578hw3-initial-CoLab.ipynb

Run all cells in this file with the original "NN578_network.py" to ensure the code runs on your platforn

NOTE: This is a version for Google CoLab.
If you make changes to the .py file (which you are importing), you must restart the kernel and run the code again.
and '**Restart and run all..**'

```
## Code piece to mount my Google Drive
from google.colab import drive
drive.mount("/content/drive")
```

⤷ Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content

```
# See the list of files in this local folder (the example here is 'Temp')
!ls -l '/content/drive/My Drive/Temp'
```

⤷ total 36
```
    -rw------- 1 root root 3453 Sep 23  2019 578hw2.ipynb
    -rw------- 1 root root 2444 Apr 14 18:29 578hw3-checktestset.ipynb
    -rw------- 1 root root 6037 Apr 14 19:27 578hw3-initial-CoLab.ipynb
    -rw------- 1 root root 1397 Apr 14 18:29 578hw3.ipynb
    -rw------- 1 root root 5920 Sep 23  2019 iris4-20-7-3.dat
    -rw------- 1 root root  468 Sep 23  2019 iris-423.dat
    -rw------- 1 root root 3301 Apr 14 18:29 iris.csv
    -rw------- 1 root root 8304 Apr 14 19:29 NN578_network.py
    drwx------ 2 root root 4096 Apr 14 19:04 __pycache__
```

```
# Change the working directory to that 'Temp' folder
import os
os.chdir('/content/drive/My Drive/Temp')
```

```
# Ensure the files are there (in the 'Temp' folder)
!ls -l
```

⤷ total 36
```
    -rw------- 1 root root 3453 Sep 23  2019 578hw2.ipynb
    -rw------- 1 root root 2444 Apr 14 18:29 578hw3-checktestset.ipynb
    -rw------- 1 root root 6037 Apr 14 19:27 578hw3-initial-CoLab.ipynb
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    -rw------- 1 root root 8304 Apr 14 19:29 NN578_network.py
    drwx------ 2 root root 4096 Apr 14 19:04 __pycache__
```

```
import NN578_network as network
import numpy as np
```

```
# Load the dataset (already in the 'one-hot-vector' format for the target)
# Call the function to load the data.
iris_data = network.my_load_csv('iris.csv', 4, 3)
```

```
# Create a network from the saved network
net1 = network.load_network("iris-423.dat")

# Train the network for 2 epochs, with minibatch size 10, eta=0.7 and no testset.
# Note the original function SGD does not return anything, so no attempt is made
# to receive the returned value.
net1.SGD(iris_data, 2, 10, 0.7)
```

⤷ Epoch 0 complete
    Epoch 1 complete

```
# re-load the saved network and run it again this time with the test data
# (though the same dataset, just to check).
net2 = network.load_network("iris-423.dat")
net2.SGD(iris_data, 2, 10, 0.7, iris_data)
```

⤷ Epoch 0: 50 / 150
    Epoch 1: 50 / 150