accuracy: 0.6833 - val_loss: 0.1348 - val_accuracy: 0.6833
Epoch 72/100
4/4 - 0s - loss: 0.1348 - accuracy: 0.6833 - val_loss: 0.1346 - val_accuracy: 0.6833
Epoch 73/100
4/4 - 0s - loss: 0.1345 - accuracy: 0.6833 - val_loss: 0.1343 - val_accuracy: 0.6833
Epoch 74/100
4/4 - 0s - loss: 0.1342 - accuracy: 0.6833 - val_loss: 0.1340 - val_accuracy: 0.6833
Epoch 75/100
4/4 - 0s - loss: 0.1340 - accuracy: 0.6833 - val_loss: 0.1338 - val_accuracy: 0.6833
Epoch 76/100
```

Epoch 76/100
4/4 - 0s - loss: 0.1337 - accuracy: 0.6833 - val_loss: 0.1336 - val_accuracy: 0.6833
Epoch 77/100
4/4 - 0s - loss: 0.1335 - accuracy: 0.6833 - val_loss: 0.1333 - val_accuracy: 0.6833
Epoch 78/100
4/4 - 0s - loss: 0.1333 - accuracy: 0.6750 - val_loss: 0.1331 - val_accuracy: 0.6833
Epoch 79/100
4/4 - 0s - loss: 0.1331 - accuracy: 0.6833 - val_loss: 0.1329 - val_accuracy: 0.6917
Epoch 80/100
4/4 - 0s - loss: 0.1329 - accuracy: 0.6917 - val_loss: 0.1327 - val_accuracy: 0.6917
Epoch 81/100
4/4 - 0s - loss: 0.1327 - accuracy: 0.6917 - val_loss: 0.1325 - val_accuracy: 0.6917
Epoch 82/100
4/4 - 0s - loss: 0.1325 - accuracy: 0.6917 - val_loss: 0.1323 - val_accuracy: 0.6917
Epoch 83/100
4/4 - 0s - loss: 0.1322 - accuracy: 0.6917 - val_loss: 0.1321 - val_accuracy: 0.6833
Epoch 84/100
4/4 - 0s - loss: 0.1321 - accuracy: 0.6917 - val_loss: 0.1319 - val_accuracy: 0.6833
Epoch 85/100
4/4 - 0s - loss: 0.1319 - accuracy: 0.6833 - val_loss: 0.1317 - val_accuracy: 0.6833
Epoch 86/100
4/4 - 0s - loss: 0.1317 - accuracy: 0.6833 - val_loss: 0.1316 - val_accuracy: 0.6833
Epoch 87/100
4/4 - 0s - loss: 0.1315 - accuracy: 0.6833 - val_loss: 0.1314 - val_accuracy: 0.6833
Epoch 88/100
4/4 - 0s - loss: 0.1314 - accuracy: 0.6833 - val_loss: 0.1312 - val_accuracy: 0.6917
Epoch 89/100
4/4 - 0s - loss: 0.1312 - accuracy: 0.6917 - val_loss: 0.1311 - val_accuracy: 0.6917
Epoch 90/100
4/4 - 0s - loss: 0.1311 - accuracy: 0.6917 - val_loss: 0.1309 - val_accuracy: 0.6917
Epoch 91/100
4/4 - 0s - loss: 0.1309 - accuracy: 0.6917 - val_loss: 0.1308 - val_accuracy: 0.6917
Epoch 92/100
4/4 - 0s - loss: 0.1307 - accuracy: 0.6917 - val_loss: 0.1306 - val_accuracy: 0.6917
Epoch 93/100
4/4 - 0s - loss: 0.1306 - accuracy: 0.6917 - val_loss: 0.1305 - val_accuracy: 0.6917
Epoch 94/100
4/4 - 0s - loss: 0.1304 - accuracy: 0.6917 - val_loss: 0.1303 - val_accuracy: 0.6917
Epoch 95/100
4/4 - 0s - loss: 0.1303 - accuracy: 0.6917 - val_loss: 0.1302 - val_accuracy: 0.6917
Epoch 96/100
4/4 - 0s - loss: 0.1301 - accuracy: 0.6917 - val_loss: 0.1300 - val_accuracy: 0.6917
Epoch 97/100
4/4 - 0s - loss: 0.1300 - accuracy: 0.6917 - val_loss: 0.1299 - val_accuracy: 0.6917
Epoch 98/100
4/4 - 0s - loss: 0.1299 - accuracy: 0.6917 - val_loss: 0.1298 - val_accuracy: 0.6917
Epoch 99/100
4/4 - 0s - loss: 0.1298 - accuracy: 0.6917 - val_loss: 0.1296 - val_accuracy: 0.6917
Epoch 100/100
4/4 - 0s - loss: 0.1296 - accuracy: 0.6917 - val_loss: 0.1295 - val_accuracy: 0.6917
Activation: tanh LR: 0.01 Itertions: 100 || Train loss: 0.1295086294412613
Activation: tanh LR: 0.01 Itertions: 100 || Train Accuracy: 0.6916666626930237
Epoch 1/100
4/4 - 0s - loss: 0.1295 - accuracy: 0.6917 - val_loss: 0.1270 - val_accuracy: 0.7333
Epoch 2/100
4/4 - 0s - loss: 0.1294 - accuracy: 0.6917 - val_loss: 0.1269 - val_accuracy: 0.7333
Epoch 3/100
4/4 - 0s - loss: 0.1292 - accuracy: 0.6917 - val_loss: 0.1268 - val_accuracy: 0.7333
Epoch 4/100
4/4 - 0s - loss: 0.1291 - accuracy: 0.6917 - val_loss: 0.1267 - val_accuracy: 0.7333
Epoch 5/100

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4/4 - 0s - loss: 0.1291 - accuracy: 0.6917 - val_loss: 0.1266 - val_accuracy: 0.7333
Epoch 6/100
4/4 - 0s - loss: 0.1289 - accuracy: 0.6917 - val_loss: 0.1265 - val_accuracy: 0.7333
Epoch 7/100
4/4 - 0s - loss: 0.1289 - accuracy: 0.6917 - val_loss: 0.1265 - val_accuracy: 0.7333
Epoch 8/100
4/4 - 0s - loss: 0.1287 - accuracy: 0.6917 - val_loss: 0.1264 - val_accuracy: 0.7333
Epoch 9/100
4/4 - 0s - loss: 0.1286 - accuracy: 0.6917 - val_loss: 0.1263 - val_accuracy: 0.7333
Epoch 10/100
4/4 - 0s - loss: 0.1285 - accuracy: 0.6917 - val_loss: 0.1262 - val_accuracy: 0.7333
Epoch 11/100
4/4 - 0s - loss: 0.1284 - accuracy: 0.6833 - val_loss: 0.1261 - val_accuracy: 0.7333
Epoch 12/100
4/4 - 0s - loss: 0.1283 - accuracy: 0.6917 - val_loss: 0.1260 - val_accuracy: 0.7333
Epoch 13/100
4/4 - 0s - loss: 0.1283 - accuracy: 0.6833 - val_loss: 0.1260 - val_accuracy: 0.7333
Epoch 14/100
4/4 - 0s - loss: 0.1281 - accuracy: 0.6833 - val_loss: 0.1259 - val_accuracy: 0.7333
Epoch 15/100
4/4 - 0s - loss: 0.1280 - accuracy: 0.6917 - val_loss: 0.1258 - val_accuracy: 0.7333
Epoch 16/100
4/4 - 0s - loss: 0.1279 - accuracy: 0.6833 - val_loss: 0.1257 - val_accuracy: 0.7333
Epoch 17/100
4/4 - 0s - loss: 0.1278 - accuracy: 0.6917 - val_loss: 0.1256 - val_accuracy: 0.7333
Epoch 18/100
4/4 - 0s - loss: 0.1277 - accuracy: 0.6917 - val_loss: 0.1256 - val_accuracy: 0.7333
Epoch 19/100
4/4 - 0s - loss: 0.1276 - accuracy: 0.6917 - val_loss: 0.1255 - val_accuracy: 0.7333
Epoch 20/100
4/4 - 0s - loss: 0.1275 - accuracy: 0.6833 - val_loss: 0.1254 - val_accuracy: 0.7333
Epoch 21/100
4/4 - 0s - loss: 0.1274 - accuracy: 0.6917 - val_loss: 0.1254 - val_accuracy: 0.7333
Epoch 22/100
4/4 - 0s - loss: 0.1274 - accuracy: 0.6917 - val_loss: 0.1253 - val_accuracy: 0.7333
Epoch 23/100
4/4 - 0s - loss: 0.1273 - accuracy: 0.6917 - val_loss: 0.1252 - val_accuracy: 0.7333
Epoch 24/100
4/4 - 0s - loss: 0.1272 - accuracy: 0.6917 - val_loss: 0.1252 - val_accuracy: 0.7333
Epoch 25/100
4/4 - 0s - loss: 0.1271 - accuracy: 0.6917 - val_loss: 0.1251 - val_accuracy: 0.7333
Epoch 26/100
4/4 - 0s - loss: 0.1270 - accuracy: 0.7083 - val_loss: 0.1250 - val_accuracy: 0.7333
Epoch 27/100
4/4 - 0s - loss: 0.1269 - accuracy: 0.7083 - val_loss: 0.1250 - val_accuracy: 0.7333
Epoch 28/100
4/4 - 0s - loss: 0.1269 - accuracy: 0.7083 - val_loss: 0.1249 - val_accuracy: 0.7333
Epoch 29/100
4/4 - 0s - loss: 0.1268 - accuracy: 0.7000 - val_loss: 0.1248 - val_accuracy: 0.7333
Epoch 30/100
4/4 - 0s - loss: 0.1267 - accuracy: 0.7083 - val_loss: 0.1248 - val_accuracy: 0.7333
Epoch 31/100
4/4 - 0s - loss: 0.1266 - accuracy: 0.7083 - val_loss: 0.1247 - val_accuracy: 0.7333
Epoch 32/100
4/4 - 0s - loss: 0.1266 - accuracy: 0.7083 - val_loss: 0.1247 - val_accuracy: 0.7333
Epoch 33/100
4/4 - 0s - loss: 0.1265 - accuracy: 0.7000 - val_loss: 0.1246 - val_accuracy: 0.7333
Epoch 34/100
4/4 - 0s - loss: 0.1264 - accuracy: 0.7083 - val_loss: 0.1246 - val_accuracy: 0.7333
Epoch 35/100
```

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4/4 - 0s - loss: 0.1264 - accuracy: 0.7083 - val_loss: 0.1245 - val_accuracy: 0.7333
Epoch 36/100
4/4 - 0s - loss: 0.1263 - accuracy: 0.7083 - val_loss: 0.1244 - val_accuracy: 0.7333
Epoch 37/100
4/4 - 0s - loss: 0.1262 - accuracy: 0.7083 - val_loss: 0.1244 - val_accuracy: 0.7333
Epoch 38/100
4/4 - 0s - loss: 0.1261 - accuracy: 0.7083 - val_loss: 0.1243 - val_accuracy: 0.7333
Epoch 39/100
4/4 - 0s - loss: 0.1261 - accuracy: 0.7083 - val_loss: 0.1243 - val_accuracy: 0.7333
Epoch 40/100
4/4 - 0s - loss: 0.1260 - accuracy: 0.7083 - val_loss: 0.1242 - val_accuracy: 0.7333
Epoch 41/100
4/4 - 0s - loss: 0.1259 - accuracy: 0.7083 - val_loss: 0.1242 - val_accuracy: 0.7333
Epoch 42/100
4/4 - 0s - loss: 0.1259 - accuracy: 0.7083 - val_loss: 0.1241 - val_accuracy: 0.7333
Epoch 43/100
4/4 - 0s - loss: 0.1258 - accuracy: 0.7000 - val_loss: 0.1241 - val_accuracy: 0.7333
Epoch 44/100
4/4 - 0s - loss: 0.1258 - accuracy: 0.7000 - val_loss: 0.1240 - val_accuracy: 0.7333
Epoch 45/100
4/4 - 0s - loss: 0.1257 - accuracy: 0.7083 - val_loss: 0.1240 - val_accuracy: 0.7333
Epoch 46/100
4/4 - 0s - loss: 0.1256 - accuracy: 0.7083 - val_loss: 0.1240 - val_accuracy: 0.7333
Epoch 47/100
4/4 - 0s - loss: 0.1256 - accuracy: 0.7083 - val_loss: 0.1239 - val_accuracy: 0.7333
Epoch 48/100
4/4 - 0s - loss: 0.1255 - accuracy: 0.7000 - val_loss: 0.1239 - val_accuracy: 0.7333
Epoch 49/100
4/4 - 0s - loss: 0.1254 - accuracy: 0.7000 - val_loss: 0.1238 - val_accuracy: 0.7333
Epoch 50/100
4/4 - 0s - loss: 0.1254 - accuracy: 0.7000 - val_loss: 0.1238 - val_accuracy: 0.7333
Epoch 51/100
4/4 - 0s - loss: 0.1253 - accuracy: 0.7000 - val_loss: 0.1237 - val_accuracy: 0.7333
Epoch 52/100
4/4 - 0s - loss: 0.1253 - accuracy: 0.7000 - val_loss: 0.1237 - val_accuracy: 0.7333
Epoch 53/100
4/4 - 0s - loss: 0.1252 - accuracy: 0.7000 - val_loss: 0.1236 - val_accuracy: 0.7333
Epoch 54/100
4/4 - 0s - loss: 0.1252 - accuracy: 0.7000 - val_loss: 0.1236 - val_accuracy: 0.7333
Epoch 55/100
4/4 - 0s - loss: 0.1251 - accuracy: 0.7000 - val_loss: 0.1236 - val_accuracy: 0.7333
Epoch 56/100
4/4 - 0s - loss: 0.1250 - accuracy: 0.7000 - val_loss: 0.1235 - val_accuracy: 0.7333
Epoch 57/100
4/4 - 0s - loss: 0.1250 - accuracy: 0.7000 - val_loss: 0.1235 - val_accuracy: 0.7333
Epoch 58/100
4/4 - 0s - loss: 0.1249 - accuracy: 0.7000 - val_loss: 0.1234 - val_accuracy: 0.7333
Epoch 59/100
4/4 - 0s - loss: 0.1248 - accuracy: 0.7000 - val_loss: 0.1234 - val_accuracy: 0.7333
Epoch 60/100
4/4 - 0s - loss: 0.1248 - accuracy: 0.7000 - val_loss: 0.1233 - val_accuracy: 0.7333
Epoch 61/100
4/4 - 0s - loss: 0.1247 - accuracy: 0.7000 - val_loss: 0.1233 - val_accuracy: 0.7333
Epoch 62/100
4/4 - 0s - loss: 0.1247 - accuracy: 0.7000 - val_loss: 0.1232 - val_accuracy: 0.7333
Epoch 63/100
4/4 - 0s - loss: 0.1246 - accuracy: 0.7000 - val_loss: 0.1232 - val_accuracy: 0.7333
Epoch 64/100
4/4 - 0s - loss: 0.1246 - accuracy: 0.7000 - val_loss: 0.1232 - val_accuracy: 0.7333
Epoch 65/100
4/4 - 0s - loss: 0.1245 - accuracy: 0.7000 - val_loss: 0.1231 - val_accuracy: 0.7667
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4/4 - 0s - loss: 0.1245 - accuracy: 0.7000 - val_loss: 0.1231 - val_accuracy: 0.7667
Epoch 66/100
4/4 - 0s - loss: 0.1245 - accuracy: 0.7000 - val_loss: 0.1231 - val_accuracy: 0.7667
Epoch 67/100
4/4 - 0s - loss: 0.1244 - accuracy: 0.7000 - val_loss: 0.1231 - val_accuracy: 0.7667
Epoch 68/100
4/4 - 0s - loss: 0.1244 - accuracy: 0.7000 - val_loss: 0.1230 - val_accuracy: 0.7667
Epoch 69/100
4/4 - 0s - loss: 0.1243 - accuracy: 0.7000 - val_loss: 0.1230 - val_accuracy: 0.7667
Epoch 70/100
4/4 - 0s - loss: 0.1243 - accuracy: 0.7000 - val_loss: 0.1230 - val_accuracy: 0.7667
Epoch 71/100
4/4 - 0s - loss: 0.1242 - accuracy: 0.7000 - val_loss: 0.1229 - val_accuracy: 0.7667
Epoch 72/100
4/4 - 0s - loss: 0.1242 - accuracy: 0.7083 - val_loss: 0.1229 - val_accuracy: 0.7667
Epoch 73/100
4/4 - 0s - loss: 0.1241 - accuracy: 0.7000 - val_loss: 0.1228 - val_accuracy: 0.7667
Epoch 74/100
4/4 - 0s - loss: 0.1241 - accuracy: 0.7000 - val_loss: 0.1228 - val_accuracy: 0.7667
Epoch 75/100
4/4 - 0s - loss: 0.1241 - accuracy: 0.7000 - val_loss: 0.1228 - val_accuracy: 0.7667
Epoch 76/100
4/4 - 0s - loss: 0.1240 - accuracy: 0.7083 - val_loss: 0.1227 - val_accuracy: 0.7667
Epoch 77/100
4/4 - 0s - loss: 0.1240 - accuracy: 0.7083 - val_loss: 0.1227 - val_accuracy: 0.7667
Epoch 78/100
4/4 - 0s - loss: 0.1239 - accuracy: 0.7083 - val_loss: 0.1226 - val_accuracy: 0.7667
Epoch 79/100
4/4 - 0s - loss: 0.1239 - accuracy: 0.7083 - val_loss: 0.1226 - val_accuracy: 0.7667
Epoch 80/100
4/4 - 0s - loss: 0.1238 - accuracy: 0.7000 - val_loss: 0.1225 - val_accuracy: 0.7667
Epoch 81/100
4/4 - 0s - loss: 0.1238 - accuracy: 0.7083 - val_loss: 0.1225 - val_accuracy: 0.7667
Epoch 82/100
4/4 - 0s - loss: 0.1237 - accuracy: 0.7083 - val_loss: 0.1225 - val_accuracy: 0.7667
Epoch 83/100
4/4 - 0s - loss: 0.1237 - accuracy: 0.7083 - val_loss: 0.1224 - val_accuracy: 0.7667
Epoch 84/100
4/4 - 0s - loss: 0.1237 - accuracy: 0.7083 - val_loss: 0.1224 - val_accuracy: 0.7667
Epoch 85/100
4/4 - 0s - loss: 0.1236 - accuracy: 0.7000 - val_loss: 0.1223 - val_accuracy: 0.7667
Epoch 86/100
4/4 - 0s - loss: 0.1235 - accuracy: 0.7083 - val_loss: 0.1223 - val_accuracy: 0.7667
Epoch 87/100
4/4 - 0s - loss: 0.1235 - accuracy: 0.7083 - val_loss: 0.1223 - val_accuracy: 0.7667
Epoch 88/100
4/4 - 0s - loss: 0.1235 - accuracy: 0.7083 - val_loss: 0.1222 - val_accuracy: 0.7667
Epoch 89/100
4/4 - 0s - loss: 0.1235 - accuracy: 0.7083 - val_loss: 0.1222 - val_accuracy: 0.7667
Epoch 90/100
4/4 - 0s - loss: 0.1234 - accuracy: 0.7167 - val_loss: 0.1222 - val_accuracy: 0.7667
Epoch 91/100
4/4 - 0s - loss: 0.1234 - accuracy: 0.7083 - val_loss: 0.1221 - val_accuracy: 0.7667
Epoch 92/100
4/4 - 0s - loss: 0.1233 - accuracy: 0.7083 - val_loss: 0.1221 - val_accuracy: 0.7667
Epoch 93/100
4/4 - 0s - loss: 0.1232 - accuracy: 0.7083 - val_loss: 0.1221 - val_accuracy: 0.7667
Epoch 94/100
4/4 - 0s - loss: 0.1232 - accuracy: 0.7083 - val_loss: 0.1221 - val_accuracy: 0.7667
Epoch 95/100
4/4 - 0s - loss: 0.1232 - accuracy: 0.7083 - val_loss: 0.1220 - val_accuracy: 0.7667

```
Epoch 96/100
4/4 - 0s - loss: 0.1231 - accuracy: 0.7083 - val_loss: 0.1220 - val_accuracy: 0.7667
Epoch 97/100
4/4 - 0s - loss: 0.1231 - accuracy: 0.7083 - val_loss: 0.1220 - val_accuracy: 0.7667
Epoch 98/100
4/4 - 0s - loss: 0.1230 - accuracy: 0.7083 - val_loss: 0.1220 - val_accuracy: 0.7667
Epoch 99/100
4/4 - 0s - loss: 0.1230 - accuracy: 0.7083 - val_loss: 0.1219 - val_accuracy: 0.7667
Epoch 100/100
4/4 - 0s - loss: 0.1230 - accuracy: 0.7083 - val_loss: 0.1219 - val_accuracy: 0.7667
Activation: tanh LR: 0.01 Iterations: 100 || Test loss: 0.12190459668636322
Activation: tanh LR: 0.01 Iterations: 100 || Test Accuracy: 0.7666666507720947
================================================================================
Model_tanh_LR_0.01_Iterations_200_HL_3
Epoch 1/200
4/4 - 1s - loss: 0.2949 - accuracy: 0.6750 - val_loss: 0.2850 - val_accuracy: 0.6833
Epoch 2/200
4/4 - 0s - loss: 0.2803 - accuracy: 0.7000 - val_loss: 0.2715 - val_accuracy: 0.7000
Epoch 3/200
4/4 - 0s - loss: 0.2673 - accuracy: 0.7000 - val_loss: 0.2594 - val_accuracy: 0.7000
Epoch 4/200
4/4 - 0s - loss: 0.2555 - accuracy: 0.7000 - val_loss: 0.2479 - val_accuracy: 0.7000
Epoch 5/200
4/4 - 0s - loss: 0.2444 - accuracy: 0.7000 - val_loss: 0.2377 - val_accuracy: 0.7083
Epoch 6/200
4/4 - 0s - loss: 0.2344 - accuracy: 0.7083 - val_loss: 0.2284 - val_accuracy: 0.7083
Epoch 7/200
4/4 - 0s - loss: 0.2255 - accuracy: 0.7083 - val_loss: 0.2200 - val_accuracy: 0.7083
Epoch 8/200
4/4 - 0s - loss: 0.2173 - accuracy: 0.7083 - val_loss: 0.2123 - val_accuracy: 0.7083
Epoch 9/200
4/4 - 0s - loss: 0.2099 - accuracy: 0.7083 - val_loss: 0.2053 - val_accuracy: 0.7167
Epoch 10/200
4/4 - 0s - loss: 0.2031 - accuracy: 0.7167 - val_loss: 0.1989 - val_accuracy: 0.7250
Epoch 11/200
4/4 - 0s - loss: 0.1968 - accuracy: 0.7250 - val_loss: 0.1930 - val_accuracy: 0.7250
Epoch 12/200
4/4 - 0s - loss: 0.1911 - accuracy: 0.7250 - val_loss: 0.1877 - val_accuracy: 0.7250
Epoch 13/200
4/4 - 0s - loss: 0.1860 - accuracy: 0.7333 - val_loss: 0.1828 - val_accuracy: 0.7333
Epoch 14/200
4/4 - 0s - loss: 0.1812 - accuracy: 0.7333 - val_loss: 0.1783 - val_accuracy: 0.7333
Epoch 15/200
4/4 - 0s - loss: 0.1769 - accuracy: 0.7333 - val_loss: 0.1742 - val_accuracy: 0.7333
Epoch 16/200
4/4 - 0s - loss: 0.1729 - accuracy: 0.7333 - val_loss: 0.1704 - val_accuracy: 0.7333
Epoch 17/200
4/4 - 0s - loss: 0.1692 - accuracy: 0.7333 - val_loss: 0.1669 - val_accuracy: 0.7333
Epoch 18/200
4/4 - 0s - loss: 0.1658 - accuracy: 0.7333 - val_loss: 0.1638 - val_accuracy: 0.7417
Epoch 19/200
4/4 - 0s - loss: 0.1628 - accuracy: 0.7417 - val_loss: 0.1609 - val_accuracy: 0.7417
Epoch 20/200
4/4 - 0s - loss: 0.1600 - accuracy: 0.7417 - val_loss: 0.1582 - val_accuracy: 0.7417
Epoch 21/200
4/4 - 0s - loss: 0.1574 - accuracy: 0.7417 - val_loss: 0.1557 - val_accuracy: 0.7417
Epoch 22/200
4/4 - 0s - loss: 0.1549 - accuracy: 0.7417 - val_loss: 0.1534 - val_accuracy: 0.7417
Epoch 23/200
4/4 - 0s - loss: 0.1527 - accuracy: 0.7417 - val_loss: 0.1513 - val_accuracy: 0.7417
```

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Epoch 24/200
4/4 - 0s - loss: 0.1506 - accuracy: 0.7417 - val_loss: 0.1493 - val_accuracy: 0.7417
Epoch 25/200
4/4 - 0s - loss: 0.1487 - accuracy: 0.7417 - val_loss: 0.1475 - val_accuracy: 0.7417
Epoch 26/200
4/4 - 0s - loss: 0.1469 - accuracy: 0.7500 - val_loss: 0.1458 - val_accuracy: 0.7417
Epoch 27/200
4/4 - 0s - loss: 0.1452 - accuracy: 0.7417 - val_loss: 0.1441 - val_accuracy: 0.7500
Epoch 28/200
4/4 - 0s - loss: 0.1437 - accuracy: 0.7417 - val_loss: 0.1426 - val_accuracy: 0.7500
Epoch 29/200
4/4 - 0s - loss: 0.1422 - accuracy: 0.7500 - val_loss: 0.1412 - val_accuracy: 0.7500
Epoch 30/200
4/4 - 0s - loss: 0.1408 - accuracy: 0.7500 - val_loss: 0.1399 - val_accuracy: 0.7583
Epoch 31/200
4/4 - 0s - loss: 0.1395 - accuracy: 0.7583 - val_loss: 0.1386 - val_accuracy: 0.7667
Epoch 32/200
4/4 - 0s - loss: 0.1383 - accuracy: 0.7667 - val_loss: 0.1375 - val_accuracy: 0.7667
Epoch 33/200
4/4 - 0s - loss: 0.1372 - accuracy: 0.7667 - val_loss: 0.1364 - val_accuracy: 0.7667
Epoch 34/200
4/4 - 0s - loss: 0.1361 - accuracy: 0.7667 - val_loss: 0.1354 - val_accuracy: 0.7667
Epoch 35/200
4/4 - 0s - loss: 0.1351 - accuracy: 0.7667 - val_loss: 0.1344 - val_accuracy: 0.7667
Epoch 36/200
4/4 - 0s - loss: 0.1341 - accuracy: 0.7667 - val_loss: 0.1335 - val_accuracy: 0.7667
Epoch 37/200
4/4 - 0s - loss: 0.1332 - accuracy: 0.7667 - val_loss: 0.1326 - val_accuracy: 0.7667
Epoch 38/200
4/4 - 0s - loss: 0.1323 - accuracy: 0.7667 - val_loss: 0.1318 - val_accuracy: 0.7667
Epoch 39/200
4/4 - 0s - loss: 0.1315 - accuracy: 0.7667 - val_loss: 0.1310 - val_accuracy: 0.7667
Epoch 40/200
4/4 - 0s - loss: 0.1308 - accuracy: 0.7667 - val_loss: 0.1302 - val_accuracy: 0.7667
Epoch 41/200
4/4 - 0s - loss: 0.1300 - accuracy: 0.7667 - val_loss: 0.1295 - val_accuracy: 0.7667
Epoch 42/200
4/4 - 0s - loss: 0.1293 - accuracy: 0.7667 - val_loss: 0.1288 - val_accuracy: 0.7667
Epoch 43/200
4/4 - 0s - loss: 0.1286 - accuracy: 0.7667 - val_loss: 0.1281 - val_accuracy: 0.7667
Epoch 44/200
4/4 - 0s - loss: 0.1279 - accuracy: 0.7667 - val_loss: 0.1275 - val_accuracy: 0.7667
Epoch 45/200
4/4 - 0s - loss: 0.1273 - accuracy: 0.7667 - val_loss: 0.1269 - val_accuracy: 0.7667
Epoch 46/200
4/4 - 0s - loss: 0.1268 - accuracy: 0.7667 - val_loss: 0.1264 - val_accuracy: 0.7667
Epoch 47/200
4/4 - 0s - loss: 0.1262 - accuracy: 0.7667 - val_loss: 0.1258 - val_accuracy: 0.7667
Epoch 48/200
4/4 - 0s - loss: 0.1257 - accuracy: 0.7667 - val_loss: 0.1253 - val_accuracy: 0.7667
Epoch 49/200
4/4 - 0s - loss: 0.1251 - accuracy: 0.7667 - val_loss: 0.1248 - val_accuracy: 0.7667
Epoch 50/200
4/4 - 0s - loss: 0.1247 - accuracy: 0.7667 - val_loss: 0.1243 - val_accuracy: 0.7667
Epoch 51/200
4/4 - 0s - loss: 0.1242 - accuracy: 0.7667 - val_loss: 0.1238 - val_accuracy: 0.7667
Epoch 52/200
4/4 - 0s - loss: 0.1237 - accuracy: 0.7667 - val_loss: 0.1234 - val_accuracy: 0.7667
Epoch 53/200
4/4 - 0s - loss: 0.1233 - accuracy: 0.7667 - val_loss: 0.1230 - val_accuracy: 0.7667
```

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Epoch 54/200
4/4 - 0s - loss: 0.1228 - accuracy: 0.7667 - val_loss: 0.1225 - val_accuracy: 0.7667
Epoch 55/200
4/4 - 0s - loss: 0.1224 - accuracy: 0.7667 - val_loss: 0.1221 - val_accuracy: 0.7667
Epoch 56/200
4/4 - 0s - loss: 0.1220 - accuracy: 0.7667 - val_loss: 0.1217 - val_accuracy: 0.7667
Epoch 57/200
4/4 - 0s - loss: 0.1217 - accuracy: 0.7667 - val_loss: 0.1214 - val_accuracy: 0.7667
Epoch 58/200
4/4 - 0s - loss: 0.1213 - accuracy: 0.7667 - val_loss: 0.1210 - val_accuracy: 0.7667
Epoch 59/200
4/4 - 0s - loss: 0.1209 - accuracy: 0.7750 - val_loss: 0.1207 - val_accuracy: 0.7750
Epoch 60/200
4/4 - 0s - loss: 0.1206 - accuracy: 0.7750 - val_loss: 0.1203 - val_accuracy: 0.7750
Epoch 61/200
4/4 - 0s - loss: 0.1202 - accuracy: 0.7750 - val_loss: 0.1200 - val_accuracy: 0.7750
Epoch 62/200
4/4 - 0s - loss: 0.1199 - accuracy: 0.7667 - val_loss: 0.1197 - val_accuracy: 0.7750
Epoch 63/200
4/4 - 0s - loss: 0.1196 - accuracy: 0.7750 - val_loss: 0.1194 - val_accuracy: 0.7667
Epoch 64/200
4/4 - 0s - loss: 0.1193 - accuracy: 0.7667 - val_loss: 0.1191 - val_accuracy: 0.7667
Epoch 65/200
4/4 - 0s - loss: 0.1190 - accuracy: 0.7667 - val_loss: 0.1188 - val_accuracy: 0.7667
Epoch 66/200
4/4 - 0s - loss: 0.1187 - accuracy: 0.7667 - val_loss: 0.1185 - val_accuracy: 0.7667
Epoch 67/200
4/4 - 0s - loss: 0.1184 - accuracy: 0.7667 - val_loss: 0.1182 - val_accuracy: 0.7667
Epoch 68/200
4/4 - 0s - loss: 0.1181 - accuracy: 0.7667 - val_loss: 0.1179 - val_accuracy: 0.7667
Epoch 69/200
4/4 - 0s - loss: 0.1178 - accuracy: 0.7667 - val_loss: 0.1177 - val_accuracy: 0.7750
Epoch 70/200
4/4 - 0s - loss: 0.1176 - accuracy: 0.7750 - val_loss: 0.1174 - val_accuracy: 0.7750
Epoch 71/200
4/4 - 0s - loss: 0.1173 - accuracy: 0.7750 - val_loss: 0.1172 - val_accuracy: 0.7750
Epoch 72/200
4/4 - 0s - loss: 0.1171 - accuracy: 0.7750 - val_loss: 0.1169 - val_accuracy: 0.7750
Epoch 73/200
4/4 - 0s - loss: 0.1169 - accuracy: 0.7750 - val_loss: 0.1167 - val_accuracy: 0.7750
Epoch 74/200
4/4 - 0s - loss: 0.1167 - accuracy: 0.7750 - val_loss: 0.1165 - val_accuracy: 0.7750
Epoch 75/200
4/4 - 0s - loss: 0.1164 - accuracy: 0.7750 - val_loss: 0.1162 - val_accuracy: 0.7750
Epoch 76/200
4/4 - 0s - loss: 0.1162 - accuracy: 0.7750 - val_loss: 0.1160 - val_accuracy: 0.7750
Epoch 77/200
4/4 - 0s - loss: 0.1160 - accuracy: 0.7750 - val_loss: 0.1158 - val_accuracy: 0.7750
Epoch 78/200
4/4 - 0s - loss: 0.1158 - accuracy: 0.7750 - val_loss: 0.1156 - val_accuracy: 0.7750
Epoch 79/200
4/4 - 0s - loss: 0.1155 - accuracy: 0.7750 - val_loss: 0.1154 - val_accuracy: 0.7750
Epoch 80/200
4/4 - 0s - loss: 0.1154 - accuracy: 0.7750 - val_loss: 0.1152 - val_accuracy: 0.7750
Epoch 81/200
4/4 - 0s - loss: 0.1151 - accuracy: 0.7750 - val_loss: 0.1150 - val_accuracy: 0.7750
Epoch 82/200
4/4 - 0s - loss: 0.1150 - accuracy: 0.7750 - val_loss: 0.1148 - val_accuracy: 0.7750
Epoch 83/200
4/4 - 0s - loss: 0.1148 - accuracy: 0.7750 - val_loss: 0.1146 - val_accuracy: 0.7750
Epoch 84/200
```

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Epoch 84/200
4/4 - 0s - loss: 0.1146 - accuracy: 0.7750 - val_loss: 0.1145 - val_accuracy: 0.7833
Epoch 85/200
4/4 - 0s - loss: 0.1144 - accuracy: 0.7833 - val_loss: 0.1143 - val_accuracy: 0.7833
Epoch 86/200
4/4 - 0s - loss: 0.1143 - accuracy: 0.7833 - val_loss: 0.1141 - val_accuracy: 0.7833
Epoch 87/200
4/4 - 0s - loss: 0.1141 - accuracy: 0.7833 - val_loss: 0.1139 - val_accuracy: 0.7833
Epoch 88/200
4/4 - 0s - loss: 0.1139 - accuracy: 0.7833 - val_loss: 0.1138 - val_accuracy: 0.7833
Epoch 89/200
4/4 - 0s - loss: 0.1137 - accuracy: 0.7917 - val_loss: 0.1136 - val_accuracy: 0.7917
Epoch 90/200
4/4 - 0s - loss: 0.1136 - accuracy: 0.7917 - val_loss: 0.1134 - val_accuracy: 0.7917
Epoch 91/200
4/4 - 0s - loss: 0.1134 - accuracy: 0.7917 - val_loss: 0.1133 - val_accuracy: 0.7917
Epoch 92/200
4/4 - 0s - loss: 0.1133 - accuracy: 0.7917 - val_loss: 0.1131 - val_accuracy: 0.7917
Epoch 93/200
4/4 - 0s - loss: 0.1131 - accuracy: 0.7917 - val_loss: 0.1130 - val_accuracy: 0.7917
Epoch 94/200
4/4 - 0s - loss: 0.1130 - accuracy: 0.7917 - val_loss: 0.1128 - val_accuracy: 0.7917
Epoch 95/200
4/4 - 0s - loss: 0.1128 - accuracy: 0.7917 - val_loss: 0.1127 - val_accuracy: 0.7917
Epoch 96/200
4/4 - 0s - loss: 0.1127 - accuracy: 0.7917 - val_loss: 0.1125 - val_accuracy: 0.7917
Epoch 97/200
4/4 - 0s - loss: 0.1125 - accuracy: 0.7917 - val_loss: 0.1124 - val_accuracy: 0.7917
Epoch 98/200
4/4 - 0s - loss: 0.1124 - accuracy: 0.7917 - val_loss: 0.1123 - val_accuracy: 0.7917
Epoch 99/200
4/4 - 0s - loss: 0.1122 - accuracy: 0.7917 - val_loss: 0.1121 - val_accuracy: 0.7917
Epoch 100/200
4/4 - 0s - loss: 0.1121 - accuracy: 0.7917 - val_loss: 0.1120 - val_accuracy: 0.7917
Epoch 101/200
4/4 - 0s - loss: 0.1120 - accuracy: 0.7917 - val_loss: 0.1119 - val_accuracy: 0.7917
Epoch 102/200
4/4 - 0s - loss: 0.1118 - accuracy: 0.7917 - val_loss: 0.1117 - val_accuracy: 0.7917
Epoch 103/200
4/4 - 0s - loss: 0.1117 - accuracy: 0.7917 - val_loss: 0.1116 - val_accuracy: 0.7917
Epoch 104/200
4/4 - 0s - loss: 0.1116 - accuracy: 0.7917 - val_loss: 0.1115 - val_accuracy: 0.7917
Epoch 105/200
4/4 - 0s - loss: 0.1115 - accuracy: 0.7917 - val_loss: 0.1113 - val_accuracy: 0.7917
Epoch 106/200
4/4 - 0s - loss: 0.1114 - accuracy: 0.7917 - val_loss: 0.1112 - val_accuracy: 0.7917
Epoch 107/200
4/4 - 0s - loss: 0.1112 - accuracy: 0.7917 - val_loss: 0.1111 - val_accuracy: 0.7917
Epoch 108/200
4/4 - 0s - loss: 0.1111 - accuracy: 0.7917 - val_loss: 0.1110 - val_accuracy: 0.7833
Epoch 109/200
4/4 - 0s - loss: 0.1110 - accuracy: 0.7917 - val_loss: 0.1109 - val_accuracy: 0.7833
Epoch 110/200
4/4 - 0s - loss: 0.1109 - accuracy: 0.7833 - val_loss: 0.1107 - val_accuracy: 0.7833
Epoch 111/200
4/4 - 0s - loss: 0.1107 - accuracy: 0.7833 - val_loss: 0.1106 - val_accuracy: 0.7833
Epoch 112/200
4/4 - 0s - loss: 0.1106 - accuracy: 0.7833 - val_loss: 0.1105 - val_accuracy: 0.7833
Epoch 113/200
4/4 - 0s - loss: 0.1105 - accuracy: 0.7833 - val_loss: 0.1104 - val_accuracy: 0.7833
Epoch 114/200
```

Epoch 114/200
4/4 - 0s - loss: 0.1104 - accuracy: 0.7833 - val_loss: 0.1103 - val_accuracy: 0.7833
Epoch 115/200
4/4 - 0s - loss: 0.1103 - accuracy: 0.7833 - val_loss: 0.1102 - val_accuracy: 0.7833
Epoch 116/200
4/4 - 0s - loss: 0.1102 - accuracy: 0.7917 - val_loss: 0.1101 - val_accuracy: 0.7833
Epoch 117/200
4/4 - 0s - loss: 0.1101 - accuracy: 0.7833 - val_loss: 0.1100 - val_accuracy: 0.7833
Epoch 118/200
4/4 - 0s - loss: 0.1100 - accuracy: 0.7833 - val_loss: 0.1099 - val_accuracy: 0.7833
Epoch 119/200
4/4 - 0s - loss: 0.1099 - accuracy: 0.7833 - val_loss: 0.1098 - val_accuracy: 0.7750
Epoch 120/200
4/4 - 0s - loss: 0.1098 - accuracy: 0.7750 - val_loss: 0.1097 - val_accuracy: 0.7750
Epoch 121/200
4/4 - 0s - loss: 0.1096 - accuracy: 0.7750 - val_loss: 0.1096 - val_accuracy: 0.7750
Epoch 122/200
4/4 - 0s - loss: 0.1096 - accuracy: 0.7750 - val_loss: 0.1095 - val_accuracy: 0.7750
Epoch 123/200
4/4 - 0s - loss: 0.1096 - accuracy: 0.7750 - val_loss: 0.1094 - val_accuracy: 0.7750
Epoch 124/200
4/4 - 0s - loss: 0.1094 - accuracy: 0.7750 - val_loss: 0.1093 - val_accuracy: 0.7750
Epoch 125/200
4/4 - 0s - loss: 0.1093 - accuracy: 0.7750 - val_loss: 0.1092 - val_accuracy: 0.7750
Epoch 126/200
4/4 - 0s - loss: 0.1092 - accuracy: 0.7750 - val_loss: 0.1091 - val_accuracy: 0.7750
Epoch 127/200
4/4 - 0s - loss: 0.1091 - accuracy: 0.7833 - val_loss: 0.1090 - val_accuracy: 0.7833
Epoch 128/200
4/4 - 0s - loss: 0.1090 - accuracy: 0.7750 - val_loss: 0.1089 - val_accuracy: 0.7833
Epoch 129/200
4/4 - 0s - loss: 0.1089 - accuracy: 0.7833 - val_loss: 0.1088 - val_accuracy: 0.7833
Epoch 130/200
4/4 - 0s - loss: 0.1088 - accuracy: 0.7833 - val_loss: 0.1087 - val_accuracy: 0.7833
Epoch 131/200
4/4 - 0s - loss: 0.1087 - accuracy: 0.7833 - val_loss: 0.1086 - val_accuracy: 0.7833
Epoch 132/200
4/4 - 0s - loss: 0.1087 - accuracy: 0.8000 - val_loss: 0.1085 - val_accuracy: 0.7917
Epoch 133/200
4/4 - 0s - loss: 0.1085 - accuracy: 0.7917 - val_loss: 0.1084 - val_accuracy: 0.8000
Epoch 134/200
4/4 - 0s - loss: 0.1085 - accuracy: 0.7833 - val_loss: 0.1084 - val_accuracy: 0.8000
Epoch 135/200
4/4 - 0s - loss: 0.1084 - accuracy: 0.8000 - val_loss: 0.1083 - val_accuracy: 0.8000
Epoch 136/200
4/4 - 0s - loss: 0.1083 - accuracy: 0.8000 - val_loss: 0.1082 - val_accuracy: 0.8000
Epoch 137/200
4/4 - 0s - loss: 0.1082 - accuracy: 0.8000 - val_loss: 0.1081 - val_accuracy: 0.8000
Epoch 138/200
4/4 - 0s - loss: 0.1081 - accuracy: 0.8000 - val_loss: 0.1080 - val_accuracy: 0.8000
Epoch 139/200
4/4 - 0s - loss: 0.1080 - accuracy: 0.8000 - val_loss: 0.1079 - val_accuracy: 0.8000
Epoch 140/200
4/4 - 0s - loss: 0.1079 - accuracy: 0.8000 - val_loss: 0.1078 - val_accuracy: 0.8000
Epoch 141/200
4/4 - 0s - loss: 0.1079 - accuracy: 0.8000 - val_loss: 0.1078 - val_accuracy: 0.8000
Epoch 142/200
4/4 - 0s - loss: 0.1078 - accuracy: 0.8000 - val_loss: 0.1077 - val_accuracy: 0.8000
Epoch 143/200
4/4 - 0s - loss: 0.1077 - accuracy: 0.8000 - val_loss: 0.1076 - val_accuracy: 0.8000
Epoch 144/200

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4/4 - 0s - loss: 0.1076 - accuracy: 0.8000 - val_loss: 0.1075 - val_accuracy: 0.8000
Epoch 145/200
4/4 - 0s - loss: 0.1075 - accuracy: 0.8000 - val_loss: 0.1074 - val_accuracy: 0.8000
Epoch 146/200
4/4 - 0s - loss: 0.1074 - accuracy: 0.8000 - val_loss: 0.1074 - val_accuracy: 0.8000
Epoch 147/200
4/4 - 0s - loss: 0.1073 - accuracy: 0.8000 - val_loss: 0.1073 - val_accuracy: 0.8000
Epoch 148/200
4/4 - 0s - loss: 0.1073 - accuracy: 0.8000 - val_loss: 0.1072 - val_accuracy: 0.8000
Epoch 149/200
4/4 - 0s - loss: 0.1072 - accuracy: 0.8000 - val_loss: 0.1071 - val_accuracy: 0.8000
Epoch 150/200
4/4 - 0s - loss: 0.1071 - accuracy: 0.8000 - val_loss: 0.1070 - val_accuracy: 0.8000
Epoch 151/200
4/4 - 0s - loss: 0.1071 - accuracy: 0.8000 - val_loss: 0.1070 - val_accuracy: 0.8000
Epoch 152/200
4/4 - 0s - loss: 0.1070 - accuracy: 0.8000 - val_loss: 0.1069 - val_accuracy: 0.8000
Epoch 153/200
4/4 - 0s - loss: 0.1069 - accuracy: 0.8000 - val_loss: 0.1068 - val_accuracy: 0.8000
Epoch 154/200
4/4 - 0s - loss: 0.1068 - accuracy: 0.8000 - val_loss: 0.1067 - val_accuracy: 0.8000
Epoch 155/200
4/4 - 0s - loss: 0.1067 - accuracy: 0.8000 - val_loss: 0.1067 - val_accuracy: 0.8000
Epoch 156/200
4/4 - 0s - loss: 0.1067 - accuracy: 0.8000 - val_loss: 0.1066 - val_accuracy: 0.8083
Epoch 157/200
4/4 - 0s - loss: 0.1066 - accuracy: 0.8083 - val_loss: 0.1065 - val_accuracy: 0.8083
Epoch 158/200
4/4 - 0s - loss: 0.1065 - accuracy: 0.8083 - val_loss: 0.1064 - val_accuracy: 0.8083
Epoch 159/200
4/4 - 0s - loss: 0.1064 - accuracy: 0.8083 - val_loss: 0.1064 - val_accuracy: 0.8083
Epoch 160/200
4/4 - 0s - loss: 0.1064 - accuracy: 0.8083 - val_loss: 0.1063 - val_accuracy: 0.8083
Epoch 161/200
4/4 - 0s - loss: 0.1063 - accuracy: 0.8083 - val_loss: 0.1062 - val_accuracy: 0.8083
Epoch 162/200
4/4 - 0s - loss: 0.1062 - accuracy: 0.8083 - val_loss: 0.1061 - val_accuracy: 0.8083
Epoch 163/200
4/4 - 0s - loss: 0.1062 - accuracy: 0.8083 - val_loss: 0.1061 - val_accuracy: 0.8083
Epoch 164/200
4/4 - 0s - loss: 0.1061 - accuracy: 0.8083 - val_loss: 0.1060 - val_accuracy: 0.8083
Epoch 165/200
4/4 - 0s - loss: 0.1060 - accuracy: 0.8083 - val_loss: 0.1059 - val_accuracy: 0.8083
Epoch 166/200
4/4 - 0s - loss: 0.1059 - accuracy: 0.8083 - val_loss: 0.1059 - val_accuracy: 0.8083
Epoch 167/200
4/4 - 0s - loss: 0.1059 - accuracy: 0.8083 - val_loss: 0.1058 - val_accuracy: 0.8083
Epoch 168/200
4/4 - 0s - loss: 0.1058 - accuracy: 0.8083 - val_loss: 0.1057 - val_accuracy: 0.8083
Epoch 169/200
4/4 - 0s - loss: 0.1057 - accuracy: 0.8083 - val_loss: 0.1056 - val_accuracy: 0.8083
Epoch 170/200
4/4 - 0s - loss: 0.1057 - accuracy: 0.8083 - val_loss: 0.1056 - val_accuracy: 0.8083
Epoch 171/200
4/4 - 0s - loss: 0.1056 - accuracy: 0.8083 - val_loss: 0.1055 - val_accuracy: 0.8083
Epoch 172/200
4/4 - 0s - loss: 0.1055 - accuracy: 0.8083 - val_loss: 0.1054 - val_accuracy: 0.8083
Epoch 173/200
4/4 - 0s - loss: 0.1054 - accuracy: 0.8083 - val_loss: 0.1054 - val_accuracy: 0.8083
Epoch 174/200
```

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4/4 - 0s - loss: 0.1054 - accuracy: 0.8083 - val_loss: 0.1053 - val_accuracy: 0.8083
Epoch 175/200
4/4 - 0s - loss: 0.1053 - accuracy: 0.8000 - val_loss: 0.1052 - val_accuracy: 0.8083
Epoch 176/200
4/4 - 0s - loss: 0.1052 - accuracy: 0.8083 - val_loss: 0.1052 - val_accuracy: 0.8083
Epoch 177/200
4/4 - 0s - loss: 0.1052 - accuracy: 0.8083 - val_loss: 0.1051 - val_accuracy: 0.8083
Epoch 178/200
4/4 - 0s - loss: 0.1051 - accuracy: 0.8083 - val_loss: 0.1050 - val_accuracy: 0.8083
Epoch 179/200
4/4 - 0s - loss: 0.1050 - accuracy: 0.8083 - val_loss: 0.1049 - val_accuracy: 0.8083
Epoch 180/200
4/4 - 0s - loss: 0.1049 - accuracy: 0.8083 - val_loss: 0.1049 - val_accuracy: 0.8083
Epoch 181/200
4/4 - 0s - loss: 0.1049 - accuracy: 0.8083 - val_loss: 0.1048 - val_accuracy: 0.8083
Epoch 182/200
4/4 - 0s - loss: 0.1048 - accuracy: 0.8083 - val_loss: 0.1047 - val_accuracy: 0.8083
Epoch 183/200
4/4 - 0s - loss: 0.1047 - accuracy: 0.8083 - val_loss: 0.1047 - val_accuracy: 0.8083
Epoch 184/200
4/4 - 0s - loss: 0.1047 - accuracy: 0.8083 - val_loss: 0.1046 - val_accuracy: 0.8083
Epoch 185/200
4/4 - 0s - loss: 0.1046 - accuracy: 0.8083 - val_loss: 0.1045 - val_accuracy: 0.8083
Epoch 186/200
4/4 - 0s - loss: 0.1046 - accuracy: 0.8083 - val_loss: 0.1045 - val_accuracy: 0.8083
Epoch 187/200
4/4 - 0s - loss: 0.1045 - accuracy: 0.8083 - val_loss: 0.1044 - val_accuracy: 0.8083
Epoch 188/200
4/4 - 0s - loss: 0.1044 - accuracy: 0.8083 - val_loss: 0.1043 - val_accuracy: 0.8083
Epoch 189/200
4/4 - 0s - loss: 0.1043 - accuracy: 0.8000 - val_loss: 0.1043 - val_accuracy: 0.8083
Epoch 190/200
4/4 - 0s - loss: 0.1043 - accuracy: 0.8083 - val_loss: 0.1042 - val_accuracy: 0.8083
Epoch 191/200
4/4 - 0s - loss: 0.1042 - accuracy: 0.8083 - val_loss: 0.1041 - val_accuracy: 0.8083
Epoch 192/200
4/4 - 0s - loss: 0.1041 - accuracy: 0.8000 - val_loss: 0.1041 - val_accuracy: 0.8083
Epoch 193/200
4/4 - 0s - loss: 0.1041 - accuracy: 0.8083 - val_loss: 0.1040 - val_accuracy: 0.8083
Epoch 194/200
4/4 - 0s - loss: 0.1040 - accuracy: 0.8083 - val_loss: 0.1039 - val_accuracy: 0.8083
Epoch 195/200
4/4 - 0s - loss: 0.1040 - accuracy: 0.8000 - val_loss: 0.1039 - val_accuracy: 0.8083
Epoch 196/200
4/4 - 0s - loss: 0.1039 - accuracy: 0.8250 - val_loss: 0.1038 - val_accuracy: 0.8250
Epoch 197/200
4/4 - 0s - loss: 0.1038 - accuracy: 0.8250 - val_loss: 0.1037 - val_accuracy: 0.8250
Epoch 198/200
4/4 - 0s - loss: 0.1038 - accuracy: 0.8250 - val_loss: 0.1037 - val_accuracy: 0.8167
Epoch 199/200
4/4 - 0s - loss: 0.1037 - accuracy: 0.8250 - val_loss: 0.1036 - val_accuracy: 0.8167
Epoch 200/200
4/4 - 0s - loss: 0.1036 - accuracy: 0.8167 - val_loss: 0.1035 - val_accuracy: 0.8167
Activation: tanh LR: 0.01 Itertions: 200 || Train loss: 0.10354720801115036
Activation: tanh LR: 0.01 Itertions: 200 || Train Accuracy: 0.8166666626930237
Epoch 1/200
4/4 - 0s - loss: 0.1036 - accuracy: 0.8167 - val_loss: 0.0967 - val_accuracy: 0.9333
Epoch 2/200
4/4 - 0s - loss: 0.1035 - accuracy: 0.8167 - val_loss: 0.0966 - val_accuracy: 0.9333
Epoch 3/200
4/4 - 0s - loss: 0.1035 - accuracy: 0.8250 - val_loss: 0.0965 - val_accuracy: 0.9333
```

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4/4 - 0s - loss: 0.1035 - accuracy: 0.8250 - val_loss: 0.0965 - val_accuracy: 0.9333
Epoch 4/200
4/4 - 0s - loss: 0.1034 - accuracy: 0.8250 - val_loss: 0.0964 - val_accuracy: 0.9333
Epoch 5/200
4/4 - 0s - loss: 0.1033 - accuracy: 0.8167 - val_loss: 0.0963 - val_accuracy: 0.9333
Epoch 6/200
4/4 - 0s - loss: 0.1032 - accuracy: 0.8250 - val_loss: 0.0963 - val_accuracy: 0.9333
Epoch 7/200
4/4 - 0s - loss: 0.1032 - accuracy: 0.8250 - val_loss: 0.0962 - val_accuracy: 0.9333
Epoch 8/200
4/4 - 0s - loss: 0.1031 - accuracy: 0.8250 - val_loss: 0.0961 - val_accuracy: 0.9333
Epoch 9/200
4/4 - 0s - loss: 0.1030 - accuracy: 0.8250 - val_loss: 0.0960 - val_accuracy: 0.9333
Epoch 10/200
4/4 - 0s - loss: 0.1030 - accuracy: 0.8250 - val_loss: 0.0959 - val_accuracy: 0.9333
Epoch 11/200
4/4 - 0s - loss: 0.1029 - accuracy: 0.8250 - val_loss: 0.0958 - val_accuracy: 0.9333
Epoch 12/200
4/4 - 0s - loss: 0.1028 - accuracy: 0.8333 - val_loss: 0.0958 - val_accuracy: 0.9333
Epoch 13/200
4/4 - 0s - loss: 0.1028 - accuracy: 0.8333 - val_loss: 0.0957 - val_accuracy: 0.9333
Epoch 14/200
4/4 - 0s - loss: 0.1027 - accuracy: 0.8333 - val_loss: 0.0956 - val_accuracy: 0.9333
Epoch 15/200
4/4 - 0s - loss: 0.1026 - accuracy: 0.8333 - val_loss: 0.0955 - val_accuracy: 0.9333
Epoch 16/200
4/4 - 0s - loss: 0.1026 - accuracy: 0.8333 - val_loss: 0.0954 - val_accuracy: 0.9333
Epoch 17/200
4/4 - 0s - loss: 0.1025 - accuracy: 0.8333 - val_loss: 0.0954 - val_accuracy: 0.9333
Epoch 18/200
4/4 - 0s - loss: 0.1024 - accuracy: 0.8333 - val_loss: 0.0953 - val_accuracy: 0.9333
Epoch 19/200
4/4 - 0s - loss: 0.1024 - accuracy: 0.8333 - val_loss: 0.0952 - val_accuracy: 0.9333
Epoch 20/200
4/4 - 0s - loss: 0.1023 - accuracy: 0.8333 - val_loss: 0.0951 - val_accuracy: 0.9333
Epoch 21/200
4/4 - 0s - loss: 0.1022 - accuracy: 0.8333 - val_loss: 0.0950 - val_accuracy: 0.9333
Epoch 22/200
4/4 - 0s - loss: 0.1022 - accuracy: 0.8333 - val_loss: 0.0949 - val_accuracy: 0.9333
Epoch 23/200
4/4 - 0s - loss: 0.1021 - accuracy: 0.8333 - val_loss: 0.0948 - val_accuracy: 0.9333
Epoch 24/200
4/4 - 0s - loss: 0.1021 - accuracy: 0.8333 - val_loss: 0.0947 - val_accuracy: 0.9333
Epoch 25/200
4/4 - 0s - loss: 0.1020 - accuracy: 0.8333 - val_loss: 0.0947 - val_accuracy: 0.9333
Epoch 26/200
4/4 - 0s - loss: 0.1020 - accuracy: 0.8333 - val_loss: 0.0946 - val_accuracy: 0.9333
Epoch 27/200
4/4 - 0s - loss: 0.1019 - accuracy: 0.8333 - val_loss: 0.0945 - val_accuracy: 0.9333
Epoch 28/200
4/4 - 0s - loss: 0.1018 - accuracy: 0.8333 - val_loss: 0.0944 - val_accuracy: 0.9333
Epoch 29/200
4/4 - 0s - loss: 0.1017 - accuracy: 0.8333 - val_loss: 0.0943 - val_accuracy: 0.9333
Epoch 30/200
4/4 - 0s - loss: 0.1018 - accuracy: 0.8333 - val_loss: 0.0942 - val_accuracy: 0.9333
Epoch 31/200
4/4 - 0s - loss: 0.1016 - accuracy: 0.8333 - val_loss: 0.0942 - val_accuracy: 0.9333
Epoch 32/200
4/4 - 0s - loss: 0.1015 - accuracy: 0.8333 - val_loss: 0.0941 - val_accuracy: 0.9333
Epoch 33/200
4/4 - 0s - loss: 0.1015 - accuracy: 0.8333 - val_loss: 0.0940 - val_accuracy: 0.9333
```

Epoch 34/200
4/4 - 0s - loss: 0.1014 - accuracy: 0.8333 - val_loss: 0.0939 - val_accuracy: 0.9333
Epoch 35/200
4/4 - 0s - loss: 0.1014 - accuracy: 0.8333 - val_loss: 0.0938 - val_accuracy: 0.9333
Epoch 36/200
4/4 - 0s - loss: 0.1013 - accuracy: 0.8333 - val_loss: 0.0938 - val_accuracy: 0.9333
Epoch 37/200
4/4 - 0s - loss: 0.1012 - accuracy: 0.8333 - val_loss: 0.0937 - val_accuracy: 0.9333
Epoch 38/200
4/4 - 0s - loss: 0.1012 - accuracy: 0.8333 - val_loss: 0.0936 - val_accuracy: 0.9333
Epoch 39/200
4/4 - 0s - loss: 0.1011 - accuracy: 0.8333 - val_loss: 0.0935 - val_accuracy: 0.9333
Epoch 40/200
4/4 - 0s - loss: 0.1011 - accuracy: 0.8333 - val_loss: 0.0935 - val_accuracy: 0.9333
Epoch 41/200
4/4 - 0s - loss: 0.1010 - accuracy: 0.8417 - val_loss: 0.0934 - val_accuracy: 0.9333
Epoch 42/200
4/4 - 0s - loss: 0.1009 - accuracy: 0.8417 - val_loss: 0.0933 - val_accuracy: 0.9333
Epoch 43/200
4/4 - 0s - loss: 0.1008 - accuracy: 0.8417 - val_loss: 0.0932 - val_accuracy: 0.9333
Epoch 44/200
4/4 - 0s - loss: 0.1008 - accuracy: 0.8417 - val_loss: 0.0931 - val_accuracy: 0.9333
Epoch 45/200
4/4 - 0s - loss: 0.1007 - accuracy: 0.8417 - val_loss: 0.0930 - val_accuracy: 0.9333
Epoch 46/200
4/4 - 0s - loss: 0.1007 - accuracy: 0.8417 - val_loss: 0.0930 - val_accuracy: 0.9333
Epoch 47/200
4/4 - 0s - loss: 0.1006 - accuracy: 0.8583 - val_loss: 0.0929 - val_accuracy: 0.9333
Epoch 48/200
4/4 - 0s - loss: 0.1005 - accuracy: 0.8583 - val_loss: 0.0928 - val_accuracy: 0.9333
Epoch 49/200
4/4 - 0s - loss: 0.1004 - accuracy: 0.8583 - val_loss: 0.0927 - val_accuracy: 0.9333
Epoch 50/200
4/4 - 0s - loss: 0.1004 - accuracy: 0.8583 - val_loss: 0.0926 - val_accuracy: 0.9333
Epoch 51/200
4/4 - 0s - loss: 0.1003 - accuracy: 0.8583 - val_loss: 0.0925 - val_accuracy: 0.9333
Epoch 52/200
4/4 - 0s - loss: 0.1003 - accuracy: 0.8583 - val_loss: 0.0924 - val_accuracy: 0.9333
Epoch 53/200
4/4 - 0s - loss: 0.1002 - accuracy: 0.8583 - val_loss: 0.0924 - val_accuracy: 0.9333
Epoch 54/200
4/4 - 0s - loss: 0.1001 - accuracy: 0.8583 - val_loss: 0.0923 - val_accuracy: 0.9333
Epoch 55/200
4/4 - 0s - loss: 0.1001 - accuracy: 0.8583 - val_loss: 0.0922 - val_accuracy: 0.9333
Epoch 56/200
4/4 - 0s - loss: 0.1000 - accuracy: 0.8583 - val_loss: 0.0921 - val_accuracy: 0.9333
Epoch 57/200
4/4 - 0s - loss: 0.0999 - accuracy: 0.8583 - val_loss: 0.0920 - val_accuracy: 0.9333
Epoch 58/200
4/4 - 0s - loss: 0.0999 - accuracy: 0.8583 - val_loss: 0.0919 - val_accuracy: 0.9333
Epoch 59/200
4/4 - 0s - loss: 0.0998 - accuracy: 0.8583 - val_loss: 0.0919 - val_accuracy: 0.9333
Epoch 60/200
4/4 - 0s - loss: 0.0998 - accuracy: 0.8583 - val_loss: 0.0918 - val_accuracy: 0.9333
Epoch 61/200
4/4 - 0s - loss: 0.0997 - accuracy: 0.8583 - val_loss: 0.0917 - val_accuracy: 0.9333
Epoch 62/200
4/4 - 0s - loss: 0.0996 - accuracy: 0.8583 - val_loss: 0.0916 - val_accuracy: 0.9333
Epoch 63/200
4/4 - 0s - loss: 0.0996 - accuracy: 0.8583 - val_loss: 0.0915 - val_accuracy: 0.9333

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Epoch 64/200
4/4 - 0s - loss: 0.0995 - accuracy: 0.8583 - val_loss: 0.0915 - val_accuracy: 0.9333
Epoch 65/200
4/4 - 0s - loss: 0.0994 - accuracy: 0.8583 - val_loss: 0.0914 - val_accuracy: 0.9333
Epoch 66/200
4/4 - 0s - loss: 0.0994 - accuracy: 0.8583 - val_loss: 0.0913 - val_accuracy: 0.9333
Epoch 67/200
4/4 - 0s - loss: 0.0993 - accuracy: 0.8583 - val_loss: 0.0912 - val_accuracy: 0.9333
Epoch 68/200
4/4 - 0s - loss: 0.0992 - accuracy: 0.8583 - val_loss: 0.0911 - val_accuracy: 0.9333
Epoch 69/200
4/4 - 0s - loss: 0.0992 - accuracy: 0.8583 - val_loss: 0.0910 - val_accuracy: 0.9333
Epoch 70/200
4/4 - 0s - loss: 0.0991 - accuracy: 0.8583 - val_loss: 0.0910 - val_accuracy: 0.9333
Epoch 71/200
4/4 - 0s - loss: 0.0991 - accuracy: 0.8583 - val_loss: 0.0909 - val_accuracy: 0.9333
Epoch 72/200
4/4 - 0s - loss: 0.0990 - accuracy: 0.8583 - val_loss: 0.0908 - val_accuracy: 0.9333
Epoch 73/200
4/4 - 0s - loss: 0.0989 - accuracy: 0.8583 - val_loss: 0.0907 - val_accuracy: 0.9333
Epoch 74/200
4/4 - 0s - loss: 0.0989 - accuracy: 0.8583 - val_loss: 0.0906 - val_accuracy: 0.9333
Epoch 75/200
4/4 - 0s - loss: 0.0988 - accuracy: 0.8583 - val_loss: 0.0906 - val_accuracy: 0.9333
Epoch 76/200
4/4 - 0s - loss: 0.0988 - accuracy: 0.8583 - val_loss: 0.0905 - val_accuracy: 0.9333
Epoch 77/200
4/4 - 0s - loss: 0.0986 - accuracy: 0.8583 - val_loss: 0.0904 - val_accuracy: 0.9333
Epoch 78/200
4/4 - 0s - loss: 0.0986 - accuracy: 0.8583 - val_loss: 0.0903 - val_accuracy: 0.9333
Epoch 79/200
4/4 - 0s - loss: 0.0985 - accuracy: 0.8583 - val_loss: 0.0902 - val_accuracy: 0.9333
Epoch 80/200
4/4 - 0s - loss: 0.0985 - accuracy: 0.8583 - val_loss: 0.0902 - val_accuracy: 0.9333
Epoch 81/200
4/4 - 0s - loss: 0.0984 - accuracy: 0.8583 - val_loss: 0.0901 - val_accuracy: 0.9333
Epoch 82/200
4/4 - 0s - loss: 0.0983 - accuracy: 0.8583 - val_loss: 0.0900 - val_accuracy: 0.9333
Epoch 83/200
4/4 - 0s - loss: 0.0983 - accuracy: 0.8583 - val_loss: 0.0899 - val_accuracy: 0.9333
Epoch 84/200
4/4 - 0s - loss: 0.0982 - accuracy: 0.8583 - val_loss: 0.0898 - val_accuracy: 0.9333
Epoch 85/200
4/4 - 0s - loss: 0.0982 - accuracy: 0.8583 - val_loss: 0.0897 - val_accuracy: 0.9333
Epoch 86/200
4/4 - 0s - loss: 0.0980 - accuracy: 0.8583 - val_loss: 0.0897 - val_accuracy: 0.9333
Epoch 87/200
4/4 - 0s - loss: 0.0980 - accuracy: 0.8583 - val_loss: 0.0896 - val_accuracy: 0.9333
Epoch 88/200
4/4 - 0s - loss: 0.0980 - accuracy: 0.8583 - val_loss: 0.0895 - val_accuracy: 0.9333
Epoch 89/200
4/4 - 0s - loss: 0.0979 - accuracy: 0.8583 - val_loss: 0.0894 - val_accuracy: 0.9333
Epoch 90/200
4/4 - 0s - loss: 0.0978 - accuracy: 0.8583 - val_loss: 0.0893 - val_accuracy: 0.9333
Epoch 91/200
4/4 - 0s - loss: 0.0977 - accuracy: 0.8583 - val_loss: 0.0893 - val_accuracy: 0.9333
Epoch 92/200
4/4 - 0s - loss: 0.0976 - accuracy: 0.8583 - val_loss: 0.0892 - val_accuracy: 0.9333
Epoch 93/200
4/4 - 0s - loss: 0.0976 - accuracy: 0.8583 - val_loss: 0.0891 - val_accuracy: 0.9333
```

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Epoch 94/200
4/4 - 0s - loss: 0.0975 - accuracy: 0.8583 - val_loss: 0.0890 - val_accuracy: 0.9333
Epoch 95/200
4/4 - 0s - loss: 0.0975 - accuracy: 0.8583 - val_loss: 0.0889 - val_accuracy: 0.9333
Epoch 96/200
4/4 - 0s - loss: 0.0974 - accuracy: 0.8583 - val_loss: 0.0888 - val_accuracy: 0.9333
Epoch 97/200
4/4 - 0s - loss: 0.0973 - accuracy: 0.8583 - val_loss: 0.0887 - val_accuracy: 0.9333
Epoch 98/200
4/4 - 0s - loss: 0.0973 - accuracy: 0.8583 - val_loss: 0.0886 - val_accuracy: 0.9333
Epoch 99/200
4/4 - 0s - loss: 0.0972 - accuracy: 0.8583 - val_loss: 0.0885 - val_accuracy: 0.9333
Epoch 100/200
4/4 - 0s - loss: 0.0971 - accuracy: 0.8583 - val_loss: 0.0885 - val_accuracy: 0.9333
Epoch 101/200
4/4 - 0s - loss: 0.0971 - accuracy: 0.8583 - val_loss: 0.0884 - val_accuracy: 0.9333
Epoch 102/200
4/4 - 0s - loss: 0.0970 - accuracy: 0.8583 - val_loss: 0.0883 - val_accuracy: 0.9333
Epoch 103/200
4/4 - 0s - loss: 0.0969 - accuracy: 0.8583 - val_loss: 0.0882 - val_accuracy: 0.9333
Epoch 104/200
4/4 - 0s - loss: 0.0969 - accuracy: 0.8583 - val_loss: 0.0881 - val_accuracy: 0.9333
Epoch 105/200
4/4 - 0s - loss: 0.0968 - accuracy: 0.8583 - val_loss: 0.0880 - val_accuracy: 0.9333
Epoch 106/200
4/4 - 0s - loss: 0.0967 - accuracy: 0.8583 - val_loss: 0.0880 - val_accuracy: 0.9333
Epoch 107/200
4/4 - 0s - loss: 0.0967 - accuracy: 0.8583 - val_loss: 0.0879 - val_accuracy: 0.9333
Epoch 108/200
4/4 - 0s - loss: 0.0966 - accuracy: 0.8583 - val_loss: 0.0878 - val_accuracy: 0.9333
Epoch 109/200
4/4 - 0s - loss: 0.0965 - accuracy: 0.8583 - val_loss: 0.0877 - val_accuracy: 0.9333
Epoch 110/200
4/4 - 0s - loss: 0.0965 - accuracy: 0.8583 - val_loss: 0.0876 - val_accuracy: 0.9333
Epoch 111/200
4/4 - 0s - loss: 0.0964 - accuracy: 0.8583 - val_loss: 0.0876 - val_accuracy: 0.9333
Epoch 112/200
4/4 - 0s - loss: 0.0964 - accuracy: 0.8583 - val_loss: 0.0875 - val_accuracy: 0.9333
Epoch 113/200
4/4 - 0s - loss: 0.0963 - accuracy: 0.8583 - val_loss: 0.0874 - val_accuracy: 0.9333
Epoch 114/200
4/4 - 0s - loss: 0.0962 - accuracy: 0.8583 - val_loss: 0.0873 - val_accuracy: 0.9333
Epoch 115/200
4/4 - 0s - loss: 0.0961 - accuracy: 0.8583 - val_loss: 0.0872 - val_accuracy: 0.9333
Epoch 116/200
4/4 - 0s - loss: 0.0961 - accuracy: 0.8667 - val_loss: 0.0871 - val_accuracy: 0.9333
Epoch 117/200
4/4 - 0s - loss: 0.0960 - accuracy: 0.8583 - val_loss: 0.0870 - val_accuracy: 0.9333
Epoch 118/200
4/4 - 0s - loss: 0.0959 - accuracy: 0.8667 - val_loss: 0.0870 - val_accuracy: 0.9333
Epoch 119/200
4/4 - 0s - loss: 0.0958 - accuracy: 0.8667 - val_loss: 0.0869 - val_accuracy: 0.9333
Epoch 120/200
4/4 - 0s - loss: 0.0958 - accuracy: 0.8667 - val_loss: 0.0868 - val_accuracy: 0.9333
Epoch 121/200
4/4 - 0s - loss: 0.0957 - accuracy: 0.8667 - val_loss: 0.0867 - val_accuracy: 0.9333
Epoch 122/200
4/4 - 0s - loss: 0.0957 - accuracy: 0.8667 - val_loss: 0.0866 - val_accuracy: 0.9333
Epoch 123/200
4/4 - 0s - loss: 0.0956 - accuracy: 0.8667 - val_loss: 0.0866 - val_accuracy: 0.9333
Epoch 124/200
```

Epoch 124/200
4/4 - 0s - loss: 0.0955 - accuracy: 0.8667 - val_loss: 0.0865 - val_accuracy: 0.9333
Epoch 125/200
4/4 - 0s - loss: 0.0955 - accuracy: 0.8667 - val_loss: 0.0864 - val_accuracy: 0.9333
Epoch 126/200
4/4 - 0s - loss: 0.0954 - accuracy: 0.8667 - val_loss: 0.0863 - val_accuracy: 0.9333
Epoch 127/200
4/4 - 0s - loss: 0.0954 - accuracy: 0.8667 - val_loss: 0.0862 - val_accuracy: 0.9333
Epoch 128/200
4/4 - 0s - loss: 0.0953 - accuracy: 0.8667 - val_loss: 0.0861 - val_accuracy: 0.9333
Epoch 129/200
4/4 - 0s - loss: 0.0952 - accuracy: 0.8667 - val_loss: 0.0861 - val_accuracy: 0.9333
Epoch 130/200
4/4 - 0s - loss: 0.0951 - accuracy: 0.8667 - val_loss: 0.0860 - val_accuracy: 0.9333
Epoch 131/200
4/4 - 0s - loss: 0.0951 - accuracy: 0.8667 - val_loss: 0.0859 - val_accuracy: 0.9333
Epoch 132/200
4/4 - 0s - loss: 0.0950 - accuracy: 0.8667 - val_loss: 0.0858 - val_accuracy: 0.9333
Epoch 133/200
4/4 - 0s - loss: 0.0949 - accuracy: 0.8667 - val_loss: 0.0857 - val_accuracy: 0.9333
Epoch 134/200
4/4 - 0s - loss: 0.0949 - accuracy: 0.8667 - val_loss: 0.0856 - val_accuracy: 0.9333
Epoch 135/200
4/4 - 0s - loss: 0.0948 - accuracy: 0.8667 - val_loss: 0.0856 - val_accuracy: 0.9333
Epoch 136/200
4/4 - 0s - loss: 0.0947 - accuracy: 0.8667 - val_loss: 0.0855 - val_accuracy: 0.9333
Epoch 137/200
4/4 - 0s - loss: 0.0946 - accuracy: 0.8667 - val_loss: 0.0854 - val_accuracy: 0.9333
Epoch 138/200
4/4 - 0s - loss: 0.0946 - accuracy: 0.8667 - val_loss: 0.0853 - val_accuracy: 0.9333
Epoch 139/200
4/4 - 0s - loss: 0.0945 - accuracy: 0.8667 - val_loss: 0.0852 - val_accuracy: 0.9333
Epoch 140/200
4/4 - 0s - loss: 0.0944 - accuracy: 0.8667 - val_loss: 0.0851 - val_accuracy: 0.9333
Epoch 141/200
4/4 - 0s - loss: 0.0944 - accuracy: 0.8667 - val_loss: 0.0851 - val_accuracy: 0.9333
Epoch 142/200
4/4 - 0s - loss: 0.0943 - accuracy: 0.8667 - val_loss: 0.0850 - val_accuracy: 0.9333
Epoch 143/200
4/4 - 0s - loss: 0.0942 - accuracy: 0.8667 - val_loss: 0.0849 - val_accuracy: 0.9333
Epoch 144/200
4/4 - 0s - loss: 0.0942 - accuracy: 0.8667 - val_loss: 0.0848 - val_accuracy: 0.9333
Epoch 145/200
4/4 - 0s - loss: 0.0941 - accuracy: 0.8667 - val_loss: 0.0847 - val_accuracy: 0.9333
Epoch 146/200
4/4 - 0s - loss: 0.0940 - accuracy: 0.8667 - val_loss: 0.0846 - val_accuracy: 0.9333
Epoch 147/200
4/4 - 0s - loss: 0.0940 - accuracy: 0.8667 - val_loss: 0.0845 - val_accuracy: 0.9333
Epoch 148/200
4/4 - 0s - loss: 0.0939 - accuracy: 0.8667 - val_loss: 0.0845 - val_accuracy: 0.9333
Epoch 149/200
4/4 - 0s - loss: 0.0938 - accuracy: 0.8667 - val_loss: 0.0844 - val_accuracy: 0.9333
Epoch 150/200
4/4 - 0s - loss: 0.0937 - accuracy: 0.8667 - val_loss: 0.0843 - val_accuracy: 0.9333
Epoch 151/200
4/4 - 0s - loss: 0.0937 - accuracy: 0.8667 - val_loss: 0.0842 - val_accuracy: 0.9333
Epoch 152/200
4/4 - 0s - loss: 0.0936 - accuracy: 0.8667 - val_loss: 0.0841 - val_accuracy: 0.9333
Epoch 153/200
4/4 - 0s - loss: 0.0935 - accuracy: 0.8667 - val_loss: 0.0840 - val_accuracy: 0.9333
Epoch 154/200

Epoch 154/200
4/4 - 0s - loss: 0.0935 - accuracy: 0.8667 - val_loss: 0.0839 - val_accuracy: 0.9333
Epoch 155/200
4/4 - 0s - loss: 0.0934 - accuracy: 0.8667 - val_loss: 0.0839 - val_accuracy: 0.9333
Epoch 156/200
4/4 - 0s - loss: 0.0933 - accuracy: 0.8667 - val_loss: 0.0838 - val_accuracy: 0.9333
Epoch 157/200
4/4 - 0s - loss: 0.0933 - accuracy: 0.8667 - val_loss: 0.0837 - val_accuracy: 0.9333
Epoch 158/200
4/4 - 0s - loss: 0.0932 - accuracy: 0.8667 - val_loss: 0.0836 - val_accuracy: 0.9333
Epoch 159/200
4/4 - 0s - loss: 0.0931 - accuracy: 0.8667 - val_loss: 0.0835 - val_accuracy: 0.9333
Epoch 160/200
4/4 - 0s - loss: 0.0931 - accuracy: 0.8667 - val_loss: 0.0835 - val_accuracy: 0.9333
Epoch 161/200
4/4 - 0s - loss: 0.0930 - accuracy: 0.8750 - val_loss: 0.0834 - val_accuracy: 0.9333
Epoch 162/200
4/4 - 0s - loss: 0.0929 - accuracy: 0.8667 - val_loss: 0.0833 - val_accuracy: 0.9333
Epoch 163/200
4/4 - 0s - loss: 0.0928 - accuracy: 0.8750 - val_loss: 0.0832 - val_accuracy: 0.9333
Epoch 164/200
4/4 - 0s - loss: 0.0928 - accuracy: 0.8750 - val_loss: 0.0831 - val_accuracy: 0.9333
Epoch 165/200
4/4 - 0s - loss: 0.0927 - accuracy: 0.8750 - val_loss: 0.0830 - val_accuracy: 0.9333
Epoch 166/200
4/4 - 0s - loss: 0.0926 - accuracy: 0.8750 - val_loss: 0.0829 - val_accuracy: 0.9333
Epoch 167/200
4/4 - 0s - loss: 0.0925 - accuracy: 0.8750 - val_loss: 0.0829 - val_accuracy: 0.9333
Epoch 168/200
4/4 - 0s - loss: 0.0925 - accuracy: 0.8750 - val_loss: 0.0828 - val_accuracy: 0.9333
Epoch 169/200
4/4 - 0s - loss: 0.0924 - accuracy: 0.8750 - val_loss: 0.0827 - val_accuracy: 0.9333
Epoch 170/200
4/4 - 0s - loss: 0.0923 - accuracy: 0.8750 - val_loss: 0.0826 - val_accuracy: 0.9333
Epoch 171/200
4/4 - 0s - loss: 0.0923 - accuracy: 0.8750 - val_loss: 0.0825 - val_accuracy: 0.9333
Epoch 172/200
4/4 - 0s - loss: 0.0922 - accuracy: 0.8750 - val_loss: 0.0824 - val_accuracy: 0.9333
Epoch 173/200
4/4 - 0s - loss: 0.0921 - accuracy: 0.8750 - val_loss: 0.0824 - val_accuracy: 0.9333
Epoch 174/200
4/4 - 0s - loss: 0.0921 - accuracy: 0.8750 - val_loss: 0.0823 - val_accuracy: 0.9333
Epoch 175/200
4/4 - 0s - loss: 0.0920 - accuracy: 0.8750 - val_loss: 0.0822 - val_accuracy: 0.9333
Epoch 176/200
4/4 - 0s - loss: 0.0919 - accuracy: 0.8750 - val_loss: 0.0821 - val_accuracy: 0.9333
Epoch 177/200
4/4 - 0s - loss: 0.0918 - accuracy: 0.8750 - val_loss: 0.0820 - val_accuracy: 0.9333
Epoch 178/200
4/4 - 0s - loss: 0.0918 - accuracy: 0.8750 - val_loss: 0.0819 - val_accuracy: 0.9333
Epoch 179/200
4/4 - 0s - loss: 0.0917 - accuracy: 0.8750 - val_loss: 0.0818 - val_accuracy: 0.9333
Epoch 180/200
4/4 - 0s - loss: 0.0916 - accuracy: 0.8750 - val_loss: 0.0818 - val_accuracy: 0.9333
Epoch 181/200
4/4 - 0s - loss: 0.0916 - accuracy: 0.8750 - val_loss: 0.0817 - val_accuracy: 0.9333
Epoch 182/200
4/4 - 0s - loss: 0.0915 - accuracy: 0.8750 - val_loss: 0.0816 - val_accuracy: 0.9333
Epoch 183/200
4/4 - 0s - loss: 0.0914 - accuracy: 0.8750 - val_loss: 0.0815 - val_accuracy: 0.9333
Epoch 184/200

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4/4 - 0s - loss: 0.0913 - accuracy: 0.8750 - val_loss: 0.0814 - val_accuracy: 0.9333
Epoch 185/200
4/4 - 0s - loss: 0.0913 - accuracy: 0.8750 - val_loss: 0.0813 - val_accuracy: 0.9333
Epoch 186/200
4/4 - 0s - loss: 0.0912 - accuracy: 0.8750 - val_loss: 0.0813 - val_accuracy: 0.9333
Epoch 187/200
4/4 - 0s - loss: 0.0911 - accuracy: 0.8750 - val_loss: 0.0812 - val_accuracy: 0.9333
Epoch 188/200
4/4 - 0s - loss: 0.0911 - accuracy: 0.8750 - val_loss: 0.0811 - val_accuracy: 0.9333
Epoch 189/200
4/4 - 0s - loss: 0.0910 - accuracy: 0.8750 - val_loss: 0.0810 - val_accuracy: 0.9333
Epoch 190/200
4/4 - 0s - loss: 0.0909 - accuracy: 0.8750 - val_loss: 0.0809 - val_accuracy: 0.9333
Epoch 191/200
4/4 - 0s - loss: 0.0908 - accuracy: 0.8750 - val_loss: 0.0808 - val_accuracy: 0.9333
Epoch 192/200
4/4 - 0s - loss: 0.0908 - accuracy: 0.8750 - val_loss: 0.0807 - val_accuracy: 0.9333
Epoch 193/200
4/4 - 0s - loss: 0.0907 - accuracy: 0.8750 - val_loss: 0.0807 - val_accuracy: 0.9333
Epoch 194/200
4/4 - 0s - loss: 0.0906 - accuracy: 0.8750 - val_loss: 0.0806 - val_accuracy: 0.9333
Epoch 195/200
4/4 - 0s - loss: 0.0906 - accuracy: 0.8750 - val_loss: 0.0805 - val_accuracy: 0.9333
Epoch 196/200
4/4 - 0s - loss: 0.0905 - accuracy: 0.8750 - val_loss: 0.0804 - val_accuracy: 0.9333
Epoch 197/200
4/4 - 0s - loss: 0.0904 - accuracy: 0.8750 - val_loss: 0.0803 - val_accuracy: 0.9333
Epoch 198/200
4/4 - 0s - loss: 0.0904 - accuracy: 0.8750 - val_loss: 0.0802 - val_accuracy: 0.9333
Epoch 199/200
4/4 - 0s - loss: 0.0903 - accuracy: 0.8750 - val_loss: 0.0801 - val_accuracy: 0.9333
Epoch 200/200
4/4 - 0s - loss: 0.0902 - accuracy: 0.8750 - val_loss: 0.0801 - val_accuracy: 0.9333
Activation: tanh LR: 0.01 Iterations: 200 || Test loss: 0.08005185425281525
Activation: tanh LR: 0.01 Iterations: 200 || Test Accuracy: 0.9333333373069763
================================================================================
Model_tanh_LR_0.1_Iterations_100_HL_3
Epoch 1/100
4/4 - 1s - loss: 0.3307 - accuracy: 0.4000 - val_loss: 0.2563 - val_accuracy: 0.5500
Epoch 2/100
4/4 - 0s - loss: 0.2336 - accuracy: 0.6667 - val_loss: 0.1988 - val_accuracy: 0.7083
Epoch 3/100
4/4 - 0s - loss: 0.1882 - accuracy: 0.6917 - val_loss: 0.1712 - val_accuracy: 0.6667
Epoch 4/100
4/4 - 0s - loss: 0.1658 - accuracy: 0.6667 - val_loss: 0.1560 - val_accuracy: 0.6750
Epoch 5/100
4/4 - 0s - loss: 0.1529 - accuracy: 0.6750 - val_loss: 0.1472 - val_accuracy: 0.6583
Epoch 6/100
4/4 - 0s - loss: 0.1452 - accuracy: 0.6583 - val_loss: 0.1417 - val_accuracy: 0.6750
Epoch 7/100
4/4 - 0s - loss: 0.1404 - accuracy: 0.6750 - val_loss: 0.1380 - val_accuracy: 0.6750
Epoch 8/100
4/4 - 0s - loss: 0.1374 - accuracy: 0.6750 - val_loss: 0.1353 - val_accuracy: 0.6833
Epoch 9/100
4/4 - 0s - loss: 0.1347 - accuracy: 0.6833 - val_loss: 0.1332 - val_accuracy: 0.6833
Epoch 10/100
4/4 - 0s - loss: 0.1330 - accuracy: 0.6833 - val_loss: 0.1317 - val_accuracy: 0.6833
Epoch 11/100
4/4 - 0s - loss: 0.1316 - accuracy: 0.6833 - val_loss: 0.1303 - val_accuracy: 0.6917
Epoch 12/100
```

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4/4 - 0s - loss: 0.1306 - accuracy: 0.6833 - val_loss: 0.1291 - val_accuracy: 0.6917
Epoch 13/100
4/4 - 0s - loss: 0.1291 - accuracy: 0.6917 - val_loss: 0.1280 - val_accuracy: 0.7000
Epoch 14/100
4/4 - 0s - loss: 0.1278 - accuracy: 0.7000 - val_loss: 0.1270 - val_accuracy: 0.7000
Epoch 15/100
4/4 - 0s - loss: 0.1270 - accuracy: 0.7000 - val_loss: 0.1261 - val_accuracy: 0.7083
Epoch 16/100
4/4 - 0s - loss: 0.1260 - accuracy: 0.7083 - val_loss: 0.1252 - val_accuracy: 0.7083
Epoch 17/100
4/4 - 0s - loss: 0.1255 - accuracy: 0.7167 - val_loss: 0.1244 - val_accuracy: 0.7167
Epoch 18/100
4/4 - 0s - loss: 0.1243 - accuracy: 0.7167 - val_loss: 0.1236 - val_accuracy: 0.7250
Epoch 19/100
4/4 - 0s - loss: 0.1236 - accuracy: 0.7250 - val_loss: 0.1229 - val_accuracy: 0.7250
Epoch 20/100
4/4 - 0s - loss: 0.1228 - accuracy: 0.7250 - val_loss: 0.1222 - val_accuracy: 0.7417
Epoch 21/100
4/4 - 0s - loss: 0.1224 - accuracy: 0.7417 - val_loss: 0.1215 - val_accuracy: 0.7417
Epoch 22/100
4/4 - 0s - loss: 0.1215 - accuracy: 0.7417 - val_loss: 0.1208 - val_accuracy: 0.7500
Epoch 23/100
4/4 - 0s - loss: 0.1207 - accuracy: 0.7583 - val_loss: 0.1202 - val_accuracy: 0.7583
Epoch 24/100
4/4 - 0s - loss: 0.1202 - accuracy: 0.7500 - val_loss: 0.1196 - val_accuracy: 0.7667
Epoch 25/100
4/4 - 0s - loss: 0.1197 - accuracy: 0.7667 - val_loss: 0.1190 - val_accuracy: 0.7667
Epoch 26/100
4/4 - 0s - loss: 0.1191 - accuracy: 0.7667 - val_loss: 0.1184 - val_accuracy: 0.7667
Epoch 27/100
4/4 - 0s - loss: 0.1185 - accuracy: 0.7667 - val_loss: 0.1179 - val_accuracy: 0.7667
Epoch 28/100
4/4 - 0s - loss: 0.1180 - accuracy: 0.7583 - val_loss: 0.1174 - val_accuracy: 0.7667
Epoch 29/100
4/4 - 0s - loss: 0.1174 - accuracy: 0.7583 - val_loss: 0.1169 - val_accuracy: 0.7583
Epoch 30/100
4/4 - 0s - loss: 0.1170 - accuracy: 0.7667 - val_loss: 0.1165 - val_accuracy: 0.7667
Epoch 31/100
4/4 - 0s - loss: 0.1165 - accuracy: 0.7667 - val_loss: 0.1160 - val_accuracy: 0.7667
Epoch 32/100
4/4 - 0s - loss: 0.1160 - accuracy: 0.7667 - val_loss: 0.1156 - val_accuracy: 0.7917
Epoch 33/100
4/4 - 0s - loss: 0.1155 - accuracy: 0.7917 - val_loss: 0.1152 - val_accuracy: 0.7917
Epoch 34/100
4/4 - 0s - loss: 0.1152 - accuracy: 0.7917 - val_loss: 0.1148 - val_accuracy: 0.7917
Epoch 35/100
4/4 - 0s - loss: 0.1148 - accuracy: 0.7917 - val_loss: 0.1144 - val_accuracy: 0.8083
Epoch 36/100
4/4 - 0s - loss: 0.1146 - accuracy: 0.8083 - val_loss: 0.1141 - val_accuracy: 0.8083
Epoch 37/100
4/4 - 0s - loss: 0.1145 - accuracy: 0.8000 - val_loss: 0.1138 - val_accuracy: 0.8167
Epoch 38/100
4/4 - 0s - loss: 0.1139 - accuracy: 0.8167 - val_loss: 0.1134 - val_accuracy: 0.8167
Epoch 39/100
4/4 - 0s - loss: 0.1135 - accuracy: 0.8167 - val_loss: 0.1131 - val_accuracy: 0.8083
Epoch 40/100
4/4 - 0s - loss: 0.1132 - accuracy: 0.8083 - val_loss: 0.1128 - val_accuracy: 0.8083
Epoch 41/100
4/4 - 0s - loss: 0.1130 - accuracy: 0.8083 - val_loss: 0.1125 - val_accuracy: 0.8000
Epoch 42/100
4/4 - 0s - loss: 0.1127 - accuracy: 0.8000 - val_loss: 0.1123 - val_accuracy: 0.8000
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4/4 - 0s - loss: 0.1127 - accuracy: 0.8000 - val_loss: 0.1123 - val_accuracy: 0.8000
Epoch 43/100
4/4 - 0s - loss: 0.1124 - accuracy: 0.8000 - val_loss: 0.1121 - val_accuracy: 0.8000
Epoch 44/100
4/4 - 0s - loss: 0.1122 - accuracy: 0.8000 - val_loss: 0.1118 - val_accuracy: 0.8000
Epoch 45/100
4/4 - 0s - loss: 0.1121 - accuracy: 0.8000 - val_loss: 0.1116 - val_accuracy: 0.8000
Epoch 46/100
4/4 - 0s - loss: 0.1118 - accuracy: 0.8000 - val_loss: 0.1114 - val_accuracy: 0.8167
Epoch 47/100
4/4 - 0s - loss: 0.1115 - accuracy: 0.8000 - val_loss: 0.1112 - val_accuracy: 0.8167
Epoch 48/100
4/4 - 0s - loss: 0.1113 - accuracy: 0.8167 - val_loss: 0.1110 - val_accuracy: 0.8000
Epoch 49/100
4/4 - 0s - loss: 0.1113 - accuracy: 0.8083 - val_loss: 0.1108 - val_accuracy: 0.8083
Epoch 50/100
4/4 - 0s - loss: 0.1110 - accuracy: 0.8000 - val_loss: 0.1106 - val_accuracy: 0.8083
Epoch 51/100
4/4 - 0s - loss: 0.1107 - accuracy: 0.8000 - val_loss: 0.1104 - val_accuracy: 0.8083
Epoch 52/100
4/4 - 0s - loss: 0.1107 - accuracy: 0.8083 - val_loss: 0.1103 - val_accuracy: 0.8000
Epoch 53/100
4/4 - 0s - loss: 0.1108 - accuracy: 0.7917 - val_loss: 0.1101 - val_accuracy: 0.8083
Epoch 54/100
4/4 - 0s - loss: 0.1103 - accuracy: 0.8083 - val_loss: 0.1100 - val_accuracy: 0.8083
Epoch 55/100
4/4 - 0s - loss: 0.1101 - accuracy: 0.8000 - val_loss: 0.1098 - val_accuracy: 0.8083
Epoch 56/100
4/4 - 0s - loss: 0.1100 - accuracy: 0.8000 - val_loss: 0.1096 - val_accuracy: 0.8000
Epoch 57/100
4/4 - 0s - loss: 0.1098 - accuracy: 0.8000 - val_loss: 0.1095 - val_accuracy: 0.8000
Epoch 58/100
4/4 - 0s - loss: 0.1103 - accuracy: 0.8000 - val_loss: 0.1094 - val_accuracy: 0.8000
Epoch 59/100
4/4 - 0s - loss: 0.1096 - accuracy: 0.7917 - val_loss: 0.1092 - val_accuracy: 0.8000
Epoch 60/100
4/4 - 0s - loss: 0.1094 - accuracy: 0.8000 - val_loss: 0.1091 - val_accuracy: 0.7917
Epoch 61/100
4/4 - 0s - loss: 0.1092 - accuracy: 0.7917 - val_loss: 0.1089 - val_accuracy: 0.8000
Epoch 62/100
4/4 - 0s - loss: 0.1090 - accuracy: 0.8000 - val_loss: 0.1088 - val_accuracy: 0.8000
Epoch 63/100
4/4 - 0s - loss: 0.1091 - accuracy: 0.7917 - val_loss: 0.1087 - val_accuracy: 0.8000
Epoch 64/100
4/4 - 0s - loss: 0.1091 - accuracy: 0.8000 - val_loss: 0.1085 - val_accuracy: 0.8000
Epoch 65/100
4/4 - 0s - loss: 0.1090 - accuracy: 0.7833 - val_loss: 0.1084 - val_accuracy: 0.8000
Epoch 66/100
4/4 - 0s - loss: 0.1086 - accuracy: 0.8000 - val_loss: 0.1083 - val_accuracy: 0.8000
Epoch 67/100
4/4 - 0s - loss: 0.1084 - accuracy: 0.8083 - val_loss: 0.1082 - val_accuracy: 0.8000
Epoch 68/100
4/4 - 0s - loss: 0.1086 - accuracy: 0.7917 - val_loss: 0.1081 - val_accuracy: 0.8000
Epoch 69/100
4/4 - 0s - loss: 0.1083 - accuracy: 0.8000 - val_loss: 0.1080 - val_accuracy: 0.8000
Epoch 70/100
4/4 - 0s - loss: 0.1083 - accuracy: 0.7917 - val_loss: 0.1079 - val_accuracy: 0.8000
Epoch 71/100
4/4 - 0s - loss: 0.1082 - accuracy: 0.7917 - val_loss: 0.1078 - val_accuracy: 0.8000
Epoch 72/100
4/4 - 0s - loss: 0.1080 - accuracy: 0.7917 - val_loss: 0.1077 - val_accuracy: 0.8000

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Epoch 73/100
4/4 - 0s - loss: 0.1081 - accuracy: 0.7917 - val_loss: 0.1076 - val_accuracy: 0.8000
Epoch 74/100
4/4 - 0s - loss: 0.1079 - accuracy: 0.7917 - val_loss: 0.1075 - val_accuracy: 0.8000
Epoch 75/100
4/4 - 0s - loss: 0.1077 - accuracy: 0.8000 - val_loss: 0.1074 - val_accuracy: 0.8167
Epoch 76/100
4/4 - 0s - loss: 0.1076 - accuracy: 0.8083 - val_loss: 0.1073 - val_accuracy: 0.8167
Epoch 77/100
4/4 - 0s - loss: 0.1077 - accuracy: 0.8083 - val_loss: 0.1072 - val_accuracy: 0.8083
Epoch 78/100
4/4 - 0s - loss: 0.1074 - accuracy: 0.8083 - val_loss: 0.1071 - val_accuracy: 0.8083
Epoch 79/100
4/4 - 0s - loss: 0.1077 - accuracy: 0.7917 - val_loss: 0.1070 - val_accuracy: 0.8167
Epoch 80/100
4/4 - 0s - loss: 0.1073 - accuracy: 0.8083 - val_loss: 0.1069 - val_accuracy: 0.8083
Epoch 81/100
4/4 - 0s - loss: 0.1073 - accuracy: 0.8083 - val_loss: 0.1069 - val_accuracy: 0.8167
Epoch 82/100
4/4 - 0s - loss: 0.1070 - accuracy: 0.8167 - val_loss: 0.1068 - val_accuracy: 0.8083
Epoch 83/100
4/4 - 0s - loss: 0.1070 - accuracy: 0.8083 - val_loss: 0.1067 - val_accuracy: 0.8167
Epoch 84/100
4/4 - 0s - loss: 0.1068 - accuracy: 0.8167 - val_loss: 0.1066 - val_accuracy: 0.8167
Epoch 85/100
4/4 - 0s - loss: 0.1069 - accuracy: 0.8000 - val_loss: 0.1065 - val_accuracy: 0.8083
Epoch 86/100
4/4 - 0s - loss: 0.1067 - accuracy: 0.8083 - val_loss: 0.1064 - val_accuracy: 0.8083
Epoch 87/100
4/4 - 0s - loss: 0.1066 - accuracy: 0.8083 - val_loss: 0.1064 - val_accuracy: 0.8083
Epoch 88/100
4/4 - 0s - loss: 0.1066 - accuracy: 0.8083 - val_loss: 0.1063 - val_accuracy: 0.8083
Epoch 89/100
4/4 - 0s - loss: 0.1067 - accuracy: 0.8083 - val_loss: 0.1062 - val_accuracy: 0.8167
Epoch 90/100
4/4 - 0s - loss: 0.1066 - accuracy: 0.8083 - val_loss: 0.1061 - val_accuracy: 0.8083
Epoch 91/100
4/4 - 0s - loss: 0.1065 - accuracy: 0.8083 - val_loss: 0.1061 - val_accuracy: 0.8083
Epoch 92/100
4/4 - 0s - loss: 0.1062 - accuracy: 0.8083 - val_loss: 0.1060 - val_accuracy: 0.8167
Epoch 93/100
4/4 - 0s - loss: 0.1061 - accuracy: 0.8000 - val_loss: 0.1059 - val_accuracy: 0.8083
Epoch 94/100
4/4 - 0s - loss: 0.1062 - accuracy: 0.8083 - val_loss: 0.1058 - val_accuracy: 0.8083
Epoch 95/100
4/4 - 0s - loss: 0.1060 - accuracy: 0.8083 - val_loss: 0.1057 - val_accuracy: 0.8083
Epoch 96/100
4/4 - 0s - loss: 0.1059 - accuracy: 0.8000 - val_loss: 0.1057 - val_accuracy: 0.8083
Epoch 97/100
4/4 - 0s - loss: 0.1060 - accuracy: 0.8083 - val_loss: 0.1056 - val_accuracy: 0.8083
Epoch 98/100
4/4 - 0s - loss: 0.1057 - accuracy: 0.8000 - val_loss: 0.1055 - val_accuracy: 0.8083
Epoch 99/100
4/4 - 0s - loss: 0.1058 - accuracy: 0.8000 - val_loss: 0.1054 - val_accuracy: 0.8083
Epoch 100/100
4/4 - 0s - loss: 0.1056 - accuracy: 0.8083 - val_loss: 0.1053 - val_accuracy: 0.8083
Activation: tanh LR: 0.1 Itertions: 100 || Train loss: 0.1053495928645134
Activation: tanh LR: 0.1 Itertions: 100 || Train Accuracy: 0.8083333373069763
Epoch 1/100
4/4 - 0s - loss: 0.1064 - accuracy: 0.8000 - val_loss: 0.0966 - val_accuracy: 0.9000
```

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Epoch 2/100
4/4 - 0s - loss: 0.1054 - accuracy: 0.8083 - val_loss: 0.0964 - val_accuracy: 0.9000
Epoch 3/100
4/4 - 0s - loss: 0.1057 - accuracy: 0.8083 - val_loss: 0.0962 - val_accuracy: 0.9000
Epoch 4/100
4/4 - 0s - loss: 0.1061 - accuracy: 0.8083 - val_loss: 0.0961 - val_accuracy: 0.9000
Epoch 5/100
4/4 - 0s - loss: 0.1053 - accuracy: 0.8083 - val_loss: 0.0961 - val_accuracy: 0.9000
Epoch 6/100
4/4 - 0s - loss: 0.1052 - accuracy: 0.8083 - val_loss: 0.0961 - val_accuracy: 0.9000
Epoch 7/100
4/4 - 0s - loss: 0.1052 - accuracy: 0.8167 - val_loss: 0.0959 - val_accuracy: 0.9000
Epoch 8/100
4/4 - 0s - loss: 0.1050 - accuracy: 0.8167 - val_loss: 0.0958 - val_accuracy: 0.9000
Epoch 9/100
4/4 - 0s - loss: 0.1051 - accuracy: 0.8000 - val_loss: 0.0958 - val_accuracy: 0.9000
Epoch 10/100
4/4 - 0s - loss: 0.1051 - accuracy: 0.8000 - val_loss: 0.0958 - val_accuracy: 0.9000
Epoch 11/100
4/4 - 0s - loss: 0.1047 - accuracy: 0.8167 - val_loss: 0.0957 - val_accuracy: 0.9000
Epoch 12/100
4/4 - 0s - loss: 0.1046 - accuracy: 0.8167 - val_loss: 0.0956 - val_accuracy: 0.9000
Epoch 13/100
4/4 - 0s - loss: 0.1049 - accuracy: 0.8083 - val_loss: 0.0952 - val_accuracy: 0.9000
Epoch 14/100
4/4 - 0s - loss: 0.1048 - accuracy: 0.8167 - val_loss: 0.0951 - val_accuracy: 0.9000
Epoch 15/100
4/4 - 0s - loss: 0.1045 - accuracy: 0.8083 - val_loss: 0.0951 - val_accuracy: 0.9000
Epoch 16/100
4/4 - 0s - loss: 0.1042 - accuracy: 0.8167 - val_loss: 0.0951 - val_accuracy: 0.9000
Epoch 17/100
4/4 - 0s - loss: 0.1044 - accuracy: 0.8083 - val_loss: 0.0948 - val_accuracy: 0.9000
Epoch 18/100
4/4 - 0s - loss: 0.1044 - accuracy: 0.8167 - val_loss: 0.0948 - val_accuracy: 0.9000
Epoch 19/100
4/4 - 0s - loss: 0.1042 - accuracy: 0.8083 - val_loss: 0.0945 - val_accuracy: 0.9000
Epoch 20/100
4/4 - 0s - loss: 0.1040 - accuracy: 0.8167 - val_loss: 0.0945 - val_accuracy: 0.9000
Epoch 21/100
4/4 - 0s - loss: 0.1040 - accuracy: 0.8167 - val_loss: 0.0945 - val_accuracy: 0.9000
Epoch 22/100
4/4 - 0s - loss: 0.1040 - accuracy: 0.8083 - val_loss: 0.0943 - val_accuracy: 0.9000
Epoch 23/100
4/4 - 0s - loss: 0.1039 - accuracy: 0.8167 - val_loss: 0.0941 - val_accuracy: 0.9000
Epoch 24/100
4/4 - 0s - loss: 0.1040 - accuracy: 0.8167 - val_loss: 0.0940 - val_accuracy: 0.9000
Epoch 25/100
4/4 - 0s - loss: 0.1038 - accuracy: 0.8167 - val_loss: 0.0939 - val_accuracy: 0.9000
Epoch 26/100
4/4 - 0s - loss: 0.1035 - accuracy: 0.8167 - val_loss: 0.0940 - val_accuracy: 0.9000
Epoch 27/100
4/4 - 0s - loss: 0.1036 - accuracy: 0.8083 - val_loss: 0.0939 - val_accuracy: 0.9000
Epoch 28/100
4/4 - 0s - loss: 0.1035 - accuracy: 0.8167 - val_loss: 0.0938 - val_accuracy: 0.9000
Epoch 29/100
4/4 - 0s - loss: 0.1031 - accuracy: 0.8250 - val_loss: 0.0936 - val_accuracy: 0.9000
Epoch 30/100
4/4 - 0s - loss: 0.1032 - accuracy: 0.8083 - val_loss: 0.0935 - val_accuracy: 0.9000
Epoch 31/100
4/4 - 0s - loss: 0.1033 - accuracy: 0.8250 - val_loss: 0.0934 - val_accuracy: 0.9000
```

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Epoch 32/100
4/4 - 0s - loss: 0.1030 - accuracy: 0.8167 - val_loss: 0.0934 - val_accuracy: 0.9000
Epoch 33/100
4/4 - 0s - loss: 0.1028 - accuracy: 0.8167 - val_loss: 0.0933 - val_accuracy: 0.9000
Epoch 34/100
4/4 - 0s - loss: 0.1027 - accuracy: 0.8083 - val_loss: 0.0931 - val_accuracy: 0.9000
Epoch 35/100
4/4 - 0s - loss: 0.1027 - accuracy: 0.8000 - val_loss: 0.0931 - val_accuracy: 0.9000
Epoch 36/100
4/4 - 0s - loss: 0.1025 - accuracy: 0.8083 - val_loss: 0.0928 - val_accuracy: 0.9000
Epoch 37/100
4/4 - 0s - loss: 0.1025 - accuracy: 0.8083 - val_loss: 0.0928 - val_accuracy: 0.9000
Epoch 38/100
4/4 - 0s - loss: 0.1024 - accuracy: 0.8167 - val_loss: 0.0927 - val_accuracy: 0.9000
Epoch 39/100
4/4 - 0s - loss: 0.1024 - accuracy: 0.8167 - val_loss: 0.0927 - val_accuracy: 0.9000
Epoch 40/100
4/4 - 0s - loss: 0.1021 - accuracy: 0.8167 - val_loss: 0.0925 - val_accuracy: 0.9000
Epoch 41/100
4/4 - 0s - loss: 0.1019 - accuracy: 0.8083 - val_loss: 0.0924 - val_accuracy: 0.9000
Epoch 42/100
4/4 - 0s - loss: 0.1019 - accuracy: 0.8083 - val_loss: 0.0922 - val_accuracy: 0.9000
Epoch 43/100
4/4 - 0s - loss: 0.1019 - accuracy: 0.8167 - val_loss: 0.0919 - val_accuracy: 0.9000
Epoch 44/100
4/4 - 0s - loss: 0.1017 - accuracy: 0.8167 - val_loss: 0.0918 - val_accuracy: 0.9000
Epoch 45/100
4/4 - 0s - loss: 0.1016 - accuracy: 0.8000 - val_loss: 0.0916 - val_accuracy: 0.9000
Epoch 46/100
4/4 - 0s - loss: 0.1014 - accuracy: 0.8167 - val_loss: 0.0914 - val_accuracy: 0.9000
Epoch 47/100
4/4 - 0s - loss: 0.1012 - accuracy: 0.8000 - val_loss: 0.0912 - val_accuracy: 0.9000
Epoch 48/100
4/4 - 0s - loss: 0.1012 - accuracy: 0.8167 - val_loss: 0.0910 - val_accuracy: 0.9000
Epoch 49/100
4/4 - 0s - loss: 0.1010 - accuracy: 0.8083 - val_loss: 0.0909 - val_accuracy: 0.9000
Epoch 50/100
4/4 - 0s - loss: 0.1009 - accuracy: 0.8167 - val_loss: 0.0908 - val_accuracy: 0.9000
Epoch 51/100
4/4 - 0s - loss: 0.1006 - accuracy: 0.8083 - val_loss: 0.0907 - val_accuracy: 0.9000
Epoch 52/100
4/4 - 0s - loss: 0.1006 - accuracy: 0.8000 - val_loss: 0.0906 - val_accuracy: 0.9000
Epoch 53/100
4/4 - 0s - loss: 0.1005 - accuracy: 0.8083 - val_loss: 0.0904 - val_accuracy: 0.9000
Epoch 54/100
4/4 - 0s - loss: 0.1001 - accuracy: 0.8167 - val_loss: 0.0904 - val_accuracy: 0.9333
Epoch 55/100
4/4 - 0s - loss: 0.1000 - accuracy: 0.8083 - val_loss: 0.0902 - val_accuracy: 0.9333
Epoch 56/100
4/4 - 0s - loss: 0.0999 - accuracy: 0.8000 - val_loss: 0.0900 - val_accuracy: 0.9333
Epoch 57/100
4/4 - 0s - loss: 0.0997 - accuracy: 0.8000 - val_loss: 0.0898 - val_accuracy: 0.9333
Epoch 58/100
4/4 - 0s - loss: 0.0995 - accuracy: 0.8083 - val_loss: 0.0896 - val_accuracy: 0.9000
Epoch 59/100
4/4 - 0s - loss: 0.0992 - accuracy: 0.8083 - val_loss: 0.0895 - val_accuracy: 0.9333
Epoch 60/100
4/4 - 0s - loss: 0.0991 - accuracy: 0.8167 - val_loss: 0.0894 - val_accuracy: 0.9333
Epoch 61/100
4/4 - 0s - loss: 0.0994 - accuracy: 0.8083 - val_loss: 0.0892 - val_accuracy: 0.9333
Epoch 62/100
```

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Epoch 62/100
4/4 - 0s - loss: 0.0988 - accuracy: 0.8167 - val_loss: 0.0891 - val_accuracy: 0.9333
Epoch 63/100
4/4 - 0s - loss: 0.0984 - accuracy: 0.8167 - val_loss: 0.0889 - val_accuracy: 0.9333
Epoch 64/100
4/4 - 0s - loss: 0.0982 - accuracy: 0.8167 - val_loss: 0.0886 - val_accuracy: 0.9333
Epoch 65/100
4/4 - 0s - loss: 0.0982 - accuracy: 0.8333 - val_loss: 0.0884 - val_accuracy: 0.9333
Epoch 66/100
4/4 - 0s - loss: 0.0980 - accuracy: 0.8250 - val_loss: 0.0883 - val_accuracy: 0.9333
Epoch 67/100
4/4 - 0s - loss: 0.0977 - accuracy: 0.8250 - val_loss: 0.0881 - val_accuracy: 0.9333
Epoch 68/100
4/4 - 0s - loss: 0.0978 - accuracy: 0.8250 - val_loss: 0.0878 - val_accuracy: 0.9333
Epoch 69/100
4/4 - 0s - loss: 0.0972 - accuracy: 0.8417 - val_loss: 0.0876 - val_accuracy: 0.9333
Epoch 70/100
4/4 - 0s - loss: 0.0971 - accuracy: 0.8167 - val_loss: 0.0874 - val_accuracy: 0.9333
Epoch 71/100
4/4 - 0s - loss: 0.0969 - accuracy: 0.8333 - val_loss: 0.0873 - val_accuracy: 0.9333
Epoch 72/100
4/4 - 0s - loss: 0.0963 - accuracy: 0.8417 - val_loss: 0.0870 - val_accuracy: 0.9333
Epoch 73/100
4/4 - 0s - loss: 0.0962 - accuracy: 0.8417 - val_loss: 0.0868 - val_accuracy: 0.9333
Epoch 74/100
4/4 - 0s - loss: 0.0960 - accuracy: 0.8333 - val_loss: 0.0865 - val_accuracy: 0.9333
Epoch 75/100
4/4 - 0s - loss: 0.0959 - accuracy: 0.8333 - val_loss: 0.0862 - val_accuracy: 0.9333
Epoch 76/100
4/4 - 0s - loss: 0.0956 - accuracy: 0.8417 - val_loss: 0.0861 - val_accuracy: 0.9667
Epoch 77/100
4/4 - 0s - loss: 0.0951 - accuracy: 0.8417 - val_loss: 0.0858 - val_accuracy: 0.9667
Epoch 78/100
4/4 - 0s - loss: 0.0947 - accuracy: 0.8500 - val_loss: 0.0856 - val_accuracy: 0.9667
Epoch 79/100
4/4 - 0s - loss: 0.0944 - accuracy: 0.8417 - val_loss: 0.0851 - val_accuracy: 0.9667
Epoch 80/100
4/4 - 0s - loss: 0.0942 - accuracy: 0.8417 - val_loss: 0.0848 - val_accuracy: 0.9667
Epoch 81/100
4/4 - 0s - loss: 0.0939 - accuracy: 0.8417 - val_loss: 0.0846 - val_accuracy: 0.9667
Epoch 82/100
4/4 - 0s - loss: 0.0933 - accuracy: 0.8417 - val_loss: 0.0843 - val_accuracy: 0.9667
Epoch 83/100
4/4 - 0s - loss: 0.0930 - accuracy: 0.8417 - val_loss: 0.0840 - val_accuracy: 0.9667
Epoch 84/100
4/4 - 0s - loss: 0.0927 - accuracy: 0.8417 - val_loss: 0.0838 - val_accuracy: 0.9667
Epoch 85/100
4/4 - 0s - loss: 0.0923 - accuracy: 0.8417 - val_loss: 0.0833 - val_accuracy: 0.9667
Epoch 86/100
4/4 - 0s - loss: 0.0919 - accuracy: 0.8417 - val_loss: 0.0830 - val_accuracy: 0.9667
Epoch 87/100
4/4 - 0s - loss: 0.0918 - accuracy: 0.8417 - val_loss: 0.0827 - val_accuracy: 0.9667
Epoch 88/100
4/4 - 0s - loss: 0.0911 - accuracy: 0.8500 - val_loss: 0.0823 - val_accuracy: 0.9667
Epoch 89/100
4/4 - 0s - loss: 0.0906 - accuracy: 0.8667 - val_loss: 0.0819 - val_accuracy: 0.9667
Epoch 90/100
4/4 - 0s - loss: 0.0903 - accuracy: 0.8583 - val_loss: 0.0815 - val_accuracy: 0.9667
Epoch 91/100
4/4 - 0s - loss: 0.0900 - accuracy: 0.8500 - val_loss: 0.0810 - val_accuracy: 0.9667
Epoch 92/100
```

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4/4 - 0s - loss: 0.0894 - accuracy: 0.8667 - val_loss: 0.0807 - val_accuracy: 0.9667
Epoch 93/100
4/4 - 0s - loss: 0.0888 - accuracy: 0.8583 - val_loss: 0.0802 - val_accuracy: 0.9667
Epoch 94/100
4/4 - 0s - loss: 0.0883 - accuracy: 0.8750 - val_loss: 0.0797 - val_accuracy: 0.9667
Epoch 95/100
4/4 - 0s - loss: 0.0882 - accuracy: 0.8750 - val_loss: 0.0791 - val_accuracy: 0.9667
Epoch 96/100
4/4 - 0s - loss: 0.0873 - accuracy: 0.8667 - val_loss: 0.0788 - val_accuracy: 0.9667
Epoch 97/100
4/4 - 0s - loss: 0.0869 - accuracy: 0.8833 - val_loss: 0.0783 - val_accuracy: 0.9667
Epoch 98/100
4/4 - 0s - loss: 0.0864 - accuracy: 0.8917 - val_loss: 0.0778 - val_accuracy: 0.9667
Epoch 99/100
4/4 - 0s - loss: 0.0859 - accuracy: 0.8833 - val_loss: 0.0774 - val_accuracy: 0.9667
Epoch 100/100
4/4 - 0s - loss: 0.0852 - accuracy: 0.9000 - val_loss: 0.0768 - val_accuracy: 0.9667
Activation: tanh LR: 0.1 Iterations: 100 || Test loss: 0.07681489735841751
Activation: tanh LR: 0.1 Iterations: 100 || Test Accuracy: 0.9666666388511658
================================================================================
Model_tanh_LR_0.1_Iterations_200_HL_3
Epoch 1/200
4/4 - 1s - loss: 0.3686 - accuracy: 0.7250 - val_loss: 0.2710 - val_accuracy: 0.6583
Epoch 2/200
4/4 - 0s - loss: 0.2469 - accuracy: 0.6750 - val_loss: 0.2135 - val_accuracy: 0.6917
Epoch 3/200
4/4 - 0s - loss: 0.2045 - accuracy: 0.7000 - val_loss: 0.1896 - val_accuracy: 0.7083
Epoch 4/200
4/4 - 0s - loss: 0.1845 - accuracy: 0.7167 - val_loss: 0.1752 - val_accuracy: 0.7083
Epoch 5/200
4/4 - 0s - loss: 0.1718 - accuracy: 0.7250 - val_loss: 0.1650 - val_accuracy: 0.7333
Epoch 6/200
4/4 - 0s - loss: 0.1624 - accuracy: 0.7250 - val_loss: 0.1567 - val_accuracy: 0.7500
Epoch 7/200
4/4 - 0s - loss: 0.1545 - accuracy: 0.7417 - val_loss: 0.1495 - val_accuracy: 0.7500
Epoch 8/200
4/4 - 0s - loss: 0.1480 - accuracy: 0.7583 - val_loss: 0.1434 - val_accuracy: 0.7750
Epoch 9/200
4/4 - 0s - loss: 0.1416 - accuracy: 0.7667 - val_loss: 0.1378 - val_accuracy: 0.7833
Epoch 10/200
4/4 - 0s - loss: 0.1363 - accuracy: 0.8083 - val_loss: 0.1330 - val_accuracy: 0.7917
Epoch 11/200
4/4 - 0s - loss: 0.1324 - accuracy: 0.7833 - val_loss: 0.1288 - val_accuracy: 0.7833
Epoch 12/200
4/4 - 0s - loss: 0.1287 - accuracy: 0.7750 - val_loss: 0.1253 - val_accuracy: 0.7833
Epoch 13/200
4/4 - 0s - loss: 0.1247 - accuracy: 0.7833 - val_loss: 0.1222 - val_accuracy: 0.7917
Epoch 14/200
4/4 - 0s - loss: 0.1224 - accuracy: 0.7917 - val_loss: 0.1195 - val_accuracy: 0.8167
Epoch 15/200
4/4 - 0s - loss: 0.1189 - accuracy: 0.8167 - val_loss: 0.1171 - val_accuracy: 0.8417
Epoch 16/200
4/4 - 0s - loss: 0.1171 - accuracy: 0.8167 - val_loss: 0.1151 - val_accuracy: 0.8333
Epoch 17/200
4/4 - 0s - loss: 0.1150 - accuracy: 0.8250 - val_loss: 0.1132 - val_accuracy: 0.8500
Epoch 18/200
4/4 - 0s - loss: 0.1128 - accuracy: 0.8500 - val_loss: 0.1115 - val_accuracy: 0.8417
Epoch 19/200
4/4 - 0s - loss: 0.1113 - accuracy: 0.8333 - val_loss: 0.1101 - val_accuracy: 0.8417
Epoch 20/200
```

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4/4 - 0s - loss: 0.1099 - accuracy: 0.8250 - val_loss: 0.1088 - val_accuracy: 0.8417
Epoch 21/200
4/4 - 0s - loss: 0.1086 - accuracy: 0.8417 - val_loss: 0.1075 - val_accuracy: 0.8417
Epoch 22/200
4/4 - 0s - loss: 0.1076 - accuracy: 0.8333 - val_loss: 0.1064 - val_accuracy: 0.8417
Epoch 23/200
4/4 - 0s - loss: 0.1063 - accuracy: 0.8333 - val_loss: 0.1053 - val_accuracy: 0.8500
Epoch 24/200
4/4 - 0s - loss: 0.1056 - accuracy: 0.8500 - val_loss: 0.1043 - val_accuracy: 0.8333
Epoch 25/200
4/4 - 0s - loss: 0.1043 - accuracy: 0.8333 - val_loss: 0.1033 - val_accuracy: 0.8417
Epoch 26/200
4/4 - 0s - loss: 0.1036 - accuracy: 0.8417 - val_loss: 0.1024 - val_accuracy: 0.8417
Epoch 27/200
4/4 - 0s - loss: 0.1028 - accuracy: 0.8417 - val_loss: 0.1014 - val_accuracy: 0.8417
Epoch 28/200
4/4 - 0s - loss: 0.1013 - accuracy: 0.8333 - val_loss: 0.1005 - val_accuracy: 0.8417
Epoch 29/200
4/4 - 0s - loss: 0.1004 - accuracy: 0.8500 - val_loss: 0.0995 - val_accuracy: 0.8500
Epoch 30/200
4/4 - 0s - loss: 0.1000 - accuracy: 0.8583 - val_loss: 0.0987 - val_accuracy: 0.8417
Epoch 31/200
4/4 - 0s - loss: 0.0990 - accuracy: 0.8417 - val_loss: 0.0977 - val_accuracy: 0.8500
Epoch 32/200
4/4 - 0s - loss: 0.0980 - accuracy: 0.8500 - val_loss: 0.0968 - val_accuracy: 0.8500
Epoch 33/200
4/4 - 0s - loss: 0.0969 - accuracy: 0.8583 - val_loss: 0.0959 - val_accuracy: 0.8500
Epoch 34/200
4/4 - 0s - loss: 0.0959 - accuracy: 0.8583 - val_loss: 0.0950 - val_accuracy: 0.8500
Epoch 35/200
4/4 - 0s - loss: 0.0950 - accuracy: 0.8500 - val_loss: 0.0941 - val_accuracy: 0.8667
Epoch 36/200
4/4 - 0s - loss: 0.0940 - accuracy: 0.8667 - val_loss: 0.0932 - val_accuracy: 0.8667
Epoch 37/200
4/4 - 0s - loss: 0.0934 - accuracy: 0.8667 - val_loss: 0.0923 - val_accuracy: 0.8583
Epoch 38/200
4/4 - 0s - loss: 0.0922 - accuracy: 0.8583 - val_loss: 0.0914 - val_accuracy: 0.8667
Epoch 39/200
4/4 - 0s - loss: 0.0913 - accuracy: 0.8667 - val_loss: 0.0904 - val_accuracy: 0.8667
Epoch 40/200
4/4 - 0s - loss: 0.0903 - accuracy: 0.8667 - val_loss: 0.0895 - val_accuracy: 0.8667
Epoch 41/200
4/4 - 0s - loss: 0.0894 - accuracy: 0.8667 - val_loss: 0.0885 - val_accuracy: 0.8667
Epoch 42/200
4/4 - 0s - loss: 0.0888 - accuracy: 0.8667 - val_loss: 0.0876 - val_accuracy: 0.8667
Epoch 43/200
4/4 - 0s - loss: 0.0874 - accuracy: 0.8667 - val_loss: 0.0866 - val_accuracy: 0.8667
Epoch 44/200
4/4 - 0s - loss: 0.0870 - accuracy: 0.8583 - val_loss: 0.0857 - val_accuracy: 0.8750
Epoch 45/200
4/4 - 0s - loss: 0.0862 - accuracy: 0.8750 - val_loss: 0.0847 - val_accuracy: 0.8750
Epoch 46/200
4/4 - 0s - loss: 0.0848 - accuracy: 0.8667 - val_loss: 0.0838 - val_accuracy: 0.8750
Epoch 47/200
4/4 - 0s - loss: 0.0838 - accuracy: 0.8750 - val_loss: 0.0828 - val_accuracy: 0.8750
Epoch 48/200
4/4 - 0s - loss: 0.0832 - accuracy: 0.8750 - val_loss: 0.0818 - val_accuracy: 0.8750
Epoch 49/200
4/4 - 0s - loss: 0.0821 - accuracy: 0.8750 - val_loss: 0.0808 - val_accuracy: 0.8833
Epoch 50/200
```

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4/4 - 0s - loss: 0.0807 - accuracy: 0.8833 - val_loss: 0.0799 - val_accuracy: 0.8833
Epoch 51/200
4/4 - 0s - loss: 0.0796 - accuracy: 0.8833 - val_loss: 0.0789 - val_accuracy: 0.8833
Epoch 52/200
4/4 - 0s - loss: 0.0790 - accuracy: 0.8833 - val_loss: 0.0779 - val_accuracy: 0.8833
Epoch 53/200
4/4 - 0s - loss: 0.0779 - accuracy: 0.8750 - val_loss: 0.0769 - val_accuracy: 0.8833
Epoch 54/200
4/4 - 0s - loss: 0.0768 - accuracy: 0.8917 - val_loss: 0.0759 - val_accuracy: 0.8917
Epoch 55/200
4/4 - 0s - loss: 0.0759 - accuracy: 0.8833 - val_loss: 0.0749 - val_accuracy: 0.9000
Epoch 56/200
4/4 - 0s - loss: 0.0748 - accuracy: 0.9000 - val_loss: 0.0739 - val_accuracy: 0.9000
Epoch 57/200
4/4 - 0s - loss: 0.0741 - accuracy: 0.9000 - val_loss: 0.0730 - val_accuracy: 0.9083
Epoch 58/200
4/4 - 0s - loss: 0.0731 - accuracy: 0.9000 - val_loss: 0.0719 - val_accuracy: 0.9083
Epoch 59/200
4/4 - 0s - loss: 0.0722 - accuracy: 0.9083 - val_loss: 0.0710 - val_accuracy: 0.9083
Epoch 60/200
4/4 - 0s - loss: 0.0709 - accuracy: 0.9083 - val_loss: 0.0699 - val_accuracy: 0.9083
Epoch 61/200
4/4 - 0s - loss: 0.0703 - accuracy: 0.9000 - val_loss: 0.0690 - val_accuracy: 0.9083
Epoch 62/200
4/4 - 0s - loss: 0.0691 - accuracy: 0.9083 - val_loss: 0.0679 - val_accuracy: 0.9083
Epoch 63/200
4/4 - 0s - loss: 0.0680 - accuracy: 0.9083 - val_loss: 0.0669 - val_accuracy: 0.9083
Epoch 64/200
4/4 - 0s - loss: 0.0670 - accuracy: 0.9083 - val_loss: 0.0659 - val_accuracy: 0.9083
Epoch 65/200
4/4 - 0s - loss: 0.0664 - accuracy: 0.9083 - val_loss: 0.0649 - val_accuracy: 0.9083
Epoch 66/200
4/4 - 0s - loss: 0.0648 - accuracy: 0.9083 - val_loss: 0.0640 - val_accuracy: 0.9083
Epoch 67/200
4/4 - 0s - loss: 0.0639 - accuracy: 0.9083 - val_loss: 0.0630 - val_accuracy: 0.9083
Epoch 68/200
4/4 - 0s - loss: 0.0630 - accuracy: 0.9167 - val_loss: 0.0621 - val_accuracy: 0.9083
Epoch 69/200
4/4 - 0s - loss: 0.0624 - accuracy: 0.9083 - val_loss: 0.0613 - val_accuracy: 0.9333
Epoch 70/200
4/4 - 0s - loss: 0.0616 - accuracy: 0.9333 - val_loss: 0.0602 - val_accuracy: 0.9333
Epoch 71/200
4/4 - 0s - loss: 0.0602 - accuracy: 0.9333 - val_loss: 0.0593 - val_accuracy: 0.9333
Epoch 72/200
4/4 - 0s - loss: 0.0595 - accuracy: 0.9417 - val_loss: 0.0585 - val_accuracy: 0.9417
Epoch 73/200
4/4 - 0s - loss: 0.0583 - accuracy: 0.9417 - val_loss: 0.0575 - val_accuracy: 0.9500
Epoch 74/200
4/4 - 0s - loss: 0.0578 - accuracy: 0.9500 - val_loss: 0.0566 - val_accuracy: 0.9417
Epoch 75/200
4/4 - 0s - loss: 0.0565 - accuracy: 0.9417 - val_loss: 0.0557 - val_accuracy: 0.9500
Epoch 76/200
4/4 - 0s - loss: 0.0564 - accuracy: 0.9417 - val_loss: 0.0548 - val_accuracy: 0.9500
Epoch 77/200
4/4 - 0s - loss: 0.0548 - accuracy: 0.9417 - val_loss: 0.0540 - val_accuracy: 0.9500
Epoch 78/200
4/4 - 0s - loss: 0.0541 - accuracy: 0.9500 - val_loss: 0.0532 - val_accuracy: 0.9500
Epoch 79/200
4/4 - 0s - loss: 0.0535 - accuracy: 0.9500 - val_loss: 0.0523 - val_accuracy: 0.9500
Epoch 80/200
4/4 - 0s - loss: 0.0525 - accuracy: 0.9500 - val_loss: 0.0516 - val_accuracy: 0.9500
```

4/4 - 0s - loss: 0.0525 - accuracy: 0.9500 - val_loss: 0.0516 - val_accuracy: 0.9500
Epoch 81/200
4/4 - 0s - loss: 0.0515 - accuracy: 0.9583 - val_loss: 0.0508 - val_accuracy: 0.9583
Epoch 82/200
4/4 - 0s - loss: 0.0508 - accuracy: 0.9500 - val_loss: 0.0500 - val_accuracy: 0.9583
Epoch 83/200
4/4 - 0s - loss: 0.0503 - accuracy: 0.9583 - val_loss: 0.0493 - val_accuracy: 0.9583
Epoch 84/200
4/4 - 0s - loss: 0.0493 - accuracy: 0.9583 - val_loss: 0.0486 - val_accuracy: 0.9583
Epoch 85/200
4/4 - 0s - loss: 0.0488 - accuracy: 0.9583 - val_loss: 0.0479 - val_accuracy: 0.9583
Epoch 86/200
4/4 - 0s - loss: 0.0478 - accuracy: 0.9583 - val_loss: 0.0472 - val_accuracy: 0.9583
Epoch 87/200
4/4 - 0s - loss: 0.0478 - accuracy: 0.9583 - val_loss: 0.0466 - val_accuracy: 0.9583
Epoch 88/200
4/4 - 0s - loss: 0.0471 - accuracy: 0.9583 - val_loss: 0.0459 - val_accuracy: 0.9583
Epoch 89/200
4/4 - 0s - loss: 0.0463 - accuracy: 0.9583 - val_loss: 0.0453 - val_accuracy: 0.9583
Epoch 90/200
4/4 - 0s - loss: 0.0455 - accuracy: 0.9583 - val_loss: 0.0448 - val_accuracy: 0.9583
Epoch 91/200
4/4 - 0s - loss: 0.0447 - accuracy: 0.9583 - val_loss: 0.0441 - val_accuracy: 0.9583
Epoch 92/200
4/4 - 0s - loss: 0.0441 - accuracy: 0.9583 - val_loss: 0.0436 - val_accuracy: 0.9583
Epoch 93/200
4/4 - 0s - loss: 0.0442 - accuracy: 0.9583 - val_loss: 0.0431 - val_accuracy: 0.9583
Epoch 94/200
4/4 - 0s - loss: 0.0432 - accuracy: 0.9583 - val_loss: 0.0425 - val_accuracy: 0.9583
Epoch 95/200
4/4 - 0s - loss: 0.0427 - accuracy: 0.9583 - val_loss: 0.0421 - val_accuracy: 0.9583
Epoch 96/200
4/4 - 0s - loss: 0.0420 - accuracy: 0.9583 - val_loss: 0.0415 - val_accuracy: 0.9583
Epoch 97/200
4/4 - 0s - loss: 0.0417 - accuracy: 0.9583 - val_loss: 0.0411 - val_accuracy: 0.9583
Epoch 98/200
4/4 - 0s - loss: 0.0412 - accuracy: 0.9583 - val_loss: 0.0406 - val_accuracy: 0.9583
Epoch 99/200
4/4 - 0s - loss: 0.0406 - accuracy: 0.9583 - val_loss: 0.0402 - val_accuracy: 0.9583
Epoch 100/200
4/4 - 0s - loss: 0.0404 - accuracy: 0.9583 - val_loss: 0.0398 - val_accuracy: 0.9583
Epoch 101/200
4/4 - 0s - loss: 0.0398 - accuracy: 0.9583 - val_loss: 0.0394 - val_accuracy: 0.9583
Epoch 102/200
4/4 - 0s - loss: 0.0394 - accuracy: 0.9583 - val_loss: 0.0390 - val_accuracy: 0.9583
Epoch 103/200
4/4 - 0s - loss: 0.0391 - accuracy: 0.9583 - val_loss: 0.0386 - val_accuracy: 0.9667
Epoch 104/200
4/4 - 0s - loss: 0.0387 - accuracy: 0.9667 - val_loss: 0.0382 - val_accuracy: 0.9583
Epoch 105/200
4/4 - 0s - loss: 0.0386 - accuracy: 0.9583 - val_loss: 0.0380 - val_accuracy: 0.9667
Epoch 106/200
4/4 - 0s - loss: 0.0379 - accuracy: 0.9667 - val_loss: 0.0375 - val_accuracy: 0.9667
Epoch 107/200
4/4 - 0s - loss: 0.0378 - accuracy: 0.9583 - val_loss: 0.0373 - val_accuracy: 0.9667
Epoch 108/200
4/4 - 0s - loss: 0.0373 - accuracy: 0.9667 - val_loss: 0.0369 - val_accuracy: 0.9667
Epoch 109/200
4/4 - 0s - loss: 0.0376 - accuracy: 0.9583 - val_loss: 0.0366 - val_accuracy: 0.9667
Epoch 110/200
4/4 - 0s - loss: 0.0369 - accuracy: 0.9667 - val_loss: 0.0363 - val_accuracy: 0.9667

Epoch 111/200
4/4 - 0s - loss: 0.0365 - accuracy: 0.9667 - val_loss: 0.0360 - val_accuracy: 0.9667
Epoch 112/200
4/4 - 0s - loss: 0.0360 - accuracy: 0.9667 - val_loss: 0.0357 - val_accuracy: 0.9667
Epoch 113/200
4/4 - 0s - loss: 0.0358 - accuracy: 0.9667 - val_loss: 0.0354 - val_accuracy: 0.9667
Epoch 114/200
4/4 - 0s - loss: 0.0355 - accuracy: 0.9667 - val_loss: 0.0352 - val_accuracy: 0.9667
Epoch 115/200
4/4 - 0s - loss: 0.0357 - accuracy: 0.9667 - val_loss: 0.0350 - val_accuracy: 0.9667
Epoch 116/200
4/4 - 0s - loss: 0.0350 - accuracy: 0.9667 - val_loss: 0.0347 - val_accuracy: 0.9667
Epoch 117/200
4/4 - 0s - loss: 0.0353 - accuracy: 0.9667 - val_loss: 0.0344 - val_accuracy: 0.9667
Epoch 118/200
4/4 - 0s - loss: 0.0349 - accuracy: 0.9667 - val_loss: 0.0342 - val_accuracy: 0.9667
Epoch 119/200
4/4 - 0s - loss: 0.0345 - accuracy: 0.9667 - val_loss: 0.0340 - val_accuracy: 0.9667
Epoch 120/200
4/4 - 0s - loss: 0.0344 - accuracy: 0.9667 - val_loss: 0.0338 - val_accuracy: 0.9667
Epoch 121/200
4/4 - 0s - loss: 0.0341 - accuracy: 0.9667 - val_loss: 0.0336 - val_accuracy: 0.9667
Epoch 122/200
4/4 - 0s - loss: 0.0337 - accuracy: 0.9667 - val_loss: 0.0334 - val_accuracy: 0.9667
Epoch 123/200
4/4 - 0s - loss: 0.0335 - accuracy: 0.9667 - val_loss: 0.0332 - val_accuracy: 0.9667
Epoch 124/200
4/4 - 0s - loss: 0.0333 - accuracy: 0.9667 - val_loss: 0.0331 - val_accuracy: 0.9667
Epoch 125/200
4/4 - 0s - loss: 0.0331 - accuracy: 0.9667 - val_loss: 0.0328 - val_accuracy: 0.9667
Epoch 126/200
4/4 - 0s - loss: 0.0329 - accuracy: 0.9667 - val_loss: 0.0326 - val_accuracy: 0.9667
Epoch 127/200
4/4 - 0s - loss: 0.0328 - accuracy: 0.9667 - val_loss: 0.0325 - val_accuracy: 0.9667
Epoch 128/200
4/4 - 0s - loss: 0.0331 - accuracy: 0.9667 - val_loss: 0.0323 - val_accuracy: 0.9667
Epoch 129/200
4/4 - 0s - loss: 0.0326 - accuracy: 0.9667 - val_loss: 0.0322 - val_accuracy: 0.9667
Epoch 130/200
4/4 - 0s - loss: 0.0326 - accuracy: 0.9667 - val_loss: 0.0320 - val_accuracy: 0.9667
Epoch 131/200
4/4 - 0s - loss: 0.0323 - accuracy: 0.9667 - val_loss: 0.0318 - val_accuracy: 0.9667
Epoch 132/200
4/4 - 0s - loss: 0.0324 - accuracy: 0.9667 - val_loss: 0.0317 - val_accuracy: 0.9667
Epoch 133/200
4/4 - 0s - loss: 0.0321 - accuracy: 0.9667 - val_loss: 0.0315 - val_accuracy: 0.9667
Epoch 134/200
4/4 - 0s - loss: 0.0317 - accuracy: 0.9667 - val_loss: 0.0314 - val_accuracy: 0.9667
Epoch 135/200
4/4 - 0s - loss: 0.0319 - accuracy: 0.9667 - val_loss: 0.0313 - val_accuracy: 0.9667
Epoch 136/200
4/4 - 0s - loss: 0.0314 - accuracy: 0.9667 - val_loss: 0.0311 - val_accuracy: 0.9667
Epoch 137/200
4/4 - 0s - loss: 0.0311 - accuracy: 0.9667 - val_loss: 0.0309 - val_accuracy: 0.9667
Epoch 138/200
4/4 - 0s - loss: 0.0313 - accuracy: 0.9667 - val_loss: 0.0308 - val_accuracy: 0.9667
Epoch 139/200
4/4 - 0s - loss: 0.0309 - accuracy: 0.9667 - val_loss: 0.0307 - val_accuracy: 0.9667
Epoch 140/200
4/4 - 0s - loss: 0.0309 - accuracy: 0.9583 - val_loss: 0.0306 - val_accuracy: 0.9667

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Epoch 141/200
4/4 - 0s - loss: 0.0307 - accuracy: 0.9667 - val_loss: 0.0304 - val_accuracy: 0.9667
Epoch 142/200
4/4 - 0s - loss: 0.0308 - accuracy: 0.9667 - val_loss: 0.0303 - val_accuracy: 0.9667
Epoch 143/200
4/4 - 0s - loss: 0.0306 - accuracy: 0.9500 - val_loss: 0.0302 - val_accuracy: 0.9667
Epoch 144/200
4/4 - 0s - loss: 0.0303 - accuracy: 0.9667 - val_loss: 0.0301 - val_accuracy: 0.9667
Epoch 145/200
4/4 - 0s - loss: 0.0302 - accuracy: 0.9667 - val_loss: 0.0300 - val_accuracy: 0.9667
Epoch 146/200
4/4 - 0s - loss: 0.0306 - accuracy: 0.9583 - val_loss: 0.0299 - val_accuracy: 0.9667
Epoch 147/200
4/4 - 0s - loss: 0.0303 - accuracy: 0.9667 - val_loss: 0.0298 - val_accuracy: 0.9667
Epoch 148/200
4/4 - 0s - loss: 0.0301 - accuracy: 0.9667 - val_loss: 0.0297 - val_accuracy: 0.9667
Epoch 149/200
4/4 - 0s - loss: 0.0297 - accuracy: 0.9583 - val_loss: 0.0295 - val_accuracy: 0.9667
Epoch 150/200
4/4 - 0s - loss: 0.0297 - accuracy: 0.9667 - val_loss: 0.0294 - val_accuracy: 0.9583
Epoch 151/200
4/4 - 0s - loss: 0.0297 - accuracy: 0.9500 - val_loss: 0.0293 - val_accuracy: 0.9667
Epoch 152/200
4/4 - 0s - loss: 0.0298 - accuracy: 0.9583 - val_loss: 0.0293 - val_accuracy: 0.9667
Epoch 153/200
4/4 - 0s - loss: 0.0295 - accuracy: 0.9667 - val_loss: 0.0292 - val_accuracy: 0.9667
Epoch 154/200
4/4 - 0s - loss: 0.0294 - accuracy: 0.9667 - val_loss: 0.0291 - val_accuracy: 0.9667
Epoch 155/200
4/4 - 0s - loss: 0.0293 - accuracy: 0.9583 - val_loss: 0.0290 - val_accuracy: 0.9667
Epoch 156/200
4/4 - 0s - loss: 0.0291 - accuracy: 0.9583 - val_loss: 0.0289 - val_accuracy: 0.9667
Epoch 157/200
4/4 - 0s - loss: 0.0291 - accuracy: 0.9667 - val_loss: 0.0288 - val_accuracy: 0.9500
Epoch 158/200
4/4 - 0s - loss: 0.0292 - accuracy: 0.9500 - val_loss: 0.0287 - val_accuracy: 0.9667
Epoch 159/200
4/4 - 0s - loss: 0.0291 - accuracy: 0.9667 - val_loss: 0.0286 - val_accuracy: 0.9500
Epoch 160/200
4/4 - 0s - loss: 0.0287 - accuracy: 0.9583 - val_loss: 0.0285 - val_accuracy: 0.9500
Epoch 161/200
4/4 - 0s - loss: 0.0291 - accuracy: 0.9500 - val_loss: 0.0285 - val_accuracy: 0.9500
Epoch 162/200
4/4 - 0s - loss: 0.0287 - accuracy: 0.9500 - val_loss: 0.0284 - val_accuracy: 0.9583
Epoch 163/200
4/4 - 0s - loss: 0.0286 - accuracy: 0.9583 - val_loss: 0.0283 - val_accuracy: 0.9500
Epoch 164/200
4/4 - 0s - loss: 0.0285 - accuracy: 0.9583 - val_loss: 0.0282 - val_accuracy: 0.9500
Epoch 165/200
4/4 - 0s - loss: 0.0284 - accuracy: 0.9500 - val_loss: 0.0281 - val_accuracy: 0.9583
Epoch 166/200
4/4 - 0s - loss: 0.0283 - accuracy: 0.9583 - val_loss: 0.0281 - val_accuracy: 0.9500
Epoch 167/200
4/4 - 0s - loss: 0.0283 - accuracy: 0.9500 - val_loss: 0.0280 - val_accuracy: 0.9500
Epoch 168/200
4/4 - 0s - loss: 0.0284 - accuracy: 0.9667 - val_loss: 0.0281 - val_accuracy: 0.9500
Epoch 169/200
4/4 - 0s - loss: 0.0282 - accuracy: 0.9500 - val_loss: 0.0278 - val_accuracy: 0.9500
Epoch 170/200
4/4 - 0s - loss: 0.0283 - accuracy: 0.9500 - val_loss: 0.0277 - val_accuracy: 0.9500
```

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Epoch 171/200
4/4 - 0s - loss: 0.0280 - accuracy: 0.9500 - val_loss: 0.0277 - val_accuracy: 0.9500
Epoch 172/200
4/4 - 0s - loss: 0.0281 - accuracy: 0.9500 - val_loss: 0.0276 - val_accuracy: 0.9500
Epoch 173/200
4/4 - 0s - loss: 0.0278 - accuracy: 0.9500 - val_loss: 0.0275 - val_accuracy: 0.9583
Epoch 174/200
4/4 - 0s - loss: 0.0276 - accuracy: 0.9583 - val_loss: 0.0274 - val_accuracy: 0.9583
Epoch 175/200
4/4 - 0s - loss: 0.0276 - accuracy: 0.9500 - val_loss: 0.0274 - val_accuracy: 0.9583
Epoch 176/200
4/4 - 0s - loss: 0.0279 - accuracy: 0.9583 - val_loss: 0.0273 - val_accuracy: 0.9500
Epoch 177/200
4/4 - 0s - loss: 0.0276 - accuracy: 0.9500 - val_loss: 0.0273 - val_accuracy: 0.9500
Epoch 178/200
4/4 - 0s - loss: 0.0274 - accuracy: 0.9500 - val_loss: 0.0272 - val_accuracy: 0.9500
Epoch 179/200
4/4 - 0s - loss: 0.0276 - accuracy: 0.9500 - val_loss: 0.0271 - val_accuracy: 0.9500
Epoch 180/200
4/4 - 0s - loss: 0.0274 - accuracy: 0.9583 - val_loss: 0.0271 - val_accuracy: 0.9500
Epoch 181/200
4/4 - 0s - loss: 0.0272 - accuracy: 0.9583 - val_loss: 0.0270 - val_accuracy: 0.9500
Epoch 182/200
4/4 - 0s - loss: 0.0273 - accuracy: 0.9500 - val_loss: 0.0269 - val_accuracy: 0.9500
Epoch 183/200
4/4 - 0s - loss: 0.0271 - accuracy: 0.9500 - val_loss: 0.0269 - val_accuracy: 0.9500
Epoch 184/200
4/4 - 0s - loss: 0.0270 - accuracy: 0.9500 - val_loss: 0.0268 - val_accuracy: 0.9500
Epoch 185/200
4/4 - 0s - loss: 0.0270 - accuracy: 0.9500 - val_loss: 0.0268 - val_accuracy: 0.9500
Epoch 186/200
4/4 - 0s - loss: 0.0268 - accuracy: 0.9500 - val_loss: 0.0267 - val_accuracy: 0.9500
Epoch 187/200
4/4 - 0s - loss: 0.0271 - accuracy: 0.9500 - val_loss: 0.0267 - val_accuracy: 0.9500
Epoch 188/200
4/4 - 0s - loss: 0.0268 - accuracy: 0.9500 - val_loss: 0.0266 - val_accuracy: 0.9500
Epoch 189/200
4/4 - 0s - loss: 0.0268 - accuracy: 0.9500 - val_loss: 0.0265 - val_accuracy: 0.9500
Epoch 190/200
4/4 - 0s - loss: 0.0272 - accuracy: 0.9500 - val_loss: 0.0265 - val_accuracy: 0.9500
Epoch 191/200
4/4 - 0s - loss: 0.0267 - accuracy: 0.9583 - val_loss: 0.0264 - val_accuracy: 0.9500
Epoch 192/200
4/4 - 0s - loss: 0.0265 - accuracy: 0.9500 - val_loss: 0.0263 - val_accuracy: 0.9500
Epoch 193/200
4/4 - 0s - loss: 0.0266 - accuracy: 0.9500 - val_loss: 0.0263 - val_accuracy: 0.9500
Epoch 194/200
4/4 - 0s - loss: 0.0264 - accuracy: 0.9500 - val_loss: 0.0262 - val_accuracy: 0.9500
Epoch 195/200
4/4 - 0s - loss: 0.0265 - accuracy: 0.9500 - val_loss: 0.0262 - val_accuracy: 0.9500
Epoch 196/200
4/4 - 0s - loss: 0.0263 - accuracy: 0.9500 - val_loss: 0.0261 - val_accuracy: 0.9500
Epoch 197/200
4/4 - 0s - loss: 0.0266 - accuracy: 0.9500 - val_loss: 0.0261 - val_accuracy: 0.9500
Epoch 198/200
4/4 - 0s - loss: 0.0263 - accuracy: 0.9500 - val_loss: 0.0260 - val_accuracy: 0.9500
Epoch 199/200
4/4 - 0s - loss: 0.0261 - accuracy: 0.9500 - val_loss: 0.0260 - val_accuracy: 0.9583
Epoch 200/200
4/4 - 0s - loss: 0.0262 - accuracy: 0.9500 - val_loss: 0.0259 - val_accuracy: 0.9500
Activation: tanh LR: 0.1 Iterations: 200 || Train loss: 0.025907523930072784
```

Activation: tanh LR: 0.1 Itertions: 200 || Train loss: 0.025907523930072784
Activation: tanh LR: 0.1 Itertions: 200 || Train Accuracy: 0.949999988079071
Epoch 1/200
4/4 - 0s - loss: 0.0264 - accuracy: 0.9500 - val_loss: 0.0225 - val_accuracy: 0.9667
Epoch 2/200
4/4 - 0s - loss: 0.0260 - accuracy: 0.9500 - val_loss: 0.0226 - val_accuracy: 0.9667
Epoch 3/200
4/4 - 0s - loss: 0.0259 - accuracy: 0.9500 - val_loss: 0.0226 - val_accuracy: 0.9667
Epoch 4/200
4/4 - 0s - loss: 0.0261 - accuracy: 0.9500 - val_loss: 0.0226 - val_accuracy: 0.9667
Epoch 5/200
4/4 - 0s - loss: 0.0261 - accuracy: 0.9500 - val_loss: 0.0216 - val_accuracy: 0.9667
Epoch 6/200
4/4 - 0s - loss: 0.0258 - accuracy: 0.9500 - val_loss: 0.0219 - val_accuracy: 0.9667
Epoch 7/200
4/4 - 0s - loss: 0.0258 - accuracy: 0.9500 - val_loss: 0.0215 - val_accuracy: 0.9667
Epoch 8/200
4/4 - 0s - loss: 0.0259 - accuracy: 0.9583 - val_loss: 0.0218 - val_accuracy: 0.9667
Epoch 9/200
4/4 - 0s - loss: 0.0257 - accuracy: 0.9500 - val_loss: 0.0222 - val_accuracy: 0.9667
Epoch 10/200
4/4 - 0s - loss: 0.0256 - accuracy: 0.9500 - val_loss: 0.0217 - val_accuracy: 0.9667
Epoch 11/200
4/4 - 0s - loss: 0.0257 - accuracy: 0.9500 - val_loss: 0.0215 - val_accuracy: 0.9667
Epoch 12/200
4/4 - 0s - loss: 0.0256 - accuracy: 0.9500 - val_loss: 0.0216 - val_accuracy: 0.9667
Epoch 13/200
4/4 - 0s - loss: 0.0256 - accuracy: 0.9500 - val_loss: 0.0216 - val_accuracy: 0.9667
Epoch 14/200
4/4 - 0s - loss: 0.0253 - accuracy: 0.9500 - val_loss: 0.0217 - val_accuracy: 0.9667
Epoch 15/200
4/4 - 0s - loss: 0.0253 - accuracy: 0.9500 - val_loss: 0.0215 - val_accuracy: 0.9667
Epoch 16/200
4/4 - 0s - loss: 0.0253 - accuracy: 0.9500 - val_loss: 0.0217 - val_accuracy: 0.9667
Epoch 17/200
4/4 - 0s - loss: 0.0254 - accuracy: 0.9500 - val_loss: 0.0216 - val_accuracy: 0.9667
Epoch 18/200
4/4 - 0s - loss: 0.0253 - accuracy: 0.9500 - val_loss: 0.0216 - val_accuracy: 0.9667
Epoch 19/200
4/4 - 0s - loss: 0.0252 - accuracy: 0.9500 - val_loss: 0.0213 - val_accuracy: 0.9667
Epoch 20/200
4/4 - 0s - loss: 0.0254 - accuracy: 0.9500 - val_loss: 0.0221 - val_accuracy: 0.9667
Epoch 21/200
4/4 - 0s - loss: 0.0251 - accuracy: 0.9500 - val_loss: 0.0215 - val_accuracy: 0.9667
Epoch 22/200
4/4 - 0s - loss: 0.0250 - accuracy: 0.9500 - val_loss: 0.0212 - val_accuracy: 0.9667
Epoch 23/200
4/4 - 0s - loss: 0.0252 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 24/200
4/4 - 0s - loss: 0.0252 - accuracy: 0.9500 - val_loss: 0.0212 - val_accuracy: 0.9667
Epoch 25/200
4/4 - 0s - loss: 0.0249 - accuracy: 0.9500 - val_loss: 0.0209 - val_accuracy: 0.9667
Epoch 26/200
4/4 - 0s - loss: 0.0250 - accuracy: 0.9500 - val_loss: 0.0214 - val_accuracy: 0.9667
Epoch 27/200
4/4 - 0s - loss: 0.0250 - accuracy: 0.9500 - val_loss: 0.0213 - val_accuracy: 0.9667
Epoch 28/200
4/4 - 0s - loss: 0.0251 - accuracy: 0.9500 - val_loss: 0.0214 - val_accuracy: 0.9667
Epoch 29/200
4/4 - 0s - loss: 0.0249 - accuracy: 0.9500 - val_loss: 0.0210 - val_accuracy: 0.9667
Epoch 30/200

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4/4 - 0s - loss: 0.0247 - accuracy: 0.9500 - val_loss: 0.0214 - val_accuracy: 0.9667
Epoch 31/200
4/4 - 0s - loss: 0.0249 - accuracy: 0.9500 - val_loss: 0.0215 - val_accuracy: 0.9667
Epoch 32/200
4/4 - 0s - loss: 0.0248 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 33/200
4/4 - 0s - loss: 0.0247 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 34/200
4/4 - 0s - loss: 0.0245 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 35/200
4/4 - 0s - loss: 0.0246 - accuracy: 0.9500 - val_loss: 0.0214 - val_accuracy: 0.9667
Epoch 36/200
4/4 - 0s - loss: 0.0246 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 37/200
4/4 - 0s - loss: 0.0244 - accuracy: 0.9500 - val_loss: 0.0208 - val_accuracy: 0.9667
Epoch 38/200
4/4 - 0s - loss: 0.0245 - accuracy: 0.9500 - val_loss: 0.0206 - val_accuracy: 0.9667
Epoch 39/200
4/4 - 0s - loss: 0.0247 - accuracy: 0.9500 - val_loss: 0.0208 - val_accuracy: 0.9667
Epoch 40/200
4/4 - 0s - loss: 0.0244 - accuracy: 0.9583 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 41/200
4/4 - 0s - loss: 0.0250 - accuracy: 0.9500 - val_loss: 0.0207 - val_accuracy: 0.9667
Epoch 42/200
4/4 - 0s - loss: 0.0243 - accuracy: 0.9500 - val_loss: 0.0210 - val_accuracy: 0.9667
Epoch 43/200
4/4 - 0s - loss: 0.0242 - accuracy: 0.9500 - val_loss: 0.0207 - val_accuracy: 0.9667
Epoch 44/200
4/4 - 0s - loss: 0.0243 - accuracy: 0.9500 - val_loss: 0.0210 - val_accuracy: 0.9667
Epoch 45/200
4/4 - 0s - loss: 0.0243 - accuracy: 0.9500 - val_loss: 0.0210 - val_accuracy: 0.9667
Epoch 46/200
4/4 - 0s - loss: 0.0241 - accuracy: 0.9500 - val_loss: 0.0211 - val_accuracy: 0.9667
Epoch 47/200
4/4 - 0s - loss: 0.0246 - accuracy: 0.9500 - val_loss: 0.0206 - val_accuracy: 0.9667
Epoch 48/200
4/4 - 0s - loss: 0.0241 - accuracy: 0.9500 - val_loss: 0.0209 - val_accuracy: 0.9667
Epoch 49/200
4/4 - 0s - loss: 0.0242 - accuracy: 0.9500 - val_loss: 0.0210 - val_accuracy: 0.9667
Epoch 50/200
4/4 - 0s - loss: 0.0240 - accuracy: 0.9500 - val_loss: 0.0208 - val_accuracy: 0.9667
Epoch 51/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0209 - val_accuracy: 0.9667
Epoch 52/200
4/4 - 0s - loss: 0.0240 - accuracy: 0.9500 - val_loss: 0.0202 - val_accuracy: 0.9667
Epoch 53/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0207 - val_accuracy: 0.9667
Epoch 54/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0207 - val_accuracy: 0.9667
Epoch 55/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0209 - val_accuracy: 0.9667
Epoch 56/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0203 - val_accuracy: 0.9667
Epoch 57/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0203 - val_accuracy: 0.9667
Epoch 58/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 59/200
4/4 - 0s - loss: 0.0238 - accuracy: 0.9500 - val_loss: 0.0203 - val_accuracy: 0.9667
Epoch 60/200
```

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4/4 - 0s - loss: 0.0239 - accuracy: 0.9500 - val_loss: 0.0203 - val_accuracy: 0.9667
Epoch 61/200
4/4 - 0s - loss: 0.0238 - accuracy: 0.9500 - val_loss: 0.0202 - val_accuracy: 0.9667
Epoch 62/200
4/4 - 0s - loss: 0.0235 - accuracy: 0.9500 - val_loss: 0.0204 - val_accuracy: 0.9667
Epoch 63/200
4/4 - 0s - loss: 0.0235 - accuracy: 0.9500 - val_loss: 0.0204 - val_accuracy: 0.9667
Epoch 64/200
4/4 - 0s - loss: 0.0236 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 65/200
4/4 - 0s - loss: 0.0235 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 66/200
4/4 - 0s - loss: 0.0236 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 67/200
4/4 - 0s - loss: 0.0234 - accuracy: 0.9500 - val_loss: 0.0201 - val_accuracy: 0.9667
Epoch 68/200
4/4 - 0s - loss: 0.0234 - accuracy: 0.9500 - val_loss: 0.0205 - val_accuracy: 0.9667
Epoch 69/200
4/4 - 0s - loss: 0.0234 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 70/200
4/4 - 0s - loss: 0.0234 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 71/200
4/4 - 0s - loss: 0.0235 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 72/200
4/4 - 0s - loss: 0.0233 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 73/200
4/4 - 0s - loss: 0.0233 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 74/200
4/4 - 0s - loss: 0.0233 - accuracy: 0.9500 - val_loss: 0.0203 - val_accuracy: 0.9667
Epoch 75/200
4/4 - 0s - loss: 0.0236 - accuracy: 0.9500 - val_loss: 0.0204 - val_accuracy: 0.9667
Epoch 76/200
4/4 - 0s - loss: 0.0232 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 77/200
4/4 - 0s - loss: 0.0232 - accuracy: 0.9500 - val_loss: 0.0197 - val_accuracy: 0.9667
Epoch 78/200
4/4 - 0s - loss: 0.0231 - accuracy: 0.9500 - val_loss: 0.0197 - val_accuracy: 0.9667
Epoch 79/200
4/4 - 0s - loss: 0.0230 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 80/200
4/4 - 0s - loss: 0.0230 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 81/200
4/4 - 0s - loss: 0.0230 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 82/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 83/200
4/4 - 0s - loss: 0.0230 - accuracy: 0.9500 - val_loss: 0.0200 - val_accuracy: 0.9667
Epoch 84/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 85/200
4/4 - 0s - loss: 0.0230 - accuracy: 0.9500 - val_loss: 0.0195 - val_accuracy: 0.9667
Epoch 86/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 87/200
4/4 - 0s - loss: 0.0228 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 88/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9500 - val_loss: 0.0201 - val_accuracy: 0.9667
Epoch 89/200
4/4 - 0s - loss: 0.0228 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 90/200
```

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4/4 - 0s - loss: 0.0231 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 91/200
4/4 - 0s - loss: 0.0227 - accuracy: 0.9500 - val_loss: 0.0195 - val_accuracy: 0.9667
Epoch 92/200
4/4 - 0s - loss: 0.0227 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 93/200
4/4 - 0s - loss: 0.0226 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 94/200
4/4 - 0s - loss: 0.0228 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 95/200
4/4 - 0s - loss: 0.0227 - accuracy: 0.9500 - val_loss: 0.0193 - val_accuracy: 0.9667
Epoch 96/200
4/4 - 0s - loss: 0.0226 - accuracy: 0.9500 - val_loss: 0.0192 - val_accuracy: 0.9667
Epoch 97/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9500 - val_loss: 0.0198 - val_accuracy: 0.9667
Epoch 98/200
4/4 - 0s - loss: 0.0225 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 99/200
4/4 - 0s - loss: 0.0227 - accuracy: 0.9500 - val_loss: 0.0195 - val_accuracy: 0.9667
Epoch 100/200
4/4 - 0s - loss: 0.0228 - accuracy: 0.9500 - val_loss: 0.0202 - val_accuracy: 0.9667
Epoch 101/200
4/4 - 0s - loss: 0.0225 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 102/200
4/4 - 0s - loss: 0.0226 - accuracy: 0.9500 - val_loss: 0.0199 - val_accuracy: 0.9667
Epoch 103/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0196 - val_accuracy: 0.9667
Epoch 104/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0191 - val_accuracy: 0.9667
Epoch 105/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0192 - val_accuracy: 0.9667
Epoch 106/200
4/4 - 0s - loss: 0.0223 - accuracy: 0.9500 - val_loss: 0.0192 - val_accuracy: 0.9667
Epoch 107/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0190 - val_accuracy: 0.9667
Epoch 108/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0190 - val_accuracy: 0.9667
Epoch 109/200
4/4 - 0s - loss: 0.0226 - accuracy: 0.9500 - val_loss: 0.0192 - val_accuracy: 0.9667
Epoch 110/200
4/4 - 0s - loss: 0.0226 - accuracy: 0.9500 - val_loss: 0.0201 - val_accuracy: 0.9667
Epoch 111/200
4/4 - 0s - loss: 0.0223 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 112/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0190 - val_accuracy: 0.9667
Epoch 113/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0190 - val_accuracy: 0.9667
Epoch 114/200
4/4 - 0s - loss: 0.0223 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 115/200
4/4 - 0s - loss: 0.0221 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 116/200
4/4 - 0s - loss: 0.0224 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 117/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0191 - val_accuracy: 0.9667
Epoch 118/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0193 - val_accuracy: 0.9667
Epoch 119/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 120/200
4/4 - 0s - loss: 0.0221 - accuracy: 0.9583 - val_loss: 0.0192 - val_accuracy: 0.9667
```

4/4 - 0s - loss: 0.0221 - accuracy: 0.9583 - val_loss: 0.0192 - val_accuracy: 0.9667
Epoch 121/200
4/4 - 0s - loss: 0.0225 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 122/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9500 - val_loss: 0.0191 - val_accuracy: 0.9667
Epoch 123/200
4/4 - 0s - loss: 0.0220 - accuracy: 0.9583 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 124/200
4/4 - 0s - loss: 0.0220 - accuracy: 0.9500 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 125/200
4/4 - 0s - loss: 0.0219 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 126/200
4/4 - 0s - loss: 0.0219 - accuracy: 0.9500 - val_loss: 0.0188 - val_accuracy: 0.9667
Epoch 127/200
4/4 - 0s - loss: 0.0218 - accuracy: 0.9500 - val_loss: 0.0190 - val_accuracy: 0.9667
Epoch 128/200
4/4 - 0s - loss: 0.0220 - accuracy: 0.9500 - val_loss: 0.0194 - val_accuracy: 0.9667
Epoch 129/200
4/4 - 0s - loss: 0.0219 - accuracy: 0.9500 - val_loss: 0.0191 - val_accuracy: 0.9667
Epoch 130/200
4/4 - 0s - loss: 0.0219 - accuracy: 0.9500 - val_loss: 0.0189 - val_accuracy: 0.9667
Epoch 131/200
4/4 - 0s - loss: 0.0218 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 132/200
4/4 - 0s - loss: 0.0223 - accuracy: 0.9500 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 133/200
4/4 - 0s - loss: 0.0216 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 134/200
4/4 - 0s - loss: 0.0218 - accuracy: 0.9583 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 135/200
4/4 - 0s - loss: 0.0216 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 136/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 137/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 138/200
4/4 - 0s - loss: 0.0216 - accuracy: 0.9500 - val_loss: 0.0184 - val_accuracy: 0.9667
Epoch 139/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9500 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 140/200
4/4 - 0s - loss: 0.0216 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 141/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9500 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 142/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9500 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 143/200
4/4 - 0s - loss: 0.0216 - accuracy: 0.9500 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 144/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9500 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 145/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 146/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9583 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 147/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9500 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 148/200
4/4 - 0s - loss: 0.0218 - accuracy: 0.9500 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 149/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 150/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9583 - val_loss: 0.0188 - val_accuracy: 0.9667

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Epoch 151/200
4/4 - 0s - loss: 0.0221 - accuracy: 0.9500 - val_loss: 0.0188 - val_accuracy: 0.9667
Epoch 152/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 153/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 154/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9500 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 155/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9500 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 156/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 157/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 158/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9500 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 159/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9583 - val_loss: 0.0181 - val_accuracy: 0.9667
Epoch 160/200
4/4 - 0s - loss: 0.0212 - accuracy: 0.9500 - val_loss: 0.0185 - val_accuracy: 0.9667
Epoch 161/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9500 - val_loss: 0.0186 - val_accuracy: 0.9667
Epoch 162/200
4/4 - 0s - loss: 0.0211 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 163/200
4/4 - 0s - loss: 0.0214 - accuracy: 0.9500 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 164/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 165/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 166/200
4/4 - 0s - loss: 0.0212 - accuracy: 0.9583 - val_loss: 0.0187 - val_accuracy: 0.9667
Epoch 167/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0182 - val_accuracy: 0.9667
Epoch 168/200
4/4 - 0s - loss: 0.0211 - accuracy: 0.9583 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 169/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0184 - val_accuracy: 0.9667
Epoch 170/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0179 - val_accuracy: 0.9667
Epoch 171/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0179 - val_accuracy: 0.9667
Epoch 172/200
4/4 - 0s - loss: 0.0211 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 173/200
4/4 - 0s - loss: 0.0212 - accuracy: 0.9500 - val_loss: 0.0177 - val_accuracy: 0.9667
Epoch 174/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0177 - val_accuracy: 0.9667
Epoch 175/200
4/4 - 0s - loss: 0.0211 - accuracy: 0.9500 - val_loss: 0.0183 - val_accuracy: 0.9667
Epoch 176/200
4/4 - 0s - loss: 0.0209 - accuracy: 0.9583 - val_loss: 0.0177 - val_accuracy: 0.9667
Epoch 177/200
4/4 - 0s - loss: 0.0209 - accuracy: 0.9583 - val_loss: 0.0179 - val_accuracy: 0.9667
Epoch 178/200
4/4 - 0s - loss: 0.0208 - accuracy: 0.9583 - val_loss: 0.0179 - val_accuracy: 0.9667
Epoch 179/200
4/4 - 0s - loss: 0.0209 - accuracy: 0.9583 - val_loss: 0.0180 - val_accuracy: 0.9667
Epoch 180/200
4/4 - 0s - loss: 0.0208 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
```

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Epoch 181/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 182/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 183/200
4/4 - 0s - loss: 0.0208 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 184/200
4/4 - 0s - loss: 0.0207 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 185/200
4/4 - 0s - loss: 0.0209 - accuracy: 0.9583 - val_loss: 0.0177 - val_accuracy: 0.9667
Epoch 186/200
4/4 - 0s - loss: 0.0207 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 187/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 188/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0177 - val_accuracy: 0.9667
Epoch 189/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 190/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0173 - val_accuracy: 0.9667
Epoch 191/200
4/4 - 0s - loss: 0.0213 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 192/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0173 - val_accuracy: 0.9667
Epoch 193/200
4/4 - 0s - loss: 0.0205 - accuracy: 0.9583 - val_loss: 0.0176 - val_accuracy: 0.9667
Epoch 194/200
4/4 - 0s - loss: 0.0207 - accuracy: 0.9583 - val_loss: 0.0175 - val_accuracy: 0.9667
Epoch 195/200
4/4 - 0s - loss: 0.0204 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 196/200
4/4 - 0s - loss: 0.0204 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 197/200
4/4 - 0s - loss: 0.0205 - accuracy: 0.9583 - val_loss: 0.0179 - val_accuracy: 0.9667
Epoch 198/200
4/4 - 0s - loss: 0.0206 - accuracy: 0.9583 - val_loss: 0.0176 - val_accuracy: 0.9667
Epoch 199/200
4/4 - 0s - loss: 0.0204 - accuracy: 0.9583 - val_loss: 0.0178 - val_accuracy: 0.9667
Epoch 200/200
4/4 - 0s - loss: 0.0203 - accuracy: 0.9583 - val_loss: 0.0176 - val_accuracy: 0.9667
Activation: tanh LR: 0.1 Iterations: 200 || Test loss: 0.017602622509002686
Activation: tanh LR: 0.1 Iterations: 200 || Test Accuracy: 0.9666666388511658
================================================================================
Model_relu_LR_0.01_Iterations_100_HL_3
Epoch 1/100
4/4 - 0s - loss: 0.3280 - accuracy: 0.2000 - val_loss: 0.3274 - val_accuracy: 0.2750
Epoch 2/100
4/4 - 0s - loss: 0.3271 - accuracy: 0.2750 - val_loss: 0.3265 - val_accuracy: 0.2750
Epoch 3/100
4/4 - 0s - loss: 0.3263 - accuracy: 0.2750 - val_loss: 0.3256 - val_accuracy: 0.3000
Epoch 4/100
4/4 - 0s - loss: 0.3253 - accuracy: 0.3000 - val_loss: 0.3246 - val_accuracy: 0.3000
Epoch 5/100
4/4 - 0s - loss: 0.3243 - accuracy: 0.3000 - val_loss: 0.3236 - val_accuracy: 0.3083
Epoch 6/100
4/4 - 0s - loss: 0.3232 - accuracy: 0.3167 - val_loss: 0.3224 - val_accuracy: 0.3167
Epoch 7/100
4/4 - 0s - loss: 0.3220 - accuracy: 0.3083 - val_loss: 0.3212 - val_accuracy: 0.3250
Epoch 8/100
4/4 - 0s - loss: 0.3208 - accuracy: 0.3167 - val_loss: 0.3200 - val_accuracy: 0.3167
Epoch 9/100
```

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Epoch 9/100
4/4 - 0s - loss: 0.3196 - accuracy: 0.3167 - val_loss: 0.3188 - val_accuracy: 0.3250
Epoch 10/100
4/4 - 0s - loss: 0.3183 - accuracy: 0.3417 - val_loss: 0.3175 - val_accuracy: 0.3417
Epoch 11/100
4/4 - 0s - loss: 0.3170 - accuracy: 0.3417 - val_loss: 0.3161 - val_accuracy: 0.3417
Epoch 12/100
4/4 - 0s - loss: 0.3157 - accuracy: 0.3417 - val_loss: 0.3148 - val_accuracy: 0.3417
Epoch 13/100
4/4 - 0s - loss: 0.3143 - accuracy: 0.3417 - val_loss: 0.3135 - val_accuracy: 0.3500
Epoch 14/100
4/4 - 0s - loss: 0.3130 - accuracy: 0.3500 - val_loss: 0.3121 - val_accuracy: 0.3583
Epoch 15/100
4/4 - 0s - loss: 0.3117 - accuracy: 0.3583 - val_loss: 0.3109 - val_accuracy: 0.3583
Epoch 16/100
4/4 - 0s - loss: 0.3104 - accuracy: 0.3667 - val_loss: 0.3094 - val_accuracy: 0.3750
Epoch 17/100
4/4 - 0s - loss: 0.3089 - accuracy: 0.3833 - val_loss: 0.3078 - val_accuracy: 0.3833
Epoch 18/100
4/4 - 0s - loss: 0.3073 - accuracy: 0.3833 - val_loss: 0.3063 - val_accuracy: 0.3750
Epoch 19/100
4/4 - 0s - loss: 0.3059 - accuracy: 0.3750 - val_loss: 0.3049 - val_accuracy: 0.3750
Epoch 20/100
4/4 - 0s - loss: 0.3043 - accuracy: 0.3750 - val_loss: 0.3032 - val_accuracy: 0.3833
Epoch 21/100
4/4 - 0s - loss: 0.3026 - accuracy: 0.3917 - val_loss: 0.3015 - val_accuracy: 0.4000
Epoch 22/100
4/4 - 0s - loss: 0.3009 - accuracy: 0.4000 - val_loss: 0.2997 - val_accuracy: 0.4000
Epoch 23/100
4/4 - 0s - loss: 0.2991 - accuracy: 0.4083 - val_loss: 0.2979 - val_accuracy: 0.4167
Epoch 24/100
4/4 - 0s - loss: 0.2974 - accuracy: 0.4167 - val_loss: 0.2962 - val_accuracy: 0.4167
Epoch 25/100
4/4 - 0s - loss: 0.2956 - accuracy: 0.4167 - val_loss: 0.2944 - val_accuracy: 0.4167
Epoch 26/100
4/4 - 0s - loss: 0.2938 - accuracy: 0.4167 - val_loss: 0.2926 - val_accuracy: 0.4250
Epoch 27/100
4/4 - 0s - loss: 0.2920 - accuracy: 0.4250 - val_loss: 0.2908 - val_accuracy: 0.4250
Epoch 28/100
4/4 - 0s - loss: 0.2902 - accuracy: 0.4250 - val_loss: 0.2890 - val_accuracy: 0.4500
Epoch 29/100
4/4 - 0s - loss: 0.2885 - accuracy: 0.4417 - val_loss: 0.2874 - val_accuracy: 0.4500
Epoch 30/100
4/4 - 0s - loss: 0.2869 - accuracy: 0.4500 - val_loss: 0.2857 - val_accuracy: 0.4583
Epoch 31/100
4/4 - 0s - loss: 0.2852 - accuracy: 0.4583 - val_loss: 0.2841 - val_accuracy: 0.4583
Epoch 32/100
4/4 - 0s - loss: 0.2836 - accuracy: 0.4583 - val_loss: 0.2826 - val_accuracy: 0.4583
Epoch 33/100
4/4 - 0s - loss: 0.2822 - accuracy: 0.4583 - val_loss: 0.2812 - val_accuracy: 0.4833
Epoch 34/100
4/4 - 0s - loss: 0.2807 - accuracy: 0.4833 - val_loss: 0.2798 - val_accuracy: 0.4833
Epoch 35/100
4/4 - 0s - loss: 0.2794 - accuracy: 0.4833 - val_loss: 0.2785 - val_accuracy: 0.4833
Epoch 36/100
4/4 - 0s - loss: 0.2781 - accuracy: 0.4917 - val_loss: 0.2773 - val_accuracy: 0.5083
Epoch 37/100
4/4 - 0s - loss: 0.2769 - accuracy: 0.5083 - val_loss: 0.2760 - val_accuracy: 0.5167
Epoch 38/100
4/4 - 0s - loss: 0.2756 - accuracy: 0.5167 - val_loss: 0.2748 - val_accuracy: 0.5250
Epoch 39/100
```

Epoch 39/100
4/4 - 0s - loss: 0.2744 - accuracy: 0.5250 - val_loss: 0.2737 - val_accuracy: 0.5250
Epoch 40/100
4/4 - 0s - loss: 0.2734 - accuracy: 0.5417 - val_loss: 0.2727 - val_accuracy: 0.5500
Epoch 41/100
4/4 - 0s - loss: 0.2723 - accuracy: 0.5500 - val_loss: 0.2717 - val_accuracy: 0.5833
Epoch 42/100
4/4 - 0s - loss: 0.2713 - accuracy: 0.5833 - val_loss: 0.2707 - val_accuracy: 0.5917
Epoch 43/100
4/4 - 0s - loss: 0.2704 - accuracy: 0.6000 - val_loss: 0.2696 - val_accuracy: 0.6000
Epoch 44/100
4/4 - 0s - loss: 0.2693 - accuracy: 0.6000 - val_loss: 0.2687 - val_accuracy: 0.6000
Epoch 45/100
4/4 - 0s - loss: 0.2684 - accuracy: 0.6000 - val_loss: 0.2678 - val_accuracy: 0.6000
Epoch 46/100
4/4 - 0s - loss: 0.2675 - accuracy: 0.6000 - val_loss: 0.2669 - val_accuracy: 0.5917
Epoch 47/100
4/4 - 0s - loss: 0.2667 - accuracy: 0.6000 - val_loss: 0.2661 - val_accuracy: 0.5917
Epoch 48/100
4/4 - 0s - loss: 0.2659 - accuracy: 0.5917 - val_loss: 0.2654 - val_accuracy: 0.5833
Epoch 49/100
4/4 - 0s - loss: 0.2652 - accuracy: 0.5833 - val_loss: 0.2647 - val_accuracy: 0.5833
Epoch 50/100
4/4 - 0s - loss: 0.2645 - accuracy: 0.5833 - val_loss: 0.2639 - val_accuracy: 0.5833
Epoch 51/100
4/4 - 0s - loss: 0.2637 - accuracy: 0.5833 - val_loss: 0.2631 - val_accuracy: 0.5833
Epoch 52/100
4/4 - 0s - loss: 0.2628 - accuracy: 0.5833 - val_loss: 0.2622 - val_accuracy: 0.5833
Epoch 53/100
4/4 - 0s - loss: 0.2619 - accuracy: 0.5833 - val_loss: 0.2613 - val_accuracy: 0.5833
Epoch 54/100
4/4 - 0s - loss: 0.2611 - accuracy: 0.5833 - val_loss: 0.2605 - val_accuracy: 0.5833
Epoch 55/100
4/4 - 0s - loss: 0.2603 - accuracy: 0.5833 - val_loss: 0.2597 - val_accuracy: 0.5833
Epoch 56/100
4/4 - 0s - loss: 0.2595 - accuracy: 0.5833 - val_loss: 0.2589 - val_accuracy: 0.5833
Epoch 57/100
4/4 - 0s - loss: 0.2587 - accuracy: 0.5833 - val_loss: 0.2581 - val_accuracy: 0.5833
Epoch 58/100
4/4 - 0s - loss: 0.2579 - accuracy: 0.5833 - val_loss: 0.2574 - val_accuracy: 0.5833
Epoch 59/100
4/4 - 0s - loss: 0.2572 - accuracy: 0.5833 - val_loss: 0.2567 - val_accuracy: 0.5833
Epoch 60/100
4/4 - 0s - loss: 0.2566 - accuracy: 0.5833 - val_loss: 0.2561 - val_accuracy: 0.5833
Epoch 61/100
4/4 - 0s - loss: 0.2559 - accuracy: 0.5833 - val_loss: 0.2554 - val_accuracy: 0.5833
Epoch 62/100
4/4 - 0s - loss: 0.2553 - accuracy: 0.5833 - val_loss: 0.2548 - val_accuracy: 0.5833
Epoch 63/100
4/4 - 0s - loss: 0.2546 - accuracy: 0.5833 - val_loss: 0.2542 - val_accuracy: 0.5833
Epoch 64/100
4/4 - 0s - loss: 0.2540 - accuracy: 0.5833 - val_loss: 0.2535 - val_accuracy: 0.5833
Epoch 65/100
4/4 - 0s - loss: 0.2534 - accuracy: 0.5833 - val_loss: 0.2530 - val_accuracy: 0.5833
Epoch 66/100
4/4 - 0s - loss: 0.2528 - accuracy: 0.5833 - val_loss: 0.2524 - val_accuracy: 0.5833
Epoch 67/100
4/4 - 0s - loss: 0.2522 - accuracy: 0.5833 - val_loss: 0.2518 - val_accuracy: 0.5833
Epoch 68/100
4/4 - 0s - loss: 0.2517 - accuracy: 0.5833 - val_loss: 0.2513 - val_accuracy: 0.5833
Epoch 69/100

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4/4 - 0s - loss: 0.2512 - accuracy: 0.5833 - val_loss: 0.2508 - val_accuracy: 0.5833
Epoch 70/100
4/4 - 0s - loss: 0.2506 - accuracy: 0.5833 - val_loss: 0.2503 - val_accuracy: 0.5833
Epoch 71/100
4/4 - 0s - loss: 0.2502 - accuracy: 0.5833 - val_loss: 0.2498 - val_accuracy: 0.5833
Epoch 72/100
4/4 - 0s - loss: 0.2496 - accuracy: 0.5917 - val_loss: 0.2493 - val_accuracy: 0.5917
Epoch 73/100
4/4 - 0s - loss: 0.2491 - accuracy: 0.5917 - val_loss: 0.2488 - val_accuracy: 0.5917
Epoch 74/100
4/4 - 0s - loss: 0.2487 - accuracy: 0.5917 - val_loss: 0.2483 - val_accuracy: 0.5917
Epoch 75/100
4/4 - 0s - loss: 0.2481 - accuracy: 0.5917 - val_loss: 0.2478 - val_accuracy: 0.5917
Epoch 76/100
4/4 - 0s - loss: 0.2477 - accuracy: 0.5917 - val_loss: 0.2473 - val_accuracy: 0.5917
Epoch 77/100
4/4 - 0s - loss: 0.2472 - accuracy: 0.5917 - val_loss: 0.2469 - val_accuracy: 0.5917
Epoch 78/100
4/4 - 0s - loss: 0.2467 - accuracy: 0.5917 - val_loss: 0.2464 - val_accuracy: 0.5917
Epoch 79/100
4/4 - 0s - loss: 0.2462 - accuracy: 0.5917 - val_loss: 0.2458 - val_accuracy: 0.5917
Epoch 80/100
4/4 - 0s - loss: 0.2457 - accuracy: 0.5917 - val_loss: 0.2453 - val_accuracy: 0.5917
Epoch 81/100
4/4 - 0s - loss: 0.2452 - accuracy: 0.5917 - val_loss: 0.2448 - val_accuracy: 0.5917
Epoch 82/100
4/4 - 0s - loss: 0.2447 - accuracy: 0.5917 - val_loss: 0.2443 - val_accuracy: 0.5917
Epoch 83/100
4/4 - 0s - loss: 0.2442 - accuracy: 0.5917 - val_loss: 0.2438 - val_accuracy: 0.5917
Epoch 84/100
4/4 - 0s - loss: 0.2437 - accuracy: 0.5917 - val_loss: 0.2434 - val_accuracy: 0.5917
Epoch 85/100
4/4 - 0s - loss: 0.2433 - accuracy: 0.5917 - val_loss: 0.2429 - val_accuracy: 0.5917
Epoch 86/100
4/4 - 0s - loss: 0.2428 - accuracy: 0.5917 - val_loss: 0.2424 - val_accuracy: 0.5917
Epoch 87/100
4/4 - 0s - loss: 0.2423 - accuracy: 0.5917 - val_loss: 0.2420 - val_accuracy: 0.5917
Epoch 88/100
4/4 - 0s - loss: 0.2419 - accuracy: 0.5917 - val_loss: 0.2415 - val_accuracy: 0.5917
Epoch 89/100
4/4 - 0s - loss: 0.2414 - accuracy: 0.5917 - val_loss: 0.2411 - val_accuracy: 0.5917
Epoch 90/100
4/4 - 0s - loss: 0.2409 - accuracy: 0.5917 - val_loss: 0.2406 - val_accuracy: 0.5917
Epoch 91/100
4/4 - 0s - loss: 0.2405 - accuracy: 0.5917 - val_loss: 0.2402 - val_accuracy: 0.6000
Epoch 92/100
4/4 - 0s - loss: 0.2400 - accuracy: 0.6083 - val_loss: 0.2397 - val_accuracy: 0.6083
Epoch 93/100
4/4 - 0s - loss: 0.2396 - accuracy: 0.6083 - val_loss: 0.2393 - val_accuracy: 0.6083
Epoch 94/100
4/4 - 0s - loss: 0.2391 - accuracy: 0.6083 - val_loss: 0.2388 - val_accuracy: 0.6083
Epoch 95/100
4/4 - 0s - loss: 0.2387 - accuracy: 0.6083 - val_loss: 0.2384 - val_accuracy: 0.6083
Epoch 96/100
4/4 - 0s - loss: 0.2383 - accuracy: 0.6083 - val_loss: 0.2380 - val_accuracy: 0.6083
Epoch 97/100
4/4 - 0s - loss: 0.2379 - accuracy: 0.6083 - val_loss: 0.2375 - val_accuracy: 0.6083
Epoch 98/100
4/4 - 0s - loss: 0.2374 - accuracy: 0.6083 - val_loss: 0.2371 - val_accuracy: 0.6083
Epoch 99/100
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4/4 - 0s - loss: 0.2370 - accuracy: 0.6083 - val_loss: 0.2367 - val_accuracy: 0.6083
Epoch 100/100
4/4 - 0s - loss: 0.2366 - accuracy: 0.6083 - val_loss: 0.2363 - val_accuracy: 0.6083
Activation: relu LR: 0.01 Itertions: 100 || Train loss: 0.2362537980079651
Activation: relu LR: 0.01 Itertions: 100 || Train Accuracy: 0.6083333492279053
Epoch 1/100
4/4 - 0s - loss: 0.2361 - accuracy: 0.6083 - val_loss: 0.2333 - val_accuracy: 0.6000
Epoch 2/100
4/4 - 0s - loss: 0.2358 - accuracy: 0.6083 - val_loss: 0.2329 - val_accuracy: 0.6000
Epoch 3/100
4/4 - 0s - loss: 0.2353 - accuracy: 0.6083 - val_loss: 0.2324 - val_accuracy: 0.6000
Epoch 4/100
4/4 - 0s - loss: 0.2349 - accuracy: 0.6083 - val_loss: 0.2319 - val_accuracy: 0.6000
Epoch 5/100
4/4 - 0s - loss: 0.2344 - accuracy: 0.6083 - val_loss: 0.2314 - val_accuracy: 0.6000
Epoch 6/100
4/4 - 0s - loss: 0.2339 - accuracy: 0.6083 - val_loss: 0.2309 - val_accuracy: 0.6000
Epoch 7/100
4/4 - 0s - loss: 0.2334 - accuracy: 0.6083 - val_loss: 0.2304 - val_accuracy: 0.6000
Epoch 8/100
4/4 - 0s - loss: 0.2330 - accuracy: 0.6083 - val_loss: 0.2299 - val_accuracy: 0.6000
Epoch 9/100
4/4 - 0s - loss: 0.2325 - accuracy: 0.6083 - val_loss: 0.2294 - val_accuracy: 0.6000
Epoch 10/100
4/4 - 0s - loss: 0.2320 - accuracy: 0.6083 - val_loss: 0.2289 - val_accuracy: 0.6000
Epoch 11/100
4/4 - 0s - loss: 0.2316 - accuracy: 0.6083 - val_loss: 0.2284 - val_accuracy: 0.6000
Epoch 12/100
4/4 - 0s - loss: 0.2311 - accuracy: 0.6083 - val_loss: 0.2279 - val_accuracy: 0.6000
Epoch 13/100
4/4 - 0s - loss: 0.2306 - accuracy: 0.6083 - val_loss: 0.2274 - val_accuracy: 0.6000
Epoch 14/100
4/4 - 0s - loss: 0.2301 - accuracy: 0.6083 - val_loss: 0.2268 - val_accuracy: 0.6000
Epoch 15/100
4/4 - 0s - loss: 0.2296 - accuracy: 0.6083 - val_loss: 0.2263 - val_accuracy: 0.6000
Epoch 16/100
4/4 - 0s - loss: 0.2291 - accuracy: 0.6083 - val_loss: 0.2258 - val_accuracy: 0.6000
Epoch 17/100
4/4 - 0s - loss: 0.2286 - accuracy: 0.6083 - val_loss: 0.2253 - val_accuracy: 0.6000
Epoch 18/100
4/4 - 0s - loss: 0.2281 - accuracy: 0.6083 - val_loss: 0.2248 - val_accuracy: 0.6000
Epoch 19/100
4/4 - 0s - loss: 0.2275 - accuracy: 0.6083 - val_loss: 0.2243 - val_accuracy: 0.6000
Epoch 20/100
4/4 - 0s - loss: 0.2270 - accuracy: 0.6083 - val_loss: 0.2238 - val_accuracy: 0.6000
Epoch 21/100
4/4 - 0s - loss: 0.2265 - accuracy: 0.6083 - val_loss: 0.2233 - val_accuracy: 0.6000
Epoch 22/100
4/4 - 0s - loss: 0.2260 - accuracy: 0.6083 - val_loss: 0.2228 - val_accuracy: 0.6000
Epoch 23/100
4/4 - 0s - loss: 0.2256 - accuracy: 0.6083 - val_loss: 0.2223 - val_accuracy: 0.6000
Epoch 24/100
4/4 - 0s - loss: 0.2250 - accuracy: 0.6083 - val_loss: 0.2218 - val_accuracy: 0.6000
Epoch 25/100
4/4 - 0s - loss: 0.2246 - accuracy: 0.6083 - val_loss: 0.2213 - val_accuracy: 0.6000
Epoch 26/100
4/4 - 0s - loss: 0.2241 - accuracy: 0.6083 - val_loss: 0.2209 - val_accuracy: 0.6000
Epoch 27/100
4/4 - 0s - loss: 0.2236 - accuracy: 0.6083 - val_loss: 0.2204 - val_accuracy: 0.6000
Epoch 28/100
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4/4 - 0s - loss: 0.2231 - accuracy: 0.6083 - val_loss: 0.2199 - val_accuracy: 0.6000
Epoch 29/100
4/4 - 0s - loss: 0.2226 - accuracy: 0.6083 - val_loss: 0.2194 - val_accuracy: 0.6000
Epoch 30/100
4/4 - 0s - loss: 0.2222 - accuracy: 0.6083 - val_loss: 0.2189 - val_accuracy: 0.6000
Epoch 31/100
4/4 - 0s - loss: 0.2217 - accuracy: 0.6083 - val_loss: 0.2185 - val_accuracy: 0.6000
Epoch 32/100
4/4 - 0s - loss: 0.2212 - accuracy: 0.6083 - val_loss: 0.2180 - val_accuracy: 0.6000
Epoch 33/100
4/4 - 0s - loss: 0.2207 - accuracy: 0.6083 - val_loss: 0.2175 - val_accuracy: 0.6000
Epoch 34/100
4/4 - 0s - loss: 0.2202 - accuracy: 0.6083 - val_loss: 0.2171 - val_accuracy: 0.6000
Epoch 35/100
4/4 - 0s - loss: 0.2198 - accuracy: 0.6167 - val_loss: 0.2166 - val_accuracy: 0.6000
Epoch 36/100
4/4 - 0s - loss: 0.2193 - accuracy: 0.6167 - val_loss: 0.2161 - val_accuracy: 0.6000
Epoch 37/100
4/4 - 0s - loss: 0.2188 - accuracy: 0.6167 - val_loss: 0.2157 - val_accuracy: 0.6000
Epoch 38/100
4/4 - 0s - loss: 0.2184 - accuracy: 0.6167 - val_loss: 0.2152 - val_accuracy: 0.6000
Epoch 39/100
4/4 - 0s - loss: 0.2179 - accuracy: 0.6250 - val_loss: 0.2147 - val_accuracy: 0.6000
Epoch 40/100
4/4 - 0s - loss: 0.2174 - accuracy: 0.6250 - val_loss: 0.2143 - val_accuracy: 0.6000
Epoch 41/100
4/4 - 0s - loss: 0.2169 - accuracy: 0.6250 - val_loss: 0.2138 - val_accuracy: 0.6000
Epoch 42/100
4/4 - 0s - loss: 0.2165 - accuracy: 0.6250 - val_loss: 0.2134 - val_accuracy: 0.6000
Epoch 43/100
4/4 - 0s - loss: 0.2160 - accuracy: 0.6250 - val_loss: 0.2129 - val_accuracy: 0.6000
Epoch 44/100
4/4 - 0s - loss: 0.2154 - accuracy: 0.6250 - val_loss: 0.2124 - val_accuracy: 0.6000
Epoch 45/100
4/4 - 0s - loss: 0.2150 - accuracy: 0.6250 - val_loss: 0.2120 - val_accuracy: 0.6000
Epoch 46/100
4/4 - 0s - loss: 0.2145 - accuracy: 0.6250 - val_loss: 0.2115 - val_accuracy: 0.6000
Epoch 47/100
4/4 - 0s - loss: 0.2140 - accuracy: 0.6250 - val_loss: 0.2111 - val_accuracy: 0.6000
Epoch 48/100
4/4 - 0s - loss: 0.2135 - accuracy: 0.6250 - val_loss: 0.2106 - val_accuracy: 0.6000
Epoch 49/100
4/4 - 0s - loss: 0.2130 - accuracy: 0.6250 - val_loss: 0.2102 - val_accuracy: 0.6000
Epoch 50/100
4/4 - 0s - loss: 0.2125 - accuracy: 0.6250 - val_loss: 0.2097 - val_accuracy: 0.6000
Epoch 51/100
4/4 - 0s - loss: 0.2121 - accuracy: 0.6250 - val_loss: 0.2092 - val_accuracy: 0.6000
Epoch 52/100
4/4 - 0s - loss: 0.2116 - accuracy: 0.6250 - val_loss: 0.2088 - val_accuracy: 0.6000
Epoch 53/100
4/4 - 0s - loss: 0.2111 - accuracy: 0.6250 - val_loss: 0.2083 - val_accuracy: 0.6000
Epoch 54/100
4/4 - 0s - loss: 0.2107 - accuracy: 0.6250 - val_loss: 0.2079 - val_accuracy: 0.6000
Epoch 55/100
4/4 - 0s - loss: 0.2102 - accuracy: 0.6250 - val_loss: 0.2074 - val_accuracy: 0.6000
Epoch 56/100
4/4 - 0s - loss: 0.2097 - accuracy: 0.6250 - val_loss: 0.2070 - val_accuracy: 0.6000
Epoch 57/100
4/4 - 0s - loss: 0.2092 - accuracy: 0.6333 - val_loss: 0.2065 - val_accuracy: 0.6000
Epoch 58/100
4/4 - 0s - loss: 0.2087 - accuracy: 0.6333 - val_loss: 0.2061 - val_accuracy: 0.6000
```

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Epoch 59/100
4/4 - 0s - loss: 0.2082 - accuracy: 0.6333 - val_loss: 0.2056 - val_accuracy: 0.6000
Epoch 60/100
4/4 - 0s - loss: 0.2077 - accuracy: 0.6333 - val_loss: 0.2052 - val_accuracy: 0.6000
Epoch 61/100
4/4 - 0s - loss: 0.2073 - accuracy: 0.6333 - val_loss: 0.2047 - val_accuracy: 0.6000
Epoch 62/100
4/4 - 0s - loss: 0.2067 - accuracy: 0.6333 - val_loss: 0.2042 - val_accuracy: 0.6000
Epoch 63/100
4/4 - 0s - loss: 0.2062 - accuracy: 0.6333 - val_loss: 0.2038 - val_accuracy: 0.6000
Epoch 64/100
4/4 - 0s - loss: 0.2058 - accuracy: 0.6333 - val_loss: 0.2034 - val_accuracy: 0.6000
Epoch 65/100
4/4 - 0s - loss: 0.2053 - accuracy: 0.6333 - val_loss: 0.2029 - val_accuracy: 0.6000
Epoch 66/100
4/4 - 0s - loss: 0.2048 - accuracy: 0.6333 - val_loss: 0.2025 - val_accuracy: 0.6000
Epoch 67/100
4/4 - 0s - loss: 0.2043 - accuracy: 0.6333 - val_loss: 0.2020 - val_accuracy: 0.6000
Epoch 68/100
4/4 - 0s - loss: 0.2038 - accuracy: 0.6333 - val_loss: 0.2016 - val_accuracy: 0.6000
Epoch 69/100
4/4 - 0s - loss: 0.2033 - accuracy: 0.6333 - val_loss: 0.2011 - val_accuracy: 0.6000
Epoch 70/100
4/4 - 0s - loss: 0.2028 - accuracy: 0.6333 - val_loss: 0.2007 - val_accuracy: 0.6000
Epoch 71/100
4/4 - 0s - loss: 0.2024 - accuracy: 0.6333 - val_loss: 0.2002 - val_accuracy: 0.6000
Epoch 72/100
4/4 - 0s - loss: 0.2019 - accuracy: 0.6333 - val_loss: 0.1998 - val_accuracy: 0.6000
Epoch 73/100
4/4 - 0s - loss: 0.2014 - accuracy: 0.6333 - val_loss: 0.1994 - val_accuracy: 0.6000
Epoch 74/100
4/4 - 0s - loss: 0.2009 - accuracy: 0.6333 - val_loss: 0.1989 - val_accuracy: 0.6000
Epoch 75/100
4/4 - 0s - loss: 0.2005 - accuracy: 0.6333 - val_loss: 0.1985 - val_accuracy: 0.6000
Epoch 76/100
4/4 - 0s - loss: 0.2000 - accuracy: 0.6333 - val_loss: 0.1981 - val_accuracy: 0.6000
Epoch 77/100
4/4 - 0s - loss: 0.1995 - accuracy: 0.6333 - val_loss: 0.1976 - val_accuracy: 0.6000
Epoch 78/100
4/4 - 0s - loss: 0.1991 - accuracy: 0.6417 - val_loss: 0.1972 - val_accuracy: 0.6000
Epoch 79/100
4/4 - 0s - loss: 0.1985 - accuracy: 0.6417 - val_loss: 0.1967 - val_accuracy: 0.6000
Epoch 80/100
4/4 - 0s - loss: 0.1981 - accuracy: 0.6417 - val_loss: 0.1963 - val_accuracy: 0.6000
Epoch 81/100
4/4 - 0s - loss: 0.1976 - accuracy: 0.6417 - val_loss: 0.1959 - val_accuracy: 0.6000
Epoch 82/100
4/4 - 0s - loss: 0.1971 - accuracy: 0.6417 - val_loss: 0.1954 - val_accuracy: 0.6000
Epoch 83/100
4/4 - 0s - loss: 0.1966 - accuracy: 0.6417 - val_loss: 0.1950 - val_accuracy: 0.6000
Epoch 84/100
4/4 - 0s - loss: 0.1961 - accuracy: 0.6417 - val_loss: 0.1946 - val_accuracy: 0.6000
Epoch 85/100
4/4 - 0s - loss: 0.1957 - accuracy: 0.6417 - val_loss: 0.1941 - val_accuracy: 0.6000
Epoch 86/100
4/4 - 0s - loss: 0.1951 - accuracy: 0.6417 - val_loss: 0.1937 - val_accuracy: 0.6000
Epoch 87/100
4/4 - 0s - loss: 0.1947 - accuracy: 0.6417 - val_loss: 0.1933 - val_accuracy: 0.6000
Epoch 88/100
4/4 - 0s - loss: 0.1942 - accuracy: 0.6417 - val_loss: 0.1929 - val_accuracy: 0.6000
```

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Epoch 89/100
4/4 - 0s - loss: 0.1937 - accuracy: 0.6417 - val_loss: 0.1924 - val_accuracy: 0.6000
Epoch 90/100
4/4 - 0s - loss: 0.1932 - accuracy: 0.6417 - val_loss: 0.1920 - val_accuracy: 0.6000
Epoch 91/100
4/4 - 0s - loss: 0.1928 - accuracy: 0.6417 - val_loss: 0.1916 - val_accuracy: 0.6000
Epoch 92/100
4/4 - 0s - loss: 0.1923 - accuracy: 0.6417 - val_loss: 0.1912 - val_accuracy: 0.6000
Epoch 93/100
4/4 - 0s - loss: 0.1918 - accuracy: 0.6417 - val_loss: 0.1908 - val_accuracy: 0.6000
Epoch 94/100
4/4 - 0s - loss: 0.1913 - accuracy: 0.6417 - val_loss: 0.1903 - val_accuracy: 0.6333
Epoch 95/100
4/4 - 0s - loss: 0.1909 - accuracy: 0.6417 - val_loss: 0.1898 - val_accuracy: 0.6333
Epoch 96/100
4/4 - 0s - loss: 0.1904 - accuracy: 0.6417 - val_loss: 0.1893 - val_accuracy: 0.6333
Epoch 97/100
4/4 - 0s - loss: 0.1900 - accuracy: 0.6417 - val_loss: 0.1889 - val_accuracy: 0.6333
Epoch 98/100
4/4 - 0s - loss: 0.1895 - accuracy: 0.6417 - val_loss: 0.1884 - val_accuracy: 0.6333
Epoch 99/100
4/4 - 0s - loss: 0.1890 - accuracy: 0.6417 - val_loss: 0.1880 - val_accuracy: 0.6333
Epoch 100/100
4/4 - 0s - loss: 0.1886 - accuracy: 0.6417 - val_loss: 0.1875 - val_accuracy: 0.6333
Activation: relu LR: 0.01 Iterations: 100 || Test loss: 0.1875152587890625
Activation: relu LR: 0.01 Iterations: 100 || Test Accuracy: 0.6333333253860474
================================================================================
Model_relu_LR_0.01_Iterations_200_HL_3
Epoch 1/200
4/4 - 1s - loss: 0.3290 - accuracy: 0.1917 - val_loss: 0.3289 - val_accuracy: 0.1583
Epoch 2/200
4/4 - 0s - loss: 0.3288 - accuracy: 0.1667 - val_loss: 0.3286 - val_accuracy: 0.1667
Epoch 3/200
4/4 - 0s - loss: 0.3286 - accuracy: 0.1833 - val_loss: 0.3284 - val_accuracy: 0.1833
Epoch 4/200
4/4 - 0s - loss: 0.3283 - accuracy: 0.1833 - val_loss: 0.3281 - val_accuracy: 0.2000
Epoch 5/200
4/4 - 0s - loss: 0.3279 - accuracy: 0.2167 - val_loss: 0.3276 - val_accuracy: 0.2417
Epoch 6/200
4/4 - 0s - loss: 0.3274 - accuracy: 0.2500 - val_loss: 0.3270 - val_accuracy: 0.2667
Epoch 7/200
4/4 - 0s - loss: 0.3267 - accuracy: 0.2750 - val_loss: 0.3261 - val_accuracy: 0.2917
Epoch 8/200
4/4 - 0s - loss: 0.3258 - accuracy: 0.2917 - val_loss: 0.3252 - val_accuracy: 0.3083
Epoch 9/200
4/4 - 0s - loss: 0.3248 - accuracy: 0.3250 - val_loss: 0.3241 - val_accuracy: 0.3333
Epoch 10/200
4/4 - 0s - loss: 0.3237 - accuracy: 0.3333 - val_loss: 0.3230 - val_accuracy: 0.3417
Epoch 11/200
4/4 - 0s - loss: 0.3226 - accuracy: 0.3417 - val_loss: 0.3218 - val_accuracy: 0.3417
Epoch 12/200
4/4 - 0s - loss: 0.3214 - accuracy: 0.3417 - val_loss: 0.3207 - val_accuracy: 0.3417
Epoch 13/200
4/4 - 0s - loss: 0.3204 - accuracy: 0.3417 - val_loss: 0.3197 - val_accuracy: 0.3417
Epoch 14/200
4/4 - 0s - loss: 0.3194 - accuracy: 0.3417 - val_loss: 0.3187 - val_accuracy: 0.3417
Epoch 15/200
4/4 - 0s - loss: 0.3184 - accuracy: 0.3417 - val_loss: 0.3178 - val_accuracy: 0.3417
Epoch 16/200
4/4 - 0s - loss: 0.3175 - accuracy: 0.3417 - val_loss: 0.3169 - val_accuracy: 0.3417
```

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Epoch 17/200
4/4 - 0s - loss: 0.3166 - accuracy: 0.3417 - val_loss: 0.3161 - val_accuracy: 0.3417
Epoch 18/200
4/4 - 0s - loss: 0.3158 - accuracy: 0.3417 - val_loss: 0.3153 - val_accuracy: 0.3417
Epoch 19/200
4/4 - 0s - loss: 0.3150 - accuracy: 0.3417 - val_loss: 0.3145 - val_accuracy: 0.3417
Epoch 20/200
4/4 - 0s - loss: 0.3143 - accuracy: 0.3417 - val_loss: 0.3138 - val_accuracy: 0.3417
Epoch 21/200
4/4 - 0s - loss: 0.3136 - accuracy: 0.3417 - val_loss: 0.3131 - val_accuracy: 0.3417
Epoch 22/200
4/4 - 0s - loss: 0.3129 - accuracy: 0.3417 - val_loss: 0.3124 - val_accuracy: 0.3417
Epoch 23/200
4/4 - 0s - loss: 0.3122 - accuracy: 0.3417 - val_loss: 0.3118 - val_accuracy: 0.3417
Epoch 24/200
4/4 - 0s - loss: 0.3116 - accuracy: 0.3417 - val_loss: 0.3112 - val_accuracy: 0.3417
Epoch 25/200
4/4 - 0s - loss: 0.3110 - accuracy: 0.3417 - val_loss: 0.3107 - val_accuracy: 0.3417
Epoch 26/200
4/4 - 0s - loss: 0.3105 - accuracy: 0.3417 - val_loss: 0.3101 - val_accuracy: 0.3417
Epoch 27/200
4/4 - 0s - loss: 0.3100 - accuracy: 0.3417 - val_loss: 0.3096 - val_accuracy: 0.3417
Epoch 28/200
4/4 - 0s - loss: 0.3094 - accuracy: 0.3417 - val_loss: 0.3091 - val_accuracy: 0.3417
Epoch 29/200
4/4 - 0s - loss: 0.3090 - accuracy: 0.3417 - val_loss: 0.3087 - val_accuracy: 0.3417
Epoch 30/200
4/4 - 0s - loss: 0.3085 - accuracy: 0.3417 - val_loss: 0.3082 - val_accuracy: 0.3417
Epoch 31/200
4/4 - 0s - loss: 0.3081 - accuracy: 0.3417 - val_loss: 0.3078 - val_accuracy: 0.3417
Epoch 32/200
4/4 - 0s - loss: 0.3077 - accuracy: 0.3417 - val_loss: 0.3074 - val_accuracy: 0.3417
Epoch 33/200
4/4 - 0s - loss: 0.3073 - accuracy: 0.3417 - val_loss: 0.3071 - val_accuracy: 0.3417
Epoch 34/200
4/4 - 0s - loss: 0.3069 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3417
Epoch 35/200
4/4 - 0s - loss: 0.3066 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3417
Epoch 36/200
4/4 - 0s - loss: 0.3063 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3417
Epoch 37/200
4/4 - 0s - loss: 0.3060 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3417
Epoch 38/200
4/4 - 0s - loss: 0.3056 - accuracy: 0.3417 - val_loss: 0.3054 - val_accuracy: 0.3417
Epoch 39/200
4/4 - 0s - loss: 0.3053 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3417
Epoch 40/200
4/4 - 0s - loss: 0.3051 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3417
Epoch 41/200
4/4 - 0s - loss: 0.3048 - accuracy: 0.3417 - val_loss: 0.3046 - val_accuracy: 0.3417
Epoch 42/200
4/4 - 0s - loss: 0.3045 - accuracy: 0.3417 - val_loss: 0.3044 - val_accuracy: 0.3417
Epoch 43/200
4/4 - 0s - loss: 0.3043 - accuracy: 0.3417 - val_loss: 0.3041 - val_accuracy: 0.3417
Epoch 44/200
4/4 - 0s - loss: 0.3041 - accuracy: 0.3417 - val_loss: 0.3039 - val_accuracy: 0.3417
Epoch 45/200
4/4 - 0s - loss: 0.3038 - accuracy: 0.3417 - val_loss: 0.3037 - val_accuracy: 0.3417
Epoch 46/200
4/4 - 0s - loss: 0.3037 - accuracy: 0.3417 - val_loss: 0.3035 - val_accuracy: 0.3417
Epoch 47/200
```

Epoch 47/200
4/4 - 0s - loss: 0.3034 - accuracy: 0.3417 - val_loss: 0.3033 - val_accuracy: 0.3417
Epoch 48/200
4/4 - 0s - loss: 0.3032 - accuracy: 0.3417 - val_loss: 0.3031 - val_accuracy: 0.3417
Epoch 49/200
4/4 - 0s - loss: 0.3030 - accuracy: 0.3417 - val_loss: 0.3029 - val_accuracy: 0.3417
Epoch 50/200
4/4 - 0s - loss: 0.3029 - accuracy: 0.3417 - val_loss: 0.3027 - val_accuracy: 0.3417
Epoch 51/200
4/4 - 0s - loss: 0.3026 - accuracy: 0.3417 - val_loss: 0.3025 - val_accuracy: 0.3417
Epoch 52/200
4/4 - 0s - loss: 0.3025 - accuracy: 0.3417 - val_loss: 0.3023 - val_accuracy: 0.3417
Epoch 53/200
4/4 - 0s - loss: 0.3023 - accuracy: 0.3417 - val_loss: 0.3022 - val_accuracy: 0.3417
Epoch 54/200
4/4 - 0s - loss: 0.3021 - accuracy: 0.3417 - val_loss: 0.3020 - val_accuracy: 0.3417
Epoch 55/200
4/4 - 0s - loss: 0.3020 - accuracy: 0.3417 - val_loss: 0.3019 - val_accuracy: 0.3417
Epoch 56/200
4/4 - 0s - loss: 0.3018 - accuracy: 0.3417 - val_loss: 0.3017 - val_accuracy: 0.3417
Epoch 57/200
4/4 - 0s - loss: 0.3017 - accuracy: 0.3417 - val_loss: 0.3016 - val_accuracy: 0.3417
Epoch 58/200
4/4 - 0s - loss: 0.3015 - accuracy: 0.3417 - val_loss: 0.3014 - val_accuracy: 0.3417
Epoch 59/200
4/4 - 0s - loss: 0.3014 - accuracy: 0.3417 - val_loss: 0.3013 - val_accuracy: 0.3417
Epoch 60/200
4/4 - 0s - loss: 0.3013 - accuracy: 0.3417 - val_loss: 0.3012 - val_accuracy: 0.3417
Epoch 61/200
4/4 - 0s - loss: 0.3012 - accuracy: 0.3417 - val_loss: 0.3011 - val_accuracy: 0.3417
Epoch 62/200
4/4 - 0s - loss: 0.3010 - accuracy: 0.3417 - val_loss: 0.3009 - val_accuracy: 0.3417
Epoch 63/200
4/4 - 0s - loss: 0.3009 - accuracy: 0.3417 - val_loss: 0.3008 - val_accuracy: 0.3417
Epoch 64/200
4/4 - 0s - loss: 0.3008 - accuracy: 0.3417 - val_loss: 0.3007 - val_accuracy: 0.3417
Epoch 65/200
4/4 - 0s - loss: 0.3007 - accuracy: 0.3417 - val_loss: 0.3006 - val_accuracy: 0.3417
Epoch 66/200
4/4 - 0s - loss: 0.3006 - accuracy: 0.3417 - val_loss: 0.3005 - val_accuracy: 0.3417
Epoch 67/200
4/4 - 0s - loss: 0.3005 - accuracy: 0.3417 - val_loss: 0.3004 - val_accuracy: 0.3417
Epoch 68/200
4/4 - 0s - loss: 0.3003 - accuracy: 0.3417 - val_loss: 0.3003 - val_accuracy: 0.3417
Epoch 69/200
4/4 - 0s - loss: 0.3002 - accuracy: 0.3417 - val_loss: 0.3002 - val_accuracy: 0.3417
Epoch 70/200
4/4 - 0s - loss: 0.3001 - accuracy: 0.3417 - val_loss: 0.3001 - val_accuracy: 0.3417
Epoch 71/200
4/4 - 0s - loss: 0.3000 - accuracy: 0.3417 - val_loss: 0.3000 - val_accuracy: 0.3417
Epoch 72/200
4/4 - 0s - loss: 0.3000 - accuracy: 0.3417 - val_loss: 0.2999 - val_accuracy: 0.3417
Epoch 73/200
4/4 - 0s - loss: 0.2999 - accuracy: 0.3417 - val_loss: 0.2998 - val_accuracy: 0.3417
Epoch 74/200
4/4 - 0s - loss: 0.2998 - accuracy: 0.3417 - val_loss: 0.2997 - val_accuracy: 0.3417
Epoch 75/200
4/4 - 0s - loss: 0.2997 - accuracy: 0.3417 - val_loss: 0.2996 - val_accuracy: 0.3417
Epoch 76/200
4/4 - 0s - loss: 0.2996 - accuracy: 0.3417 - val_loss: 0.2995 - val_accuracy: 0.3417
Epoch 77/200

Epoch 77/200
4/4 - 0s - loss: 0.2995 - accuracy: 0.3417 - val_loss: 0.2994 - val_accuracy: 0.3417
Epoch 78/200
4/4 - 0s - loss: 0.2994 - accuracy: 0.3417 - val_loss: 0.2994 - val_accuracy: 0.3417
Epoch 79/200
4/4 - 0s - loss: 0.2993 - accuracy: 0.3417 - val_loss: 0.2993 - val_accuracy: 0.3417
Epoch 80/200
4/4 - 0s - loss: 0.2993 - accuracy: 0.3417 - val_loss: 0.2992 - val_accuracy: 0.3417
Epoch 81/200
4/4 - 0s - loss: 0.2992 - accuracy: 0.3417 - val_loss: 0.2991 - val_accuracy: 0.3417
Epoch 82/200
4/4 - 0s - loss: 0.2991 - accuracy: 0.3417 - val_loss: 0.2990 - val_accuracy: 0.3417
Epoch 83/200
4/4 - 0s - loss: 0.2991 - accuracy: 0.3417 - val_loss: 0.2990 - val_accuracy: 0.3417
Epoch 84/200
4/4 - 0s - loss: 0.2990 - accuracy: 0.3417 - val_loss: 0.2989 - val_accuracy: 0.3417
Epoch 85/200
4/4 - 0s - loss: 0.2989 - accuracy: 0.3417 - val_loss: 0.2988 - val_accuracy: 0.3417
Epoch 86/200
4/4 - 0s - loss: 0.2988 - accuracy: 0.3417 - val_loss: 0.2988 - val_accuracy: 0.3417
Epoch 87/200
4/4 - 0s - loss: 0.2988 - accuracy: 0.3417 - val_loss: 0.2987 - val_accuracy: 0.3417
Epoch 88/200
4/4 - 0s - loss: 0.2987 - accuracy: 0.3417 - val_loss: 0.2986 - val_accuracy: 0.3417
Epoch 89/200
4/4 - 0s - loss: 0.2986 - accuracy: 0.3417 - val_loss: 0.2985 - val_accuracy: 0.3417
Epoch 90/200
4/4 - 0s - loss: 0.2985 - accuracy: 0.3417 - val_loss: 0.2985 - val_accuracy: 0.3417
Epoch 91/200
4/4 - 0s - loss: 0.2985 - accuracy: 0.3417 - val_loss: 0.2984 - val_accuracy: 0.3417
Epoch 92/200
4/4 - 0s - loss: 0.2984 - accuracy: 0.3417 - val_loss: 0.2983 - val_accuracy: 0.3417
Epoch 93/200
4/4 - 0s - loss: 0.2983 - accuracy: 0.3417 - val_loss: 0.2983 - val_accuracy: 0.3417
Epoch 94/200
4/4 - 0s - loss: 0.2983 - accuracy: 0.3417 - val_loss: 0.2982 - val_accuracy: 0.3417
Epoch 95/200
4/4 - 0s - loss: 0.2982 - accuracy: 0.3417 - val_loss: 0.2982 - val_accuracy: 0.3417
Epoch 96/200
4/4 - 0s - loss: 0.2981 - accuracy: 0.3417 - val_loss: 0.2981 - val_accuracy: 0.3417
Epoch 97/200
4/4 - 0s - loss: 0.2981 - accuracy: 0.3417 - val_loss: 0.2980 - val_accuracy: 0.3417
Epoch 98/200
4/4 - 0s - loss: 0.2981 - accuracy: 0.3417 - val_loss: 0.2980 - val_accuracy: 0.3417
Epoch 99/200
4/4 - 0s - loss: 0.2980 - accuracy: 0.3417 - val_loss: 0.2979 - val_accuracy: 0.3417
Epoch 100/200
4/4 - 0s - loss: 0.2979 - accuracy: 0.3417 - val_loss: 0.2979 - val_accuracy: 0.3417
Epoch 101/200
4/4 - 0s - loss: 0.2979 - accuracy: 0.3417 - val_loss: 0.2978 - val_accuracy: 0.3417
Epoch 102/200
4/4 - 0s - loss: 0.2978 - accuracy: 0.3417 - val_loss: 0.2978 - val_accuracy: 0.3417
Epoch 103/200
4/4 - 0s - loss: 0.2977 - accuracy: 0.3417 - val_loss: 0.2977 - val_accuracy: 0.3417
Epoch 104/200
4/4 - 0s - loss: 0.2977 - accuracy: 0.3417 - val_loss: 0.2977 - val_accuracy: 0.3417
Epoch 105/200
4/4 - 0s - loss: 0.2977 - accuracy: 0.3417 - val_loss: 0.2976 - val_accuracy: 0.3417
Epoch 106/200
4/4 - 0s - loss: 0.2976 - accuracy: 0.3417 - val_loss: 0.2976 - val_accuracy: 0.3417
Epoch 107/200

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4/4 - 0s - loss: 0.2976 - accuracy: 0.3417 - val_loss: 0.2975 - val_accuracy: 0.3417
Epoch 108/200
4/4 - 0s - loss: 0.2975 - accuracy: 0.3417 - val_loss: 0.2975 - val_accuracy: 0.3417
Epoch 109/200
4/4 - 0s - loss: 0.2974 - accuracy: 0.3417 - val_loss: 0.2974 - val_accuracy: 0.3417
Epoch 110/200
4/4 - 0s - loss: 0.2974 - accuracy: 0.3417 - val_loss: 0.2974 - val_accuracy: 0.3417
Epoch 111/200
4/4 - 0s - loss: 0.2974 - accuracy: 0.3417 - val_loss: 0.2973 - val_accuracy: 0.3417
Epoch 112/200
4/4 - 0s - loss: 0.2973 - accuracy: 0.3417 - val_loss: 0.2973 - val_accuracy: 0.3417
Epoch 113/200
4/4 - 0s - loss: 0.2973 - accuracy: 0.3417 - val_loss: 0.2972 - val_accuracy: 0.3417
Epoch 114/200
4/4 - 0s - loss: 0.2972 - accuracy: 0.3417 - val_loss: 0.2972 - val_accuracy: 0.3417
Epoch 115/200
4/4 - 0s - loss: 0.2972 - accuracy: 0.3417 - val_loss: 0.2971 - val_accuracy: 0.3417
Epoch 116/200
4/4 - 0s - loss: 0.2971 - accuracy: 0.3417 - val_loss: 0.2971 - val_accuracy: 0.3417
Epoch 117/200
4/4 - 0s - loss: 0.2971 - accuracy: 0.3417 - val_loss: 0.2971 - val_accuracy: 0.3417
Epoch 118/200
4/4 - 0s - loss: 0.2971 - accuracy: 0.3417 - val_loss: 0.2970 - val_accuracy: 0.3417
Epoch 119/200
4/4 - 0s - loss: 0.2970 - accuracy: 0.3417 - val_loss: 0.2970 - val_accuracy: 0.3417
Epoch 120/200
4/4 - 0s - loss: 0.2970 - accuracy: 0.3417 - val_loss: 0.2969 - val_accuracy: 0.3417
Epoch 121/200
4/4 - 0s - loss: 0.2970 - accuracy: 0.3417 - val_loss: 0.2969 - val_accuracy: 0.3417
Epoch 122/200
4/4 - 0s - loss: 0.2970 - accuracy: 0.3417 - val_loss: 0.2969 - val_accuracy: 0.3417
Epoch 123/200
4/4 - 0s - loss: 0.2969 - accuracy: 0.3417 - val_loss: 0.2968 - val_accuracy: 0.3417
Epoch 124/200
4/4 - 0s - loss: 0.2968 - accuracy: 0.3417 - val_loss: 0.2968 - val_accuracy: 0.3417
Epoch 125/200
4/4 - 0s - loss: 0.2968 - accuracy: 0.3417 - val_loss: 0.2968 - val_accuracy: 0.3417
Epoch 126/200
4/4 - 0s - loss: 0.2968 - accuracy: 0.3417 - val_loss: 0.2967 - val_accuracy: 0.3417
Epoch 127/200
4/4 - 0s - loss: 0.2967 - accuracy: 0.3417 - val_loss: 0.2967 - val_accuracy: 0.3417
Epoch 128/200
4/4 - 0s - loss: 0.2967 - accuracy: 0.3417 - val_loss: 0.2966 - val_accuracy: 0.3417
Epoch 129/200
4/4 - 0s - loss: 0.2967 - accuracy: 0.3417 - val_loss: 0.2966 - val_accuracy: 0.3417
Epoch 130/200
4/4 - 0s - loss: 0.2966 - accuracy: 0.3417 - val_loss: 0.2966 - val_accuracy: 0.3417
Epoch 131/200
4/4 - 0s - loss: 0.2966 - accuracy: 0.3417 - val_loss: 0.2965 - val_accuracy: 0.3417
Epoch 132/200
4/4 - 0s - loss: 0.2965 - accuracy: 0.3417 - val_loss: 0.2965 - val_accuracy: 0.3417
Epoch 133/200
4/4 - 0s - loss: 0.2965 - accuracy: 0.3417 - val_loss: 0.2965 - val_accuracy: 0.3417
Epoch 134/200
4/4 - 0s - loss: 0.2965 - accuracy: 0.3417 - val_loss: 0.2964 - val_accuracy: 0.3417
Epoch 135/200
4/4 - 0s - loss: 0.2964 - accuracy: 0.3417 - val_loss: 0.2964 - val_accuracy: 0.3417
Epoch 136/200
4/4 - 0s - loss: 0.2964 - accuracy: 0.3417 - val_loss: 0.2964 - val_accuracy: 0.3417
Epoch 137/200
```

```
4/4 - 0s - loss: 0.2963 - accuracy: 0.3417 - val_loss: 0.2963 - val_accuracy: 0.3417
Epoch 138/200
4/4 - 0s - loss: 0.2963 - accuracy: 0.3417 - val_loss: 0.2963 - val_accuracy: 0.3417
Epoch 139/200
4/4 - 0s - loss: 0.2963 - accuracy: 0.3417 - val_loss: 0.2962 - val_accuracy: 0.3417
Epoch 140/200
4/4 - 0s - loss: 0.2963 - accuracy: 0.3417 - val_loss: 0.2962 - val_accuracy: 0.3417
Epoch 141/200
4/4 - 0s - loss: 0.2962 - accuracy: 0.3417 - val_loss: 0.2962 - val_accuracy: 0.3417
Epoch 142/200
4/4 - 0s - loss: 0.2962 - accuracy: 0.3417 - val_loss: 0.2961 - val_accuracy: 0.3417
Epoch 143/200
4/4 - 0s - loss: 0.2961 - accuracy: 0.3417 - val_loss: 0.2961 - val_accuracy: 0.3417
Epoch 144/200
4/4 - 0s - loss: 0.2961 - accuracy: 0.3417 - val_loss: 0.2961 - val_accuracy: 0.3417
Epoch 145/200
4/4 - 0s - loss: 0.2961 - accuracy: 0.3417 - val_loss: 0.2961 - val_accuracy: 0.3417
Epoch 146/200
4/4 - 0s - loss: 0.2961 - accuracy: 0.3417 - val_loss: 0.2960 - val_accuracy: 0.3417
Epoch 147/200
4/4 - 0s - loss: 0.2960 - accuracy: 0.3417 - val_loss: 0.2960 - val_accuracy: 0.3417
Epoch 148/200
4/4 - 0s - loss: 0.2960 - accuracy: 0.3417 - val_loss: 0.2960 - val_accuracy: 0.3417
Epoch 149/200
4/4 - 0s - loss: 0.2960 - accuracy: 0.3417 - val_loss: 0.2959 - val_accuracy: 0.3417
Epoch 150/200
4/4 - 0s - loss: 0.2959 - accuracy: 0.3417 - val_loss: 0.2959 - val_accuracy: 0.3417
Epoch 151/200
4/4 - 0s - loss: 0.2959 - accuracy: 0.3417 - val_loss: 0.2959 - val_accuracy: 0.3417
Epoch 152/200
4/4 - 0s - loss: 0.2959 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3417
Epoch 153/200
4/4 - 0s - loss: 0.2959 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3417
Epoch 154/200
4/4 - 0s - loss: 0.2958 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3417
Epoch 155/200
4/4 - 0s - loss: 0.2958 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3417
Epoch 156/200
4/4 - 0s - loss: 0.2958 - accuracy: 0.3417 - val_loss: 0.2957 - val_accuracy: 0.3417
Epoch 157/200
4/4 - 0s - loss: 0.2957 - accuracy: 0.3417 - val_loss: 0.2957 - val_accuracy: 0.3417
Epoch 158/200
4/4 - 0s - loss: 0.2957 - accuracy: 0.3417 - val_loss: 0.2957 - val_accuracy: 0.3417
Epoch 159/200
4/4 - 0s - loss: 0.2957 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3417
Epoch 160/200
4/4 - 0s - loss: 0.2957 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3417
Epoch 161/200
4/4 - 0s - loss: 0.2956 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3417
Epoch 162/200
4/4 - 0s - loss: 0.2956 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3417
Epoch 163/200
4/4 - 0s - loss: 0.2956 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 164/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 165/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 166/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 167/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
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4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 168/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2954 - val_accuracy: 0.3417
Epoch 169/200
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2954 - val_accuracy: 0.3417
Epoch 170/200
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2954 - val_accuracy: 0.3417
Epoch 171/200
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2954 - val_accuracy: 0.3417
Epoch 172/200
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2954 - val_accuracy: 0.3417
Epoch 173/200
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 174/200
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 175/200
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 176/200
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 177/200
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 178/200
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 179/200
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 180/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 181/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 182/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 183/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 184/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 185/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 186/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 187/200
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 188/200
4/4 - 0s - loss: 0.2951 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 189/200
4/4 - 0s - loss: 0.2951 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 190/200
4/4 - 0s - loss: 0.2951 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 191/200
4/4 - 0s - loss: 0.2951 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 192/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 193/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 194/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 195/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 196/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 197/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417

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Epoch 198/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2949 - val_accuracy: 0.3417
Epoch 199/200
4/4 - 0s - loss: 0.2950 - accuracy: 0.3417 - val_loss: 0.2949 - val_accuracy: 0.3417
Epoch 200/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.2949 - val_accuracy: 0.3417
Activation: relu LR: 0.01 Itertions: 200 || Train loss: 0.2949122190475464
Activation: relu LR: 0.01 Itertions: 200 || Train Accuracy: 0.34166666865348816
Epoch 1/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3070 - val_accuracy: 0.3000
Epoch 2/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3070 - val_accuracy: 0.3000
Epoch 3/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 4/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 5/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 6/200
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 7/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 8/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3069 - val_accuracy: 0.3000
Epoch 9/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 10/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 11/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 12/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 13/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 14/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 15/200
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.3068 - val_accuracy: 0.3000
Epoch 16/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 17/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 18/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 19/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 20/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 21/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3000
Epoch 22/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3066 - val_accuracy: 0.3000
Epoch 23/200
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.3066 - val_accuracy: 0.3000
Epoch 24/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3066 - val_accuracy: 0.3000
Epoch 25/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3066 - val_accuracy: 0.3000
Epoch 26/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3066 - val_accuracy: 0.3000
```

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Epoch 27/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 28/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 29/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 30/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 31/200
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 32/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3065 - val_accuracy: 0.3000
Epoch 33/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 34/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 35/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 36/200
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 37/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 38/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 39/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3064 - val_accuracy: 0.3000
Epoch 40/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 41/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 42/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 43/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 44/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 45/200
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 46/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 47/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 48/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3063 - val_accuracy: 0.3000
Epoch 49/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 50/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 51/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 52/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 53/200
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 54/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 55/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 56/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
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Epoch 57/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 58/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3062 - val_accuracy: 0.3000
Epoch 59/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 60/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 61/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 62/200
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 63/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 64/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 65/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3061 - val_accuracy: 0.3000
Epoch 66/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 67/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 68/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 69/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 70/200
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 71/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 72/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3060 - val_accuracy: 0.3000
Epoch 73/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 74/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 75/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 76/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 77/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 78/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 79/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 80/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 81/200
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 82/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 83/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3059 - val_accuracy: 0.3000
Epoch 84/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 85/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 86/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 87/200
```

Epoch 87/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 88/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 89/200
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 90/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 91/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3058 - val_accuracy: 0.3000
Epoch 92/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 93/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 94/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 95/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 96/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 97/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 98/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 99/200
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3057 - val_accuracy: 0.3000
Epoch 100/200
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3056 - val_accuracy: 0.3000
Epoch 101/200
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3056 - val_accuracy: 0.3000
Epoch 102/200
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3056 - val_accuracy: 0.3000
Epoch 103/200
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Epoch 104/200
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Epoch 105/200
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Epoch 107/200
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Epoch 108/200
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Epoch 109/200
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Epoch 110/200
4/4 - 0s - loss: 0.2936 - accuracy: 0.3417 - val_loss: 0.3055 - val_accuracy: 0.3000
Epoch 111/200
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Epoch 112/200
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Epoch 113/200
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Epoch 114/200
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Epoch 115/200
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Epoch 116/200
4/4 - 0s - loss: 0.2936 - accuracy: 0.3417 - val_loss: 0.3054 - val_accuracy: 0.3000
Epoch 117/200

Epoch 117/200
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Epoch 118/200
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Epoch 119/200
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Epoch 120/200
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Epoch 121/200
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Epoch 124/200
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Epoch 125/200
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Epoch 126/200
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Epoch 129/200
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Epoch 131/200
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Epoch 132/200
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Epoch 136/200
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Epoch 137/200
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Epoch 138/200
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Epoch 140/200
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Epoch 141/200
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Epoch 142/200
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Epoch 143/200
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Epoch 144/200
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Epoch 145/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3052 - val_accuracy: 0.3000
Epoch 146/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3052 - val_accuracy: 0.3000
Epoch 147/200

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4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3052 - val_accuracy: 0.3000
Epoch 148/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3052 - val_accuracy: 0.3000
Epoch 149/200
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Epoch 150/200
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Epoch 151/200
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Epoch 152/200
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Epoch 153/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3000
Epoch 154/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3000
Epoch 155/200
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3000
Epoch 156/200
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Epoch 157/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3000
Epoch 158/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 159/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 160/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 161/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 162/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 163/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 164/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 165/200
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 166/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 167/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 168/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 169/200
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Epoch 170/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3050 - val_accuracy: 0.3000
Epoch 171/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 172/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 173/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 174/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 175/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 176/200
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 177/200
```

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4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 178/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 179/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3049 - val_accuracy: 0.3000
Epoch 180/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 181/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 182/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 183/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 184/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 185/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 186/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 187/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 188/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3048 - val_accuracy: 0.3000
Epoch 189/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 190/200
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 191/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 192/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 193/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 194/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 195/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 196/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 197/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 198/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 199/200
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3047 - val_accuracy: 0.3000
Epoch 200/200
4/4 - 0s - loss: 0.2928 - accuracy: 0.3417 - val_loss: 0.3046 - val_accuracy: 0.3000
Activation: relu LR: 0.01 Iterations: 200 || Test loss: 0.30464521050453186
Activation: relu LR: 0.01 Iterations: 200 || Test Accuracy: 0.30000001192092896
======================================================================
Model_relu_LR_0.1_Iterations_100_HL_3
Epoch 1/100
4/4 - 1s - loss: 0.3424 - accuracy: 0.4500 - val_loss: 0.3366 - val_accuracy: 0.3333
Epoch 2/100
4/4 - 0s - loss: 0.3344 - accuracy: 0.3417 - val_loss: 0.3290 - val_accuracy: 0.3417
Epoch 3/100
4/4 - 0s - loss: 0.3271 - accuracy: 0.3417 - val_loss: 0.3231 - val_accuracy: 0.3417
Epoch 4/100
4/4 - 0s - loss: 0.3215 - accuracy: 0.3417 - val_loss: 0.3184 - val_accuracy: 0.3417
Epoch 5/100
4/4 - 0s - loss: 0.3177 - accuracy: 0.3417 - val_loss: 0.3146 - val_accuracy: 0.3417
```

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4/4 - 0s - loss: 0.3177 - accuracy: 0.3417 - val_loss: 0.3148 - val_accuracy: 0.3417
Epoch 6/100
4/4 - 0s - loss: 0.3137 - accuracy: 0.3417 - val_loss: 0.3115 - val_accuracy: 0.3417
Epoch 7/100
4/4 - 0s - loss: 0.3107 - accuracy: 0.3417 - val_loss: 0.3089 - val_accuracy: 0.3417
Epoch 8/100
4/4 - 0s - loss: 0.3083 - accuracy: 0.3417 - val_loss: 0.3067 - val_accuracy: 0.3417
Epoch 9/100
4/4 - 0s - loss: 0.3062 - accuracy: 0.3417 - val_loss: 0.3051 - val_accuracy: 0.3417
Epoch 10/100
4/4 - 0s - loss: 0.3048 - accuracy: 0.3417 - val_loss: 0.3036 - val_accuracy: 0.3417
Epoch 11/100
4/4 - 0s - loss: 0.3035 - accuracy: 0.3417 - val_loss: 0.3024 - val_accuracy: 0.3417
Epoch 12/100
4/4 - 0s - loss: 0.3021 - accuracy: 0.3417 - val_loss: 0.3013 - val_accuracy: 0.3417
Epoch 13/100
4/4 - 0s - loss: 0.3011 - accuracy: 0.3417 - val_loss: 0.3004 - val_accuracy: 0.3417
Epoch 14/100
4/4 - 0s - loss: 0.3006 - accuracy: 0.3417 - val_loss: 0.2996 - val_accuracy: 0.3417
Epoch 15/100
4/4 - 0s - loss: 0.2995 - accuracy: 0.3417 - val_loss: 0.2989 - val_accuracy: 0.3417
Epoch 16/100
4/4 - 0s - loss: 0.2988 - accuracy: 0.3417 - val_loss: 0.2984 - val_accuracy: 0.3417
Epoch 17/100
4/4 - 0s - loss: 0.2982 - accuracy: 0.3417 - val_loss: 0.2978 - val_accuracy: 0.3417
Epoch 18/100
4/4 - 0s - loss: 0.2978 - accuracy: 0.3417 - val_loss: 0.2974 - val_accuracy: 0.3417
Epoch 19/100
4/4 - 0s - loss: 0.2975 - accuracy: 0.3417 - val_loss: 0.2970 - val_accuracy: 0.3417
Epoch 20/100
4/4 - 0s - loss: 0.2970 - accuracy: 0.3417 - val_loss: 0.2967 - val_accuracy: 0.3417
Epoch 21/100
4/4 - 0s - loss: 0.2967 - accuracy: 0.3417 - val_loss: 0.2964 - val_accuracy: 0.3417
Epoch 22/100
4/4 - 0s - loss: 0.2965 - accuracy: 0.3417 - val_loss: 0.2962 - val_accuracy: 0.3417
Epoch 23/100
4/4 - 0s - loss: 0.2962 - accuracy: 0.3417 - val_loss: 0.2960 - val_accuracy: 0.3417
Epoch 24/100
4/4 - 0s - loss: 0.2960 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3417
Epoch 25/100
4/4 - 0s - loss: 0.2959 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3417
Epoch 26/100
4/4 - 0s - loss: 0.2957 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3417
Epoch 27/100
4/4 - 0s - loss: 0.2956 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3417
Epoch 28/100
4/4 - 0s - loss: 0.2954 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3417
Epoch 29/100
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3417
Epoch 30/100
4/4 - 0s - loss: 0.2955 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 31/100
4/4 - 0s - loss: 0.2951 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3417
Epoch 32/100
4/4 - 0s - loss: 0.2953 - accuracy: 0.3417 - val_loss: 0.2949 - val_accuracy: 0.3417
Epoch 33/100
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.2949 - val_accuracy: 0.3417
Epoch 34/100
4/4 - 0s - loss: 0.2952 - accuracy: 0.3417 - val_loss: 0.2948 - val_accuracy: 0.3417
Epoch 35/100
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.2948 - val_accuracy: 0.3417
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Epoch 36/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2947 - val_accuracy: 0.3417
Epoch 37/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2947 - val_accuracy: 0.3417
Epoch 38/100
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.2946 - val_accuracy: 0.3417
Epoch 39/100
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.2946 - val_accuracy: 0.3417
Epoch 40/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2946 - val_accuracy: 0.3417
Epoch 41/100
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.2946 - val_accuracy: 0.3417
Epoch 42/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 43/100
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 44/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 45/100
4/4 - 0s - loss: 0.2947 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 46/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 47/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 48/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 49/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 50/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3417
Epoch 51/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 52/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 53/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 54/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 55/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 56/100
4/4 - 0s - loss: 0.2949 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 57/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 58/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 59/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 60/100
4/4 - 0s - loss: 0.2948 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 61/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 62/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 63/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 64/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 65/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417

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Epoch 66/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 67/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 68/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 69/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 70/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 71/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2944 - val_accuracy: 0.3417
Epoch 72/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 73/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 74/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 75/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 76/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 77/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 78/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 79/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 80/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 81/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 82/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 83/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 84/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 85/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3417
Epoch 86/100
4/4 - 0s - loss: 0.2945 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 87/100
4/4 - 0s - loss: 0.2946 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 88/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 89/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 90/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 91/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 92/100
4/4 - 0s - loss: 0.2943 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 93/100
4/4 - 0s - loss: 0.2944 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3417
Epoch 94/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
Epoch 95/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
```

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Epoch 96/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
Epoch 97/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
Epoch 98/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
Epoch 99/100
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.2941 - val_accuracy: 0.3417
Epoch 100/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.2940 - val_accuracy: 0.3417
Activation: relu LR: 0.1 Itertions: 100 || Train loss: 0.2940273880958557
Activation: relu LR: 0.1 Itertions: 100 || Train Accuracy: 0.34166666865348816
Epoch 1/100
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3029 - val_accuracy: 0.3000
Epoch 2/100
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3029 - val_accuracy: 0.3000
Epoch 3/100
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3029 - val_accuracy: 0.3000
Epoch 4/100
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3029 - val_accuracy: 0.3000
Epoch 5/100
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3028 - val_accuracy: 0.3000
Epoch 6/100
4/4 - 0s - loss: 0.2941 - accuracy: 0.3417 - val_loss: 0.3027 - val_accuracy: 0.3000
Epoch 7/100
4/4 - 0s - loss: 0.2942 - accuracy: 0.3417 - val_loss: 0.3027 - val_accuracy: 0.3000
Epoch 8/100
4/4 - 0s - loss: 0.2939 - accuracy: 0.3417 - val_loss: 0.3027 - val_accuracy: 0.3000
Epoch 9/100
4/4 - 0s - loss: 0.2940 - accuracy: 0.3417 - val_loss: 0.3026 - val_accuracy: 0.3000
Epoch 10/100
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3026 - val_accuracy: 0.3000
Epoch 11/100
4/4 - 0s - loss: 0.2938 - accuracy: 0.3417 - val_loss: 0.3026 - val_accuracy: 0.3000
Epoch 12/100
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3025 - val_accuracy: 0.3000
Epoch 13/100
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3024 - val_accuracy: 0.3000
Epoch 14/100
4/4 - 0s - loss: 0.2936 - accuracy: 0.3417 - val_loss: 0.3023 - val_accuracy: 0.3000
Epoch 15/100
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3023 - val_accuracy: 0.3000
Epoch 16/100
4/4 - 0s - loss: 0.2936 - accuracy: 0.3417 - val_loss: 0.3022 - val_accuracy: 0.3000
Epoch 17/100
4/4 - 0s - loss: 0.2937 - accuracy: 0.3417 - val_loss: 0.3020 - val_accuracy: 0.3000
Epoch 18/100
4/4 - 0s - loss: 0.2935 - accuracy: 0.3417 - val_loss: 0.3018 - val_accuracy: 0.3000
Epoch 19/100
4/4 - 0s - loss: 0.2934 - accuracy: 0.3417 - val_loss: 0.3018 - val_accuracy: 0.3000
Epoch 20/100
4/4 - 0s - loss: 0.2933 - accuracy: 0.3417 - val_loss: 0.3018 - val_accuracy: 0.3000
Epoch 21/100
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3017 - val_accuracy: 0.3000
Epoch 22/100
4/4 - 0s - loss: 0.2932 - accuracy: 0.3417 - val_loss: 0.3016 - val_accuracy: 0.3000
Epoch 23/100
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3015 - val_accuracy: 0.3000
Epoch 24/100
4/4 - 0s - loss: 0.2931 - accuracy: 0.3417 - val_loss: 0.3014 - val_accuracy: 0.3000
Epoch 25/100
```

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Epoch 25/100
4/4 - 0s - loss: 0.2929 - accuracy: 0.3417 - val_loss: 0.3013 - val_accuracy: 0.3000
Epoch 26/100
4/4 - 0s - loss: 0.2930 - accuracy: 0.3417 - val_loss: 0.3012 - val_accuracy: 0.3000
Epoch 27/100
4/4 - 0s - loss: 0.2928 - accuracy: 0.3417 - val_loss: 0.3012 - val_accuracy: 0.3000
Epoch 28/100
4/4 - 0s - loss: 0.2927 - accuracy: 0.3417 - val_loss: 0.3009 - val_accuracy: 0.3000
Epoch 29/100
4/4 - 0s - loss: 0.2926 - accuracy: 0.3417 - val_loss: 0.3008 - val_accuracy: 0.3000
Epoch 30/100
4/4 - 0s - loss: 0.2925 - accuracy: 0.3417 - val_loss: 0.3007 - val_accuracy: 0.3000
Epoch 31/100
4/4 - 0s - loss: 0.2923 - accuracy: 0.3417 - val_loss: 0.3006 - val_accuracy: 0.3000
Epoch 32/100
4/4 - 0s - loss: 0.2925 - accuracy: 0.3417 - val_loss: 0.3006 - val_accuracy: 0.3000
Epoch 33/100
4/4 - 0s - loss: 0.2922 - accuracy: 0.3417 - val_loss: 0.3003 - val_accuracy: 0.3000
Epoch 34/100
4/4 - 0s - loss: 0.2920 - accuracy: 0.3417 - val_loss: 0.3002 - val_accuracy: 0.3000
Epoch 35/100
4/4 - 0s - loss: 0.2920 - accuracy: 0.3417 - val_loss: 0.3000 - val_accuracy: 0.3000
Epoch 36/100
4/4 - 0s - loss: 0.2919 - accuracy: 0.3417 - val_loss: 0.2999 - val_accuracy: 0.3000
Epoch 37/100
4/4 - 0s - loss: 0.2918 - accuracy: 0.3417 - val_loss: 0.2997 - val_accuracy: 0.3000
Epoch 38/100
4/4 - 0s - loss: 0.2917 - accuracy: 0.3417 - val_loss: 0.2996 - val_accuracy: 0.3000
Epoch 39/100
4/4 - 0s - loss: 0.2917 - accuracy: 0.3417 - val_loss: 0.2994 - val_accuracy: 0.3000
Epoch 40/100
4/4 - 0s - loss: 0.2915 - accuracy: 0.3417 - val_loss: 0.2993 - val_accuracy: 0.3000
Epoch 41/100
4/4 - 0s - loss: 0.2913 - accuracy: 0.3417 - val_loss: 0.2991 - val_accuracy: 0.3000
Epoch 42/100
4/4 - 0s - loss: 0.2912 - accuracy: 0.3417 - val_loss: 0.2990 - val_accuracy: 0.3000
Epoch 43/100
4/4 - 0s - loss: 0.2913 - accuracy: 0.3417 - val_loss: 0.2988 - val_accuracy: 0.3000
Epoch 44/100
4/4 - 0s - loss: 0.2911 - accuracy: 0.3417 - val_loss: 0.2987 - val_accuracy: 0.3000
Epoch 45/100
4/4 - 0s - loss: 0.2910 - accuracy: 0.3417 - val_loss: 0.2986 - val_accuracy: 0.3000
Epoch 46/100
4/4 - 0s - loss: 0.2908 - accuracy: 0.3417 - val_loss: 0.2984 - val_accuracy: 0.3000
Epoch 47/100
4/4 - 0s - loss: 0.2907 - accuracy: 0.3417 - val_loss: 0.2983 - val_accuracy: 0.3000
Epoch 48/100
4/4 - 0s - loss: 0.2907 - accuracy: 0.3417 - val_loss: 0.2983 - val_accuracy: 0.3000
Epoch 49/100
4/4 - 0s - loss: 0.2905 - accuracy: 0.3417 - val_loss: 0.2981 - val_accuracy: 0.3000
Epoch 50/100
4/4 - 0s - loss: 0.2905 - accuracy: 0.3417 - val_loss: 0.2980 - val_accuracy: 0.3000
Epoch 51/100
4/4 - 0s - loss: 0.2902 - accuracy: 0.3417 - val_loss: 0.2978 - val_accuracy: 0.3000
Epoch 52/100
4/4 - 0s - loss: 0.2901 - accuracy: 0.3417 - val_loss: 0.2977 - val_accuracy: 0.3000
Epoch 53/100
4/4 - 0s - loss: 0.2899 - accuracy: 0.3417 - val_loss: 0.2975 - val_accuracy: 0.3000
Epoch 54/100
4/4 - 0s - loss: 0.2900 - accuracy: 0.3417 - val_loss: 0.2974 - val_accuracy: 0.3000
Epoch 55/100
```

4/4 - 0s - loss: 0.2897 - accuracy: 0.3417 - val_loss: 0.2973 - val_accuracy: 0.3000
Epoch 56/100
4/4 - 0s - loss: 0.2895 - accuracy: 0.3417 - val_loss: 0.2971 - val_accuracy: 0.3000
Epoch 57/100
4/4 - 0s - loss: 0.2894 - accuracy: 0.3417 - val_loss: 0.2969 - val_accuracy: 0.3000
Epoch 58/100
4/4 - 0s - loss: 0.2892 - accuracy: 0.3417 - val_loss: 0.2968 - val_accuracy: 0.3000
Epoch 59/100
4/4 - 0s - loss: 0.2891 - accuracy: 0.3417 - val_loss: 0.2966 - val_accuracy: 0.3000
Epoch 60/100
4/4 - 0s - loss: 0.2889 - accuracy: 0.3417 - val_loss: 0.2964 - val_accuracy: 0.3000
Epoch 61/100
4/4 - 0s - loss: 0.2889 - accuracy: 0.3417 - val_loss: 0.2963 - val_accuracy: 0.3000
Epoch 62/100
4/4 - 0s - loss: 0.2888 - accuracy: 0.3417 - val_loss: 0.2962 - val_accuracy: 0.3000
Epoch 63/100
4/4 - 0s - loss: 0.2886 - accuracy: 0.3417 - val_loss: 0.2961 - val_accuracy: 0.3000
Epoch 64/100
4/4 - 0s - loss: 0.2888 - accuracy: 0.3417 - val_loss: 0.2960 - val_accuracy: 0.3000
Epoch 65/100
4/4 - 0s - loss: 0.2885 - accuracy: 0.3417 - val_loss: 0.2958 - val_accuracy: 0.3000
Epoch 66/100
4/4 - 0s - loss: 0.2882 - accuracy: 0.3417 - val_loss: 0.2957 - val_accuracy: 0.3000
Epoch 67/100
4/4 - 0s - loss: 0.2882 - accuracy: 0.3417 - val_loss: 0.2956 - val_accuracy: 0.3000
Epoch 68/100
4/4 - 0s - loss: 0.2883 - accuracy: 0.3417 - val_loss: 0.2955 - val_accuracy: 0.3000
Epoch 69/100
4/4 - 0s - loss: 0.2879 - accuracy: 0.3417 - val_loss: 0.2953 - val_accuracy: 0.3000
Epoch 70/100
4/4 - 0s - loss: 0.2880 - accuracy: 0.3417 - val_loss: 0.2952 - val_accuracy: 0.3000
Epoch 71/100
4/4 - 0s - loss: 0.2878 - accuracy: 0.3417 - val_loss: 0.2951 - val_accuracy: 0.3000
Epoch 72/100
4/4 - 0s - loss: 0.2876 - accuracy: 0.3417 - val_loss: 0.2950 - val_accuracy: 0.3000
Epoch 73/100
4/4 - 0s - loss: 0.2875 - accuracy: 0.3417 - val_loss: 0.2948 - val_accuracy: 0.3000
Epoch 74/100
4/4 - 0s - loss: 0.2873 - accuracy: 0.3417 - val_loss: 0.2947 - val_accuracy: 0.3000
Epoch 75/100
4/4 - 0s - loss: 0.2875 - accuracy: 0.3417 - val_loss: 0.2945 - val_accuracy: 0.3000
Epoch 76/100
4/4 - 0s - loss: 0.2872 - accuracy: 0.3417 - val_loss: 0.2943 - val_accuracy: 0.3000
Epoch 77/100
4/4 - 0s - loss: 0.2871 - accuracy: 0.3417 - val_loss: 0.2942 - val_accuracy: 0.3000
Epoch 78/100
4/4 - 0s - loss: 0.2869 - accuracy: 0.3417 - val_loss: 0.2940 - val_accuracy: 0.3000
Epoch 79/100
4/4 - 0s - loss: 0.2869 - accuracy: 0.3417 - val_loss: 0.2939 - val_accuracy: 0.3000
Epoch 80/100
4/4 - 0s - loss: 0.2867 - accuracy: 0.3417 - val_loss: 0.2937 - val_accuracy: 0.3000
Epoch 81/100
4/4 - 0s - loss: 0.2865 - accuracy: 0.3417 - val_loss: 0.2935 - val_accuracy: 0.3000
Epoch 82/100
4/4 - 0s - loss: 0.2864 - accuracy: 0.3417 - val_loss: 0.2933 - val_accuracy: 0.3000
Epoch 83/100
4/4 - 0s - loss: 0.2861 - accuracy: 0.3417 - val_loss: 0.2931 - val_accuracy: 0.3000
Epoch 84/100
4/4 - 0s - loss: 0.2860 - accuracy: 0.3417 - val_loss: 0.2929 - val_accuracy: 0.3000
Epoch 85/100

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4/4 - 0s - loss: 0.2857 - accuracy: 0.3417 - val_loss: 0.2927 - val_accuracy: 0.3000
Epoch 86/100
4/4 - 0s - loss: 0.2856 - accuracy: 0.3417 - val_loss: 0.2925 - val_accuracy: 0.3000
Epoch 87/100
4/4 - 0s - loss: 0.2855 - accuracy: 0.3417 - val_loss: 0.2923 - val_accuracy: 0.3000
Epoch 88/100
4/4 - 0s - loss: 0.2852 - accuracy: 0.3417 - val_loss: 0.2921 - val_accuracy: 0.3000
Epoch 89/100
4/4 - 0s - loss: 0.2850 - accuracy: 0.3417 - val_loss: 0.2919 - val_accuracy: 0.3000
Epoch 90/100
4/4 - 0s - loss: 0.2850 - accuracy: 0.3417 - val_loss: 0.2917 - val_accuracy: 0.3000
Epoch 91/100
4/4 - 0s - loss: 0.2846 - accuracy: 0.3417 - val_loss: 0.2916 - val_accuracy: 0.3000
Epoch 92/100
4/4 - 0s - loss: 0.2845 - accuracy: 0.3417 - val_loss: 0.2914 - val_accuracy: 0.3000
Epoch 93/100
4/4 - 0s - loss: 0.2842 - accuracy: 0.3417 - val_loss: 0.2912 - val_accuracy: 0.3000
Epoch 94/100
4/4 - 0s - loss: 0.2840 - accuracy: 0.3417 - val_loss: 0.2909 - val_accuracy: 0.3000
Epoch 95/100
4/4 - 0s - loss: 0.2839 - accuracy: 0.3417 - val_loss: 0.2906 - val_accuracy: 0.3000
Epoch 96/100
4/4 - 0s - loss: 0.2837 - accuracy: 0.3417 - val_loss: 0.2904 - val_accuracy: 0.3000
Epoch 97/100
4/4 - 0s - loss: 0.2833 - accuracy: 0.3417 - val_loss: 0.2901 - val_accuracy: 0.3000
Epoch 98/100
4/4 - 0s - loss: 0.2830 - accuracy: 0.3417 - val_loss: 0.2898 - val_accuracy: 0.3000
Epoch 99/100
4/4 - 0s - loss: 0.2829 - accuracy: 0.3417 - val_loss: 0.2896 - val_accuracy: 0.3000
Epoch 100/100
4/4 - 0s - loss: 0.2826 - accuracy: 0.3417 - val_loss: 0.2892 - val_accuracy: 0.3000
Activation: relu LR: 0.1 Iterations: 100 || Test loss: 0.28923386335372925
Activation: relu LR: 0.1 Iterations: 100 || Test Accuracy: 0.30000001192092896
================================================================================
Model_relu_LR_0.1_Iterations_200_HL_3
Epoch 1/200
4/4 - 1s - loss: 0.3207 - accuracy: 0.3583 - val_loss: 0.2982 - val_accuracy: 0.3583
Epoch 2/200
4/4 - 0s - loss: 0.2898 - accuracy: 0.3583 - val_loss: 0.2667 - val_accuracy: 0.3250
Epoch 3/200
4/4 - 0s - loss: 0.2545 - accuracy: 0.3333 - val_loss: 0.2362 - val_accuracy: 0.3750
Epoch 4/200
4/4 - 0s - loss: 0.2304 - accuracy: 0.3917 - val_loss: 0.2141 - val_accuracy: 0.4750
Epoch 5/200
4/4 - 0s - loss: 0.2014 - accuracy: 0.4917 - val_loss: 0.1743 - val_accuracy: 0.7417
Epoch 6/200
4/4 - 0s - loss: 0.1655 - accuracy: 0.8167 - val_loss: 0.1501 - val_accuracy: 0.8750
Epoch 7/200
4/4 - 0s - loss: 0.1455 - accuracy: 0.8583 - val_loss: 0.1352 - val_accuracy: 0.8833
Epoch 8/200
4/4 - 0s - loss: 0.1318 - accuracy: 0.8667 - val_loss: 0.1248 - val_accuracy: 0.8917
Epoch 9/200
4/4 - 0s - loss: 0.1225 - accuracy: 0.8917 - val_loss: 0.1169 - val_accuracy: 0.9000
Epoch 10/200
4/4 - 0s - loss: 0.1155 - accuracy: 0.9000 - val_loss: 0.1108 - val_accuracy: 0.9000
Epoch 11/200
4/4 - 0s - loss: 0.1094 - accuracy: 0.8917 - val_loss: 0.1057 - val_accuracy: 0.9083
Epoch 12/200
4/4 - 0s - loss: 0.1046 - accuracy: 0.9000 - val_loss: 0.1016 - val_accuracy: 0.9250
Epoch 13/200
```

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4/4 - 0s - loss: 0.1012 - accuracy: 0.9250 - val_loss: 0.0980 - val_accuracy: 0.9250
Epoch 14/200
4/4 - 0s - loss: 0.0973 - accuracy: 0.9250 - val_loss: 0.0950 - val_accuracy: 0.9250
Epoch 15/200
4/4 - 0s - loss: 0.0946 - accuracy: 0.9250 - val_loss: 0.0924 - val_accuracy: 0.9333
Epoch 16/200
4/4 - 0s - loss: 0.0926 - accuracy: 0.9333 - val_loss: 0.0899 - val_accuracy: 0.9333
Epoch 17/200
4/4 - 0s - loss: 0.0899 - accuracy: 0.9333 - val_loss: 0.0876 - val_accuracy: 0.9333
Epoch 18/200
4/4 - 0s - loss: 0.0875 - accuracy: 0.9333 - val_loss: 0.0855 - val_accuracy: 0.9333
Epoch 19/200
4/4 - 0s - loss: 0.0850 - accuracy: 0.9333 - val_loss: 0.0834 - val_accuracy: 0.9333
Epoch 20/200
4/4 - 0s - loss: 0.0837 - accuracy: 0.9333 - val_loss: 0.0817 - val_accuracy: 0.9167
Epoch 21/200
4/4 - 0s - loss: 0.0812 - accuracy: 0.9250 - val_loss: 0.0796 - val_accuracy: 0.9333
Epoch 22/200
4/4 - 0s - loss: 0.0798 - accuracy: 0.9333 - val_loss: 0.0779 - val_accuracy: 0.9333
Epoch 23/200
4/4 - 0s - loss: 0.0785 - accuracy: 0.9333 - val_loss: 0.0763 - val_accuracy: 0.9333
Epoch 24/200
4/4 - 0s - loss: 0.0764 - accuracy: 0.9333 - val_loss: 0.0746 - val_accuracy: 0.9333
Epoch 25/200
4/4 - 0s - loss: 0.0741 - accuracy: 0.9333 - val_loss: 0.0727 - val_accuracy: 0.9333
Epoch 26/200
4/4 - 0s - loss: 0.0728 - accuracy: 0.9333 - val_loss: 0.0711 - val_accuracy: 0.9333
Epoch 27/200
4/4 - 0s - loss: 0.0713 - accuracy: 0.9333 - val_loss: 0.0695 - val_accuracy: 0.9500
Epoch 28/200
4/4 - 0s - loss: 0.0694 - accuracy: 0.9417 - val_loss: 0.0679 - val_accuracy: 0.9333
Epoch 29/200
4/4 - 0s - loss: 0.0677 - accuracy: 0.9417 - val_loss: 0.0664 - val_accuracy: 0.9500
Epoch 30/200
4/4 - 0s - loss: 0.0661 - accuracy: 0.9500 - val_loss: 0.0648 - val_accuracy: 0.9583
Epoch 31/200
4/4 - 0s - loss: 0.0648 - accuracy: 0.9500 - val_loss: 0.0635 - val_accuracy: 0.9500
Epoch 32/200
4/4 - 0s - loss: 0.0634 - accuracy: 0.9583 - val_loss: 0.0621 - val_accuracy: 0.9500
Epoch 33/200
4/4 - 0s - loss: 0.0630 - accuracy: 0.9500 - val_loss: 0.0608 - val_accuracy: 0.9500
Epoch 34/200
4/4 - 0s - loss: 0.0604 - accuracy: 0.9500 - val_loss: 0.0592 - val_accuracy: 0.9500
Epoch 35/200
4/4 - 0s - loss: 0.0592 - accuracy: 0.9417 - val_loss: 0.0581 - val_accuracy: 0.9500
Epoch 36/200
4/4 - 0s - loss: 0.0581 - accuracy: 0.9500 - val_loss: 0.0566 - val_accuracy: 0.9500
Epoch 37/200
4/4 - 0s - loss: 0.0564 - accuracy: 0.9500 - val_loss: 0.0551 - val_accuracy: 0.9500
Epoch 38/200
4/4 - 0s - loss: 0.0555 - accuracy: 0.9500 - val_loss: 0.0538 - val_accuracy: 0.9583
Epoch 39/200
4/4 - 0s - loss: 0.0538 - accuracy: 0.9667 - val_loss: 0.0524 - val_accuracy: 0.9583
Epoch 40/200
4/4 - 0s - loss: 0.0525 - accuracy: 0.9500 - val_loss: 0.0511 - val_accuracy: 0.9667
Epoch 41/200
4/4 - 0s - loss: 0.0516 - accuracy: 0.9667 - val_loss: 0.0499 - val_accuracy: 0.9667
Epoch 42/200
4/4 - 0s - loss: 0.0498 - accuracy: 0.9667 - val_loss: 0.0487 - val_accuracy: 0.9667
Epoch 43/200
4/4 - 0s - loss: 0.0490 - accuracy: 0.9667 - val_loss: 0.0475 - val_accuracy: 0.9750
```

4/4 - 0s - loss: 0.0490 - accuracy: 0.9667 - val_loss: 0.0475 - val_accuracy: 0.9750
Epoch 44/200
4/4 - 0s - loss: 0.0475 - accuracy: 0.9667 - val_loss: 0.0464 - val_accuracy: 0.9667
Epoch 45/200
4/4 - 0s - loss: 0.0465 - accuracy: 0.9667 - val_loss: 0.0454 - val_accuracy: 0.9667
Epoch 46/200
4/4 - 0s - loss: 0.0455 - accuracy: 0.9750 - val_loss: 0.0443 - val_accuracy: 0.9750
Epoch 47/200
4/4 - 0s - loss: 0.0444 - accuracy: 0.9750 - val_loss: 0.0433 - val_accuracy: 0.9667
Epoch 48/200
4/4 - 0s - loss: 0.0437 - accuracy: 0.9667 - val_loss: 0.0423 - val_accuracy: 0.9750
Epoch 49/200
4/4 - 0s - loss: 0.0427 - accuracy: 0.9667 - val_loss: 0.0414 - val_accuracy: 0.9667
Epoch 50/200
4/4 - 0s - loss: 0.0415 - accuracy: 0.9667 - val_loss: 0.0404 - val_accuracy: 0.9750
Epoch 51/200
4/4 - 0s - loss: 0.0406 - accuracy: 0.9750 - val_loss: 0.0396 - val_accuracy: 0.9750
Epoch 52/200
4/4 - 0s - loss: 0.0394 - accuracy: 0.9750 - val_loss: 0.0386 - val_accuracy: 0.9750
Epoch 53/200
4/4 - 0s - loss: 0.0386 - accuracy: 0.9750 - val_loss: 0.0378 - val_accuracy: 0.9750
Epoch 54/200
4/4 - 0s - loss: 0.0380 - accuracy: 0.9667 - val_loss: 0.0371 - val_accuracy: 0.9750
Epoch 55/200
4/4 - 0s - loss: 0.0369 - accuracy: 0.9833 - val_loss: 0.0362 - val_accuracy: 0.9833
Epoch 56/200
4/4 - 0s - loss: 0.0363 - accuracy: 0.9833 - val_loss: 0.0354 - val_accuracy: 0.9833
Epoch 57/200
4/4 - 0s - loss: 0.0356 - accuracy: 0.9833 - val_loss: 0.0347 - val_accuracy: 0.9833
Epoch 58/200
4/4 - 0s - loss: 0.0351 - accuracy: 0.9833 - val_loss: 0.0340 - val_accuracy: 0.9833
Epoch 59/200
4/4 - 0s - loss: 0.0345 - accuracy: 0.9833 - val_loss: 0.0333 - val_accuracy: 0.9833
Epoch 60/200
4/4 - 0s - loss: 0.0343 - accuracy: 0.9833 - val_loss: 0.0327 - val_accuracy: 0.9833
Epoch 61/200
4/4 - 0s - loss: 0.0328 - accuracy: 0.9833 - val_loss: 0.0320 - val_accuracy: 0.9833
Epoch 62/200
4/4 - 0s - loss: 0.0320 - accuracy: 0.9833 - val_loss: 0.0314 - val_accuracy: 0.9833
Epoch 63/200
4/4 - 0s - loss: 0.0315 - accuracy: 0.9833 - val_loss: 0.0308 - val_accuracy: 0.9833
Epoch 64/200
4/4 - 0s - loss: 0.0318 - accuracy: 0.9833 - val_loss: 0.0303 - val_accuracy: 0.9833
Epoch 65/200
4/4 - 0s - loss: 0.0305 - accuracy: 0.9833 - val_loss: 0.0297 - val_accuracy: 0.9833
Epoch 66/200
4/4 - 0s - loss: 0.0299 - accuracy: 0.9833 - val_loss: 0.0292 - val_accuracy: 0.9833
Epoch 67/200
4/4 - 0s - loss: 0.0296 - accuracy: 0.9833 - val_loss: 0.0287 - val_accuracy: 0.9833
Epoch 68/200
4/4 - 0s - loss: 0.0289 - accuracy: 0.9833 - val_loss: 0.0281 - val_accuracy: 0.9833
Epoch 69/200
4/4 - 0s - loss: 0.0285 - accuracy: 0.9833 - val_loss: 0.0277 - val_accuracy: 0.9833
Epoch 70/200
4/4 - 0s - loss: 0.0280 - accuracy: 0.9833 - val_loss: 0.0273 - val_accuracy: 0.9833
Epoch 71/200
4/4 - 0s - loss: 0.0282 - accuracy: 0.9750 - val_loss: 0.0268 - val_accuracy: 0.9833
Epoch 72/200
4/4 - 0s - loss: 0.0270 - accuracy: 0.9833 - val_loss: 0.0264 - val_accuracy: 0.9833
Epoch 73/200
4/4 - 0s - loss: 0.0265 - accuracy: 0.9833 - val_loss: 0.0260 - val_accuracy: 0.9833

Epoch 74/200
4/4 - 0s - loss: 0.0264 - accuracy: 0.9833 - val_loss: 0.0256 - val_accuracy: 0.9833
Epoch 75/200
4/4 - 0s - loss: 0.0257 - accuracy: 0.9750 - val_loss: 0.0252 - val_accuracy: 0.9833
Epoch 76/200
4/4 - 0s - loss: 0.0255 - accuracy: 0.9833 - val_loss: 0.0248 - val_accuracy: 0.9833
Epoch 77/200
4/4 - 0s - loss: 0.0250 - accuracy: 0.9833 - val_loss: 0.0245 - val_accuracy: 0.9833
Epoch 78/200
4/4 - 0s - loss: 0.0246 - accuracy: 0.9833 - val_loss: 0.0241 - val_accuracy: 0.9833
Epoch 79/200
4/4 - 0s - loss: 0.0244 - accuracy: 0.9833 - val_loss: 0.0238 - val_accuracy: 0.9833
Epoch 80/200
4/4 - 0s - loss: 0.0242 - accuracy: 0.9833 - val_loss: 0.0235 - val_accuracy: 0.9833
Epoch 81/200
4/4 - 0s - loss: 0.0239 - accuracy: 0.9833 - val_loss: 0.0233 - val_accuracy: 0.9833
Epoch 82/200
4/4 - 0s - loss: 0.0234 - accuracy: 0.9833 - val_loss: 0.0229 - val_accuracy: 0.9833
Epoch 83/200
4/4 - 0s - loss: 0.0233 - accuracy: 0.9833 - val_loss: 0.0227 - val_accuracy: 0.9833
Epoch 84/200
4/4 - 0s - loss: 0.0229 - accuracy: 0.9833 - val_loss: 0.0224 - val_accuracy: 0.9833
Epoch 85/200
4/4 - 0s - loss: 0.0227 - accuracy: 0.9833 - val_loss: 0.0222 - val_accuracy: 0.9833
Epoch 86/200
4/4 - 0s - loss: 0.0223 - accuracy: 0.9833 - val_loss: 0.0219 - val_accuracy: 0.9833
Epoch 87/200
4/4 - 0s - loss: 0.0222 - accuracy: 0.9833 - val_loss: 0.0217 - val_accuracy: 0.9833
Epoch 88/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9833 - val_loss: 0.0215 - val_accuracy: 0.9833
Epoch 89/200
4/4 - 0s - loss: 0.0217 - accuracy: 0.9833 - val_loss: 0.0213 - val_accuracy: 0.9833
Epoch 90/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9833 - val_loss: 0.0211 - val_accuracy: 0.9833
Epoch 91/200
4/4 - 0s - loss: 0.0215 - accuracy: 0.9750 - val_loss: 0.0210 - val_accuracy: 0.9833
Epoch 92/200
4/4 - 0s - loss: 0.0212 - accuracy: 0.9833 - val_loss: 0.0209 - val_accuracy: 0.9833
Epoch 93/200
4/4 - 0s - loss: 0.0211 - accuracy: 0.9833 - val_loss: 0.0206 - val_accuracy: 0.9833
Epoch 94/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9833 - val_loss: 0.0206 - val_accuracy: 0.9833
Epoch 95/200
4/4 - 0s - loss: 0.0210 - accuracy: 0.9833 - val_loss: 0.0204 - val_accuracy: 0.9833
Epoch 96/200
4/4 - 0s - loss: 0.0205 - accuracy: 0.9833 - val_loss: 0.0201 - val_accuracy: 0.9833
Epoch 97/200
4/4 - 0s - loss: 0.0205 - accuracy: 0.9833 - val_loss: 0.0200 - val_accuracy: 0.9833
Epoch 98/200
4/4 - 0s - loss: 0.0202 - accuracy: 0.9833 - val_loss: 0.0198 - val_accuracy: 0.9833
Epoch 99/200
4/4 - 0s - loss: 0.0200 - accuracy: 0.9833 - val_loss: 0.0197 - val_accuracy: 0.9833
Epoch 100/200
4/4 - 0s - loss: 0.0203 - accuracy: 0.9833 - val_loss: 0.0195 - val_accuracy: 0.9833
Epoch 101/200
4/4 - 0s - loss: 0.0197 - accuracy: 0.9833 - val_loss: 0.0194 - val_accuracy: 0.9833
Epoch 102/200
4/4 - 0s - loss: 0.0197 - accuracy: 0.9750 - val_loss: 0.0194 - val_accuracy: 0.9833
Epoch 103/200
4/4 - 0s - loss: 0.0196 - accuracy: 0.9833 - val_loss: 0.0193 - val_accuracy: 0.9750

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Epoch 104/200
4/4 - 0s - loss: 0.0197 - accuracy: 0.9750 - val_loss: 0.0192 - val_accuracy: 0.9750
Epoch 105/200
4/4 - 0s - loss: 0.0194 - accuracy: 0.9750 - val_loss: 0.0190 - val_accuracy: 0.9833
Epoch 106/200
4/4 - 0s - loss: 0.0193 - accuracy: 0.9750 - val_loss: 0.0190 - val_accuracy: 0.9833
Epoch 107/200
4/4 - 0s - loss: 0.0192 - accuracy: 0.9833 - val_loss: 0.0189 - val_accuracy: 0.9833
Epoch 108/200
4/4 - 0s - loss: 0.0190 - accuracy: 0.9833 - val_loss: 0.0188 - val_accuracy: 0.9833
Epoch 109/200
4/4 - 0s - loss: 0.0188 - accuracy: 0.9833 - val_loss: 0.0187 - val_accuracy: 0.9833
Epoch 110/200
4/4 - 0s - loss: 0.0188 - accuracy: 0.9833 - val_loss: 0.0187 - val_accuracy: 0.9833
Epoch 111/200
4/4 - 0s - loss: 0.0191 - accuracy: 0.9833 - val_loss: 0.0186 - val_accuracy: 0.9833
Epoch 112/200
4/4 - 0s - loss: 0.0188 - accuracy: 0.9833 - val_loss: 0.0185 - val_accuracy: 0.9833
Epoch 113/200
4/4 - 0s - loss: 0.0187 - accuracy: 0.9833 - val_loss: 0.0184 - val_accuracy: 0.9833
Epoch 114/200
4/4 - 0s - loss: 0.0188 - accuracy: 0.9833 - val_loss: 0.0185 - val_accuracy: 0.9750
Epoch 115/200
4/4 - 0s - loss: 0.0189 - accuracy: 0.9750 - val_loss: 0.0183 - val_accuracy: 0.9833
Epoch 116/200
4/4 - 0s - loss: 0.0186 - accuracy: 0.9750 - val_loss: 0.0183 - val_accuracy: 0.9833
Epoch 117/200
4/4 - 0s - loss: 0.0185 - accuracy: 0.9833 - val_loss: 0.0182 - val_accuracy: 0.9833
Epoch 118/200
4/4 - 0s - loss: 0.0188 - accuracy: 0.9833 - val_loss: 0.0182 - val_accuracy: 0.9750
Epoch 119/200
4/4 - 0s - loss: 0.0192 - accuracy: 0.9750 - val_loss: 0.0182 - val_accuracy: 0.9833
Epoch 120/200
4/4 - 0s - loss: 0.0183 - accuracy: 0.9833 - val_loss: 0.0181 - val_accuracy: 0.9833
Epoch 121/200
4/4 - 0s - loss: 0.0183 - accuracy: 0.9833 - val_loss: 0.0180 - val_accuracy: 0.9750
Epoch 122/200
4/4 - 0s - loss: 0.0181 - accuracy: 0.9750 - val_loss: 0.0180 - val_accuracy: 0.9833
Epoch 123/200
4/4 - 0s - loss: 0.0182 - accuracy: 0.9750 - val_loss: 0.0180 - val_accuracy: 0.9833
Epoch 124/200
4/4 - 0s - loss: 0.0182 - accuracy: 0.9750 - val_loss: 0.0180 - val_accuracy: 0.9750
Epoch 125/200
4/4 - 0s - loss: 0.0182 - accuracy: 0.9833 - val_loss: 0.0179 - val_accuracy: 0.9750
Epoch 126/200
4/4 - 0s - loss: 0.0180 - accuracy: 0.9750 - val_loss: 0.0178 - val_accuracy: 0.9833
Epoch 127/200
4/4 - 0s - loss: 0.0183 - accuracy: 0.9750 - val_loss: 0.0180 - val_accuracy: 0.9750
Epoch 128/200
4/4 - 0s - loss: 0.0180 - accuracy: 0.9750 - val_loss: 0.0177 - val_accuracy: 0.9833
Epoch 129/200
4/4 - 0s - loss: 0.0178 - accuracy: 0.9750 - val_loss: 0.0177 - val_accuracy: 0.9833
Epoch 130/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0177 - val_accuracy: 0.9833
Epoch 131/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0177 - val_accuracy: 0.9750
Epoch 132/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0178 - val_accuracy: 0.9750
Epoch 133/200
4/4 - 0s - loss: 0.0178 - accuracy: 0.9750 - val_loss: 0.0176 - val_accuracy: 0.9750
```

```
Epoch 134/200
4/4 - 0s - loss: 0.0178 - accuracy: 0.9833 - val_loss: 0.0176 - val_accuracy: 0.9750
Epoch 135/200
4/4 - 0s - loss: 0.0178 - accuracy: 0.9750 - val_loss: 0.0175 - val_accuracy: 0.9833
Epoch 136/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9750 - val_loss: 0.0175 - val_accuracy: 0.9833
Epoch 137/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9833 - val_loss: 0.0174 - val_accuracy: 0.9750
Epoch 138/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9750 - val_loss: 0.0174 - val_accuracy: 0.9750
Epoch 139/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0175 - val_accuracy: 0.9750
Epoch 140/200
4/4 - 0s - loss: 0.0178 - accuracy: 0.9750 - val_loss: 0.0174 - val_accuracy: 0.9833
Epoch 141/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9833 - val_loss: 0.0174 - val_accuracy: 0.9750
Epoch 142/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9750 - val_loss: 0.0174 - val_accuracy: 0.9750
Epoch 143/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0173 - val_accuracy: 0.9833
Epoch 144/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0173 - val_accuracy: 0.9833
Epoch 145/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9750 - val_loss: 0.0173 - val_accuracy: 0.9833
Epoch 146/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9667 - val_loss: 0.0173 - val_accuracy: 0.9833
Epoch 147/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0173 - val_accuracy: 0.9833
Epoch 148/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9833 - val_loss: 0.0172 - val_accuracy: 0.9833
Epoch 149/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0172 - val_accuracy: 0.9833
Epoch 150/200
4/4 - 0s - loss: 0.0175 - accuracy: 0.9833 - val_loss: 0.0172 - val_accuracy: 0.9750
Epoch 151/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9750 - val_loss: 0.0172 - val_accuracy: 0.9833
Epoch 152/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9833 - val_loss: 0.0172 - val_accuracy: 0.9833
Epoch 153/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0171 - val_accuracy: 0.9833
Epoch 154/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0171 - val_accuracy: 0.9833
Epoch 155/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9833 - val_loss: 0.0171 - val_accuracy: 0.9750
Epoch 156/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9833 - val_loss: 0.0173 - val_accuracy: 0.9750
Epoch 157/200
4/4 - 0s - loss: 0.0175 - accuracy: 0.9667 - val_loss: 0.0171 - val_accuracy: 0.9750
Epoch 158/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9750 - val_loss: 0.0171 - val_accuracy: 0.9833
Epoch 159/200
4/4 - 0s - loss: 0.0176 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9750
Epoch 160/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9833
Epoch 161/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9750 - val_loss: 0.0171 - val_accuracy: 0.9750
Epoch 162/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9833
Epoch 163/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0171 - val_accuracy: 0.9833
Epoch 164/200
```

Epoch 164/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9750
Epoch 165/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9750
Epoch 166/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0170 - val_accuracy: 0.9833
Epoch 167/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9833 - val_loss: 0.0170 - val_accuracy: 0.9750
Epoch 168/200
4/4 - 0s - loss: 0.0177 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 169/200
4/4 - 0s - loss: 0.0179 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 170/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 171/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 172/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 173/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9833
Epoch 174/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 175/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 176/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9750
Epoch 177/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9833 - val_loss: 0.0171 - val_accuracy: 0.9833
Epoch 178/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 179/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 180/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 181/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 182/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9833
Epoch 183/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9833 - val_loss: 0.0172 - val_accuracy: 0.9833
Epoch 184/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 185/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 186/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 187/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 188/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 189/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0169 - val_accuracy: 0.9833
Epoch 190/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0167 - val_accuracy: 0.9750
Epoch 191/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0167 - val_accuracy: 0.9750
Epoch 192/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9833
Epoch 193/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9833 - val_loss: 0.0167 - val_accuracy: 0.9833
Epoch 194/200

4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0167 - val_accuracy: 0.9750
Epoch 195/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0168 - val_accuracy: 0.9750
Epoch 196/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9833 - val_loss: 0.0168 - val_accuracy: 0.9833
Epoch 197/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0167 - val_accuracy: 0.9833
Epoch 198/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0167 - val_accuracy: 0.9750
Epoch 199/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0167 - val_accuracy: 0.9750
Epoch 200/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0167 - val_accuracy: 0.9750
Activation: relu LR: 0.1 Itertions: 200 || Train loss: 0.016662104055285454
Activation: relu LR: 0.1 Itertions: 200 || Train Accuracy: 0.9750000238418579
Epoch 1/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 2/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9833 - val_loss: 0.0225 - val_accuracy: 1.0000
Epoch 3/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 4/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 5/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0223 - val_accuracy: 1.0000
Epoch 6/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 7/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 8/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 9/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 10/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 11/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 12/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 13/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 14/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0224 - val_accuracy: 1.0000
Epoch 15/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 16/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 17/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 18/200
4/4 - 0s - loss: 0.0175 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 19/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 20/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0231 - val_accuracy: 1.0000
Epoch 21/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 22/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 23/200

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4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0245 - val_accuracy: 1.0000
Epoch 24/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 25/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 26/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9833 - val_loss: 0.0224 - val_accuracy: 1.0000
Epoch 27/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 28/200
4/4 - 0s - loss: 0.0174 - accuracy: 0.9750 - val_loss: 0.0223 - val_accuracy: 1.0000
Epoch 29/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 30/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 31/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 32/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9667 - val_loss: 0.0224 - val_accuracy: 1.0000
Epoch 33/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9833 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 34/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9667 - val_loss: 0.0225 - val_accuracy: 1.0000
Epoch 35/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 36/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 37/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 38/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 39/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 40/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 41/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 42/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 43/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 44/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 45/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 46/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9833 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 47/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0244 - val_accuracy: 1.0000
Epoch 48/200
4/4 - 0s - loss: 0.0173 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 49/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 50/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0224 - val_accuracy: 1.0000
Epoch 51/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 52/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 53/200
```

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4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0231 - val_accuracy: 1.0000
Epoch 54/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0231 - val_accuracy: 1.0000
Epoch 55/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 56/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 57/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0247 - val_accuracy: 1.0000
Epoch 58/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 59/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 60/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0249 - val_accuracy: 0.9667
Epoch 61/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0245 - val_accuracy: 1.0000
Epoch 62/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 63/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 64/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 65/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 66/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 67/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 68/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 69/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9833 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 70/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 71/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 72/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 73/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 74/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 75/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 76/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 77/200
4/4 - 0s - loss: 0.0175 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 78/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 79/200
4/4 - 0s - loss: 0.0171 - accuracy: 0.9750 - val_loss: 0.0223 - val_accuracy: 1.0000
Epoch 80/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0224 - val_accuracy: 1.0000
Epoch 81/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9833 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 82/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0243 - val_accuracy: 1.0000
Epoch 83/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
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4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 84/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 85/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 86/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 87/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 88/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 89/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0243 - val_accuracy: 1.0000
Epoch 90/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0245 - val_accuracy: 1.0000
Epoch 91/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 92/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 93/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0247 - val_accuracy: 1.0000
Epoch 94/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 95/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0244 - val_accuracy: 1.0000
Epoch 96/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 97/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 98/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 99/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 100/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 101/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0248 - val_accuracy: 1.0000
Epoch 102/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9833 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 103/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0243 - val_accuracy: 1.0000
Epoch 104/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0246 - val_accuracy: 1.0000
Epoch 105/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 106/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 107/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 108/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 109/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 110/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 111/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 112/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 113/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000

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Epoch 114/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0247 - val_accuracy: 1.0000
Epoch 115/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0246 - val_accuracy: 1.0000
Epoch 116/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9833 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 117/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 118/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 119/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0231 - val_accuracy: 1.0000
Epoch 120/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9667 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 121/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9833 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 122/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 123/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 124/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 125/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9833 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 126/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 127/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0243 - val_accuracy: 1.0000
Epoch 128/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 129/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 130/200
4/4 - 0s - loss: 0.0172 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 131/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0246 - val_accuracy: 1.0000
Epoch 132/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9833 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 133/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 134/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9833 - val_loss: 0.0228 - val_accuracy: 1.0000
Epoch 135/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 136/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 137/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 138/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 139/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 140/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 141/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 142/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 143/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
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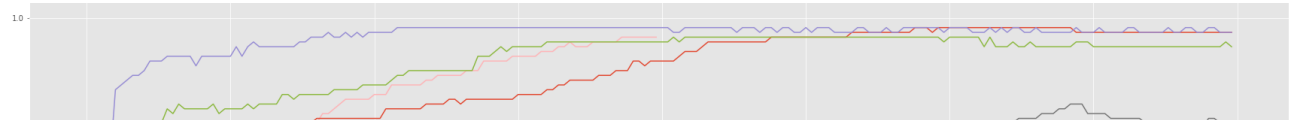
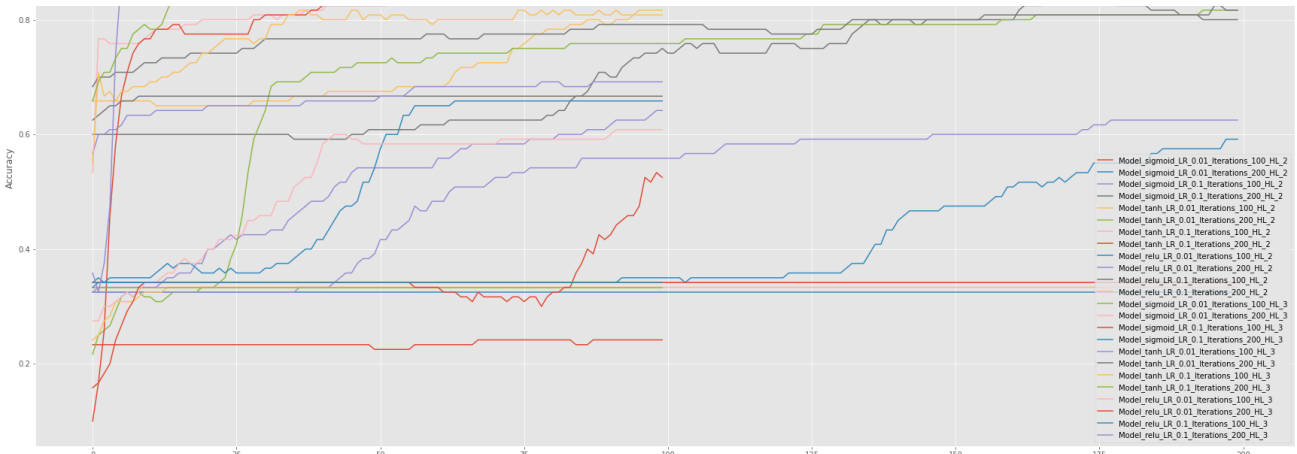
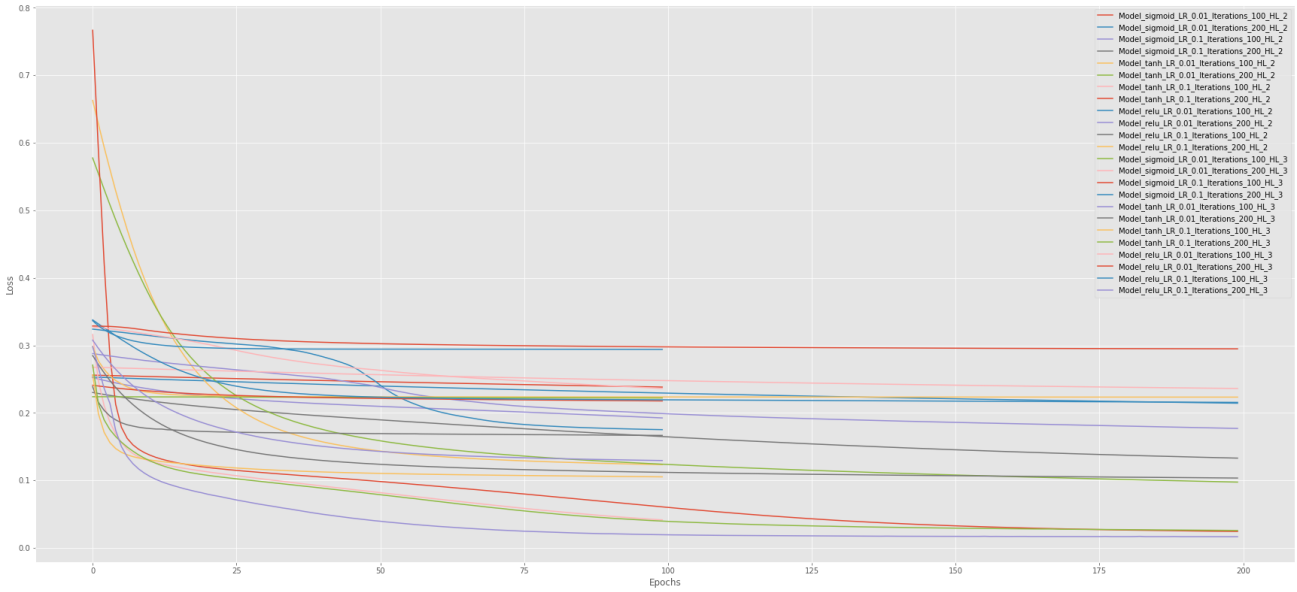
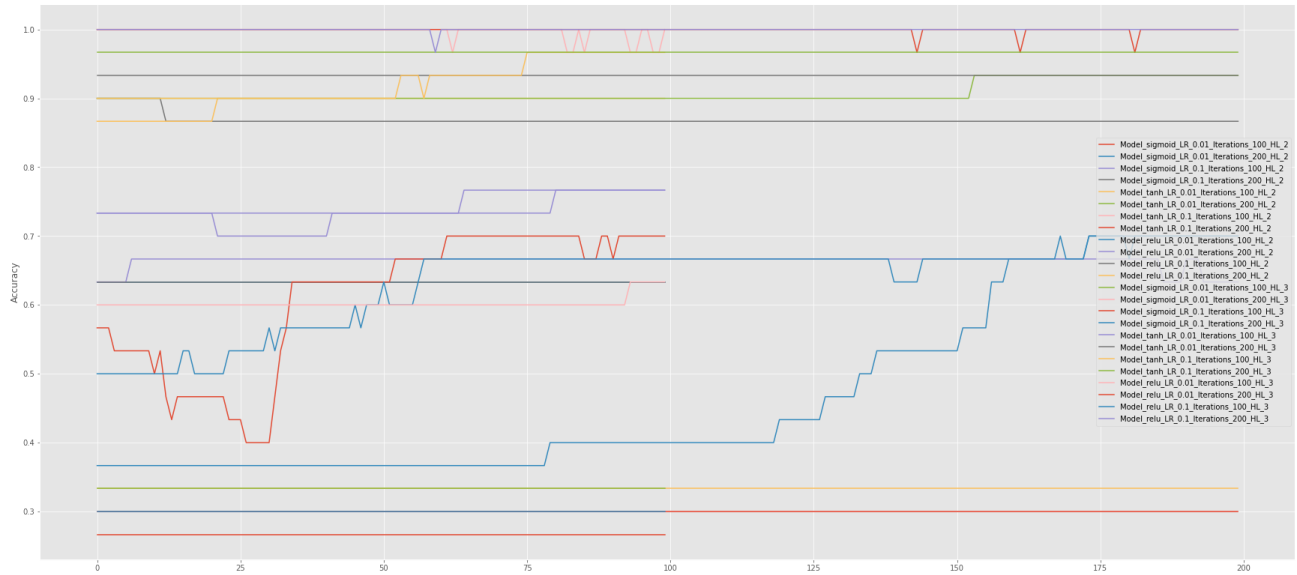
Epoch 144/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0227 - val_accuracy: 1.0000
Epoch 145/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 146/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 147/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 148/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0245 - val_accuracy: 1.0000
Epoch 149/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 150/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 151/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 152/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 153/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 154/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0239 - val_accuracy: 1.0000
Epoch 155/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 156/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0231 - val_accuracy: 1.0000
Epoch 157/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 158/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 159/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9833 - val_loss: 0.0229 - val_accuracy: 1.0000
Epoch 160/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9833 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 161/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 162/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0230 - val_accuracy: 1.0000
Epoch 163/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9667 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 164/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 165/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 166/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 167/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 168/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 169/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 170/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 171/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 172/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 173/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 174/200
```

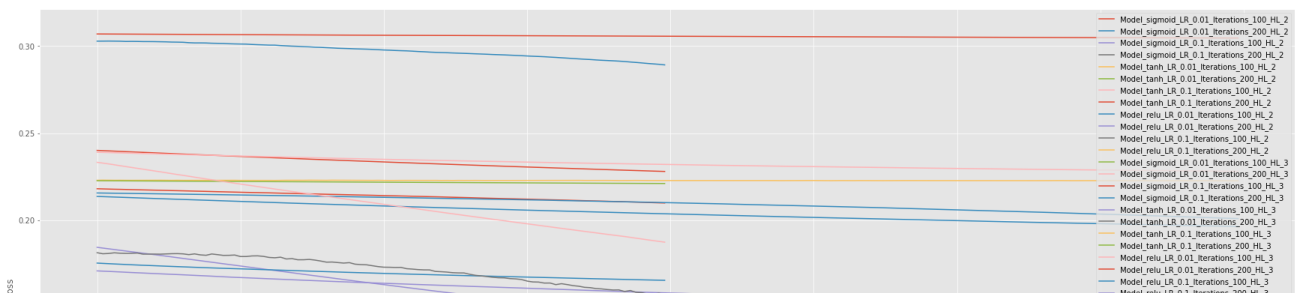
```
Epoch 174/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 175/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0246 - val_accuracy: 1.0000
Epoch 176/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 177/200
4/4 - 0s - loss: 0.0161 - accuracy: 0.9750 - val_loss: 0.0236 - val_accuracy: 1.0000
Epoch 178/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 179/200
4/4 - 0s - loss: 0.0166 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 180/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0238 - val_accuracy: 1.0000
Epoch 181/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 182/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 183/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9833 - val_loss: 0.0242 - val_accuracy: 1.0000
Epoch 184/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 185/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 186/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 187/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 188/200
4/4 - 0s - loss: 0.0170 - accuracy: 0.9750 - val_loss: 0.0240 - val_accuracy: 1.0000
Epoch 189/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 190/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0235 - val_accuracy: 1.0000
Epoch 191/200
4/4 - 0s - loss: 0.0161 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 192/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 193/200
4/4 - 0s - loss: 0.0168 - accuracy: 0.9750 - val_loss: 0.0244 - val_accuracy: 1.0000
Epoch 194/200
4/4 - 0s - loss: 0.0165 - accuracy: 0.9750 - val_loss: 0.0233 - val_accuracy: 1.0000
Epoch 195/200
4/4 - 0s - loss: 0.0167 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 196/200
4/4 - 0s - loss: 0.0169 - accuracy: 0.9750 - val_loss: 0.0241 - val_accuracy: 1.0000
Epoch 197/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0237 - val_accuracy: 1.0000
Epoch 198/200
4/4 - 0s - loss: 0.0164 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Epoch 199/200
4/4 - 0s - loss: 0.0162 - accuracy: 0.9750 - val_loss: 0.0234 - val_accuracy: 1.0000
Epoch 200/200
4/4 - 0s - loss: 0.0163 - accuracy: 0.9750 - val_loss: 0.0232 - val_accuracy: 1.0000
Activation: relu LR: 0.1 Iterations: 200 || Test loss: 0.023185070604085922
Activation: relu LR: 0.1 Iterations: 200 || Test Accuracy: 1.0
================================================================================
```




Accuracy
Model_sigmoid_LR_0.01_Iterations_100_HL_2
Model_sigmoid_LR_0.01_Iterations_200_HL_2
Model_sigmoid_LR_0.1_Iterations_100_HL_2
Model_sigmoid_LR_0.1_Iterations_200_HL_2
Model_tanh_LR_0.01_Iterations_100_HL_2
Model_tanh_LR_0.01_Iterations_200_HL_2
Model_tanh_LR_0.1_Iterations_100_HL_2
Model_tanh_LR_0.1_Iterations_200_HL_2
Model_relu_LR_0.01_Iterations_100_HL_2
Model_relu_LR_0.01_Iterations_200_HL_2
Model_relu_LR_0.1_Iterations_100_HL_2
Model_relu_LR_0.1_Iterations_200_HL_2
Model_sigmoid_LR_0.01_Iterations_100_HL_3
Model_sigmoid_LR_0.01_Iterations_200_HL_3
Model_sigmoid_LR_0.1_Iterations_100_HL_3
Model_sigmoid_LR_0.1_Iterations_200_HL_3
Model_tanh_LR_0.01_Iterations_100_HL_3
Model_tanh_LR_0.01_Iterations_200_HL_3
Model_tanh_LR_0.1_Iterations_100_HL_3
Model_tanh_LR_0.1_Iterations_200_HL_3
Model_relu_LR_0.01_Iterations_100_HL_3
Model_relu_LR_0.01_Iterations_200_HL_3
Model_relu_LR_0.1_Iterations_100_HL_3
Model_relu_LR_0.1_Iterations_200_HL_3


Loss
Epochs
Model_sigmoid_LR_0.01_Iterations_100_HL_2
Model_sigmoid_LR_0.01_Iterations_200_HL_2
Model_sigmoid_LR_0.1_Iterations_100_HL_2
Model_sigmoid_LR_0.1_Iterations_200_HL_2
Model_tanh_LR_0.01_Iterations_100_HL_2
Model_tanh_LR_0.01_Iterations_200_HL_2
Model_tanh_LR_0.1_Iterations_100_HL_2
Model_tanh_LR_0.1_Iterations_200_HL_2
Model_relu_LR_0.01_Iterations_100_HL_2
Model_relu_LR_0.01_Iterations_200_HL_2
Model_relu_LR_0.1_Iterations_100_HL_2
Model_relu_LR_0.1_Iterations_200_HL_2
Model_sigmoid_LR_0.01_Iterations_100_HL_3
Model_sigmoid_LR_0.01_Iterations_200_HL_3
Model_sigmoid_LR_0.1_Iterations_100_HL_3
Model_sigmoid_LR_0.1_Iterations_200_HL_3
Model_tanh_LR_0.01_Iterations_100_HL_3
Model_tanh_LR_0.01_Iterations_200_HL_3
Model_tanh_LR_0.1_Iterations_100_HL_3
Model_tanh_LR_0.1_Iterations_200_HL_3
Model_relu_LR_0.01_Iterations_100_HL_3
Model_relu_LR_0.01_Iterations_200_HL_3
Model_relu_LR_0.1_Iterations_100_HL_3
Model_relu_LR_0.1_Iterations_200_HL_3


Accuracy
Model_sigmoid_LR_0.01_Iterations_100_HL_2
Model_sigmoid_LR_0.01_Iterations_200_HL_2
Model_sigmoid_LR_0.1_Iterations_100_HL_2
Model_sigmoid_LR_0.1_Iterations_200_HL_2
Model_tanh_LR_0.01_Iterations_100_HL_2
Model_tanh_LR_0.01_Iterations_200_HL_2
Model_tanh_LR_0.1_Iterations_100_HL_2
Model_tanh_LR_0.1_Iterations_200_HL_2
Model_relu_LR_0.01_Iterations_100_HL_2
Model_relu_LR_0.01_Iterations_200_HL_2
Model_relu_LR_0.1_Iterations_100_HL_2
Model_relu_LR_0.1_Iterations_200_HL_2
Model_sigmoid_LR_0.01_Iterations_100_HL_3
Model_sigmoid_LR_0.01_Iterations_200_HL_3
Model_sigmoid_LR_0.1_Iterations_100_HL_3
Model_sigmoid_LR_0.1_Iterations_200_HL_3
Model_tanh_LR_0.01_Iterations_100_HL_3
Model_tanh_LR_0.01_Iterations_200_HL_3
Model_tanh_LR_0.1_Iterations_100_HL_3
Model_tanh_LR_0.1_Iterations_200_HL_3
Model_relu_LR_0.01_Iterations_100_HL_3
Model_relu_LR_0.01_Iterations_200_HL_3
Model_relu_LR_0.1_Iterations_100_HL_3
Model_relu_LR_0.1_Iterations_200_HL_3


Model_sigmoid_LR_0.01_Iterations_100_HL_2
Model_sigmoid_LR_0.01_Iterations_200_HL_2
Model_sigmoid_LR_0.1_Iterations_100_HL_2
Model_sigmoid_LR_0.1_Iterations_200_HL_2
Model_tanh_LR_0.01_Iterations_100_HL_2
Model_tanh_LR_0.01_Iterations_200_HL_2
Model_tanh_LR_0.1_Iterations_100_HL_2
Model_tanh_LR_0.1_Iterations_200_HL_2
Model_relu_LR_0.01_Iterations_100_HL_2
Model_relu_LR_0.01_Iterations_200_HL_2
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Model_sigmoid_LR_0.1_Iterations_200_HL_3
Model_tanh_LR_0.01_Iterations_100_HL_3
Model_tanh_LR_0.01_Iterations_200_HL_3
Model_tanh_LR_0.1_Iterations_100_HL_3
Model_tanh_LR_0.1_Iterations_200_HL_3
Model_relu_LR_0.01_Iterations_100_HL_3
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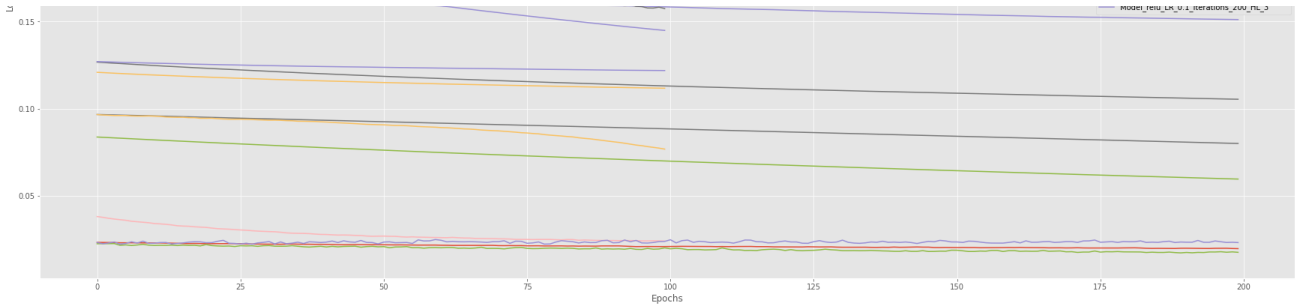
Model_relu_LR_0.1_Iterations_100_HL_3


Model_relu_LR_0.1_Iterations_200_HL_3
0.15
0.10
0.05
0
25
50
75
100
125
150
175
200
Epochs

✓ 9m 34s completed at 7:17 PM