

```
In [27]: runfile('C:/Users/ali/Documents/5334-DM/Quiz2/submittal/Quiz2-ProbB1-Last.py',  
wdir='C:/Users/ali/Documents/5334-DM/Quiz2/submittal')  
Extracting MNIST_data/train-images-idx3-ubyte.gz  
Extracting MNIST_data/train-labels-idx1-ubyte.gz  
Extracting MNIST_data/t10k-images-idx3-ubyte.gz  
Extracting MNIST_data/t10k-labels-idx1-ubyte.gz  
accuracy: 0.0787  
cross_entropy_train: 30.0043, cross_entropy_test: 28.0685  
accuracy: 0.5822  
cross_entropy_train: 2.82259, cross_entropy_test: 2.9853  
accuracy: 0.7085  
cross_entropy_train: 1.99917, cross_entropy_test: 1.96091  
accuracy: 0.7597  
cross_entropy_train: 1.40341, cross_entropy_test: 1.57991  
accuracy: 0.7871  
cross_entropy_train: 1.20384, cross_entropy_test: 1.36689  
accuracy: 0.8074  
cross_entropy_train: 1.17935, cross_entropy_test: 1.22677  
accuracy: 0.8211  
cross_entropy_train: 1.13341, cross_entropy_test: 1.12755  
accuracy: 0.8309  
cross_entropy_train: 0.741847, cross_entropy_test: 1.05093  
accuracy: 0.8394  
cross_entropy_train: 0.73216, cross_entropy_test: 0.991166  
accuracy: 0.8472  
cross_entropy_train: 0.832436, cross_entropy_test: 0.943568  
0.852
```

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In [28]:
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