PRINTOUTS

Question 1(b).

-------------

accuracy: 0.7818

precision: 0.761270801815

recall: 0.5032

Question 1(c).

-------------

accuracy: 0.8178

precision: 0.77241047825

recall: 0.6428

Question 1(d).

-------------

accuracy: 0.822

precision: 0.755819060167

recall: 0.6884

Question 1(e).

-------------

accuracy: 0.821666666667

precision: 0.759312960071

recall: 0.6808

Question 3(a).

-------------

validation accuracy of trained net 1: 0.9369

validation accuracy of trained net 2: 0.9249

validation accuracy of trained net 3: 0.9261

validation accuracy of trained net 4: 0.9256

validation accuracy of trained net 5: 0.9264

validation accuracy of trained net 6: 0.9289

validation accuracy of trained net 7: 0.9301

validation accuracy of trained net 8: 0.9292

validation accuracy of trained net 9: 0.9287

validation accuracy of trained net 10: 0.9331

maximum validation accuracy: 0.9369

test accuracy: 0.9425

cross entropy: 271.741386392

learning rate used: 1.0

Question 3(b).

-------------

validation accuracy of trained net 1: 0.7972

validation accuracy of trained net 2: 0.7992

validation accuracy of trained net 3: 0.8012

validation accuracy of trained net 4: 0.797

validation accuracy of trained net 5: 0.7894

validation accuracy of trained net 6: 0.7995

validation accuracy of trained net 7: 0.8001

validation accuracy of trained net 8: 0.8009

validation accuracy of trained net 9: 0.795

validation accuracy of trained net 10: 0.7955

maximum validation accuracy: 0.8012

test accuracy: 0.8108

cross entropy: 8104.27189644

learning rate used: 1.0

Question 3(c).

-------------

training accuracy (after 50 iterations): 0.9339

test accuracy (after 50 iterations): 0.9177

cross entropy (after 50 iterations): 2309.19289926

training accuracy (after 200 iterations): 0.9841

test accuracy (after 200 iterations): 0.9385

cross entropy (after 200 iterations): 775.079204549