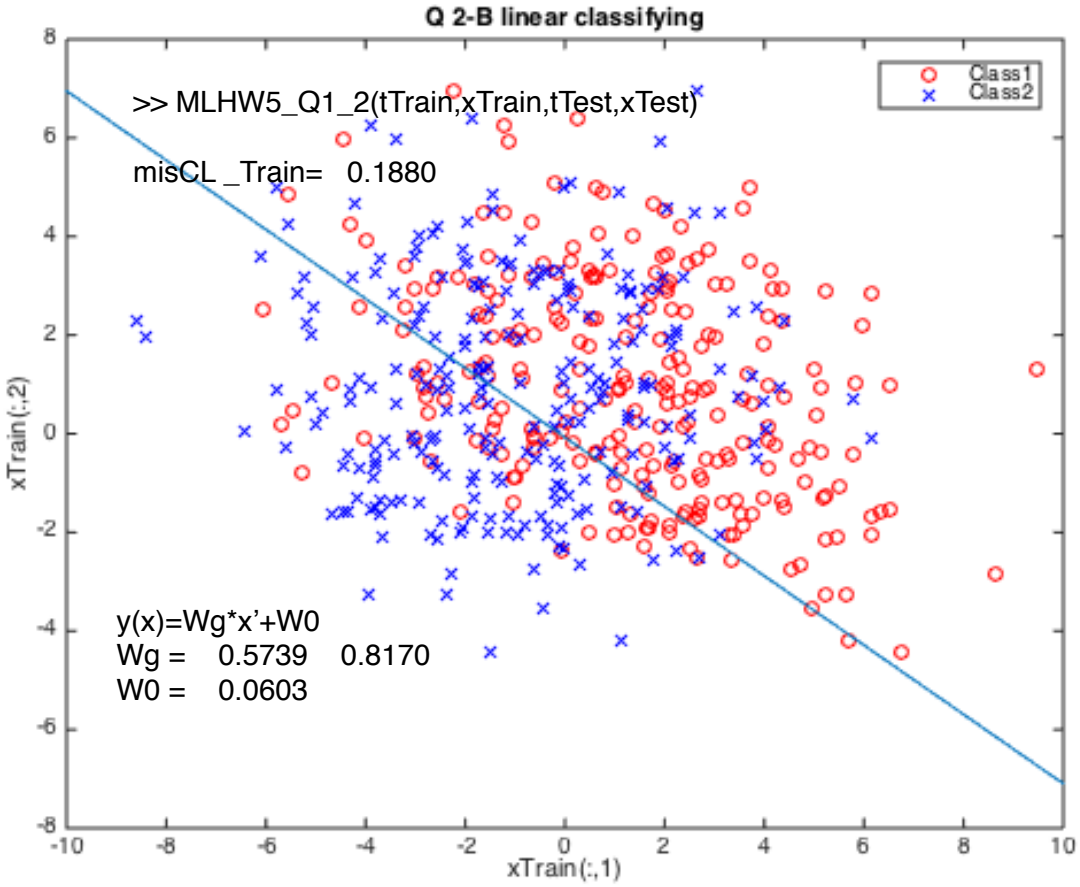
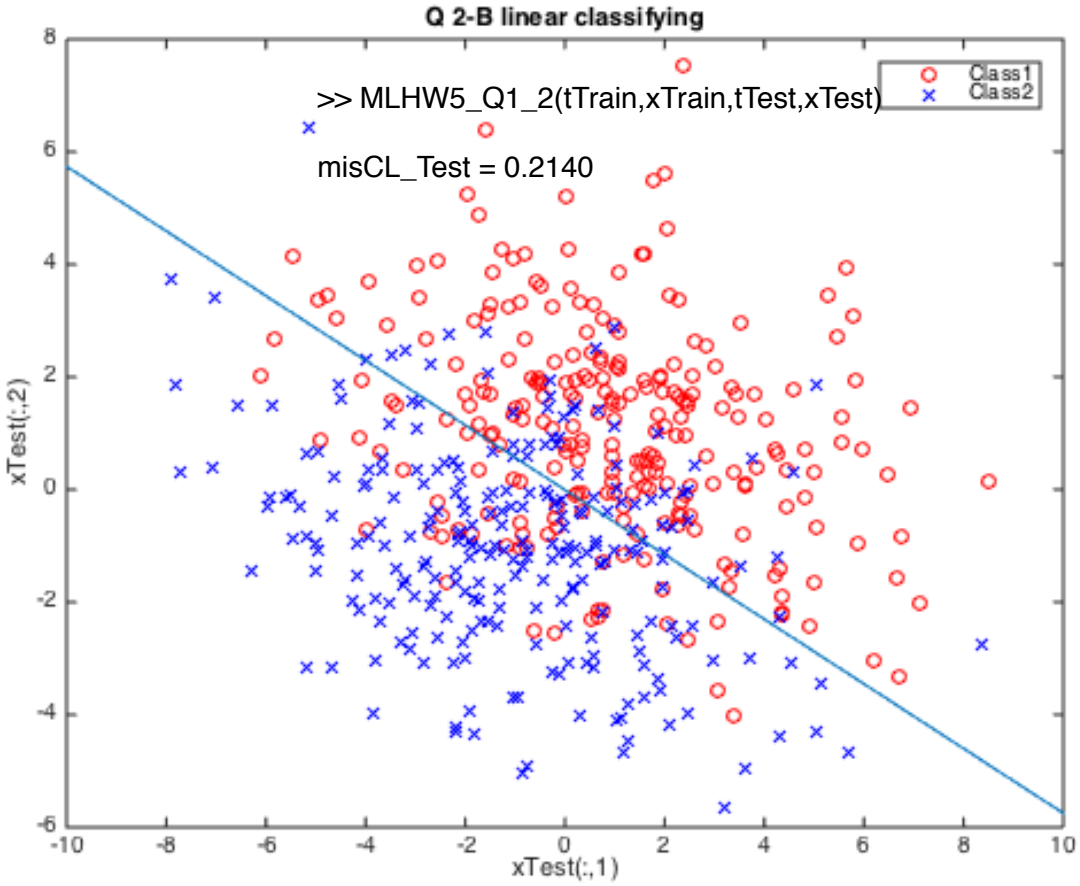
Machine Learning ex5
Po-Hsuan Huang 2014.11.28

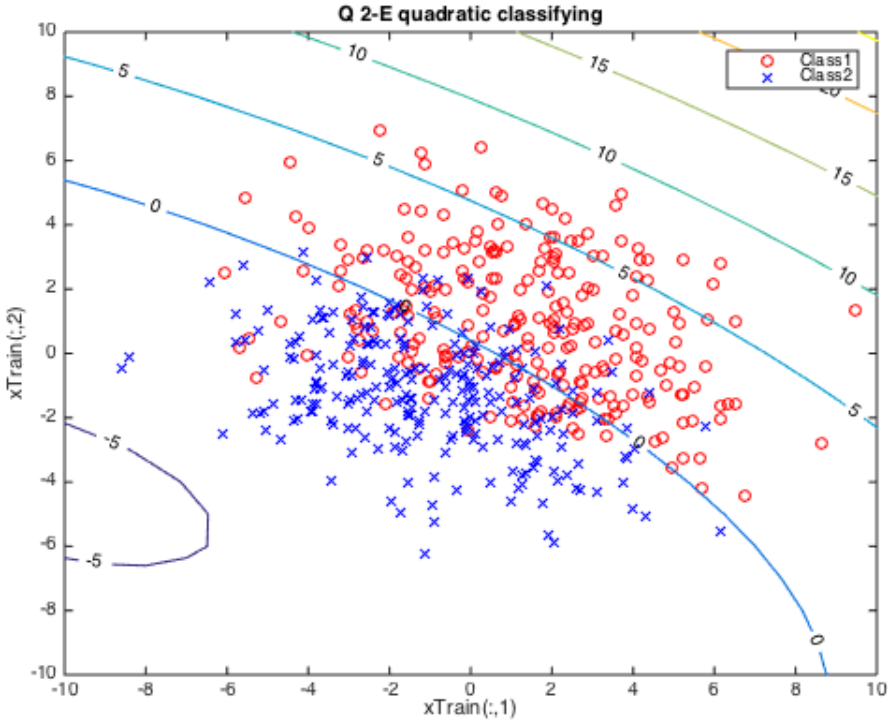


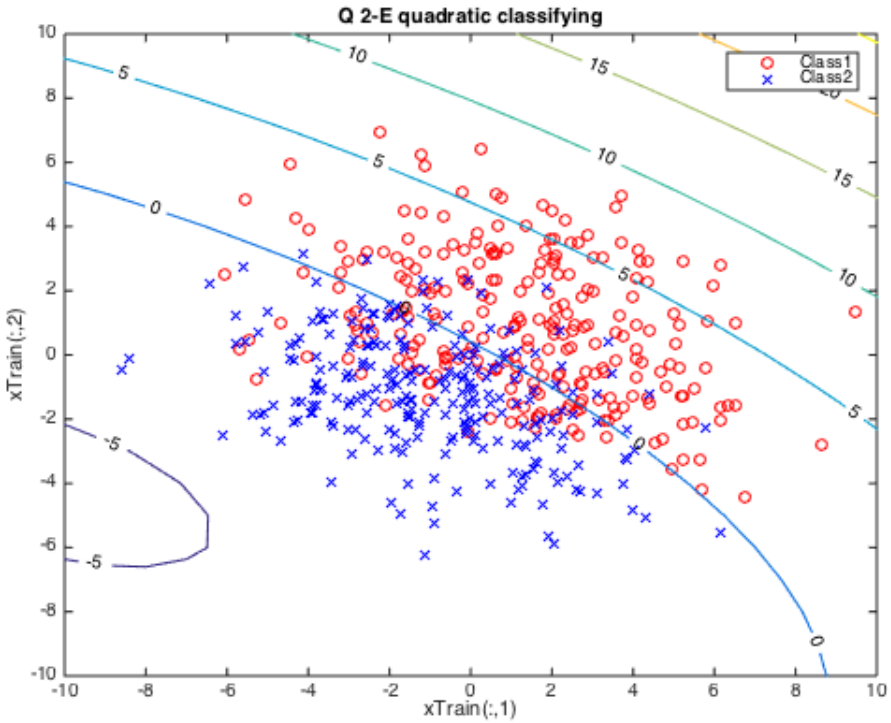


Q2_c ,d,e quadratic discriminant analysis

Misclassification rate:

MLHW5_Q1_2_C(tTrain,xTrain,tTest,xTest)





Misclassification rate:
Training set: = 0.1920 Test set: = 0.2100

The method classify points into t=1 class if the posterior probability > 0.5, otherwise t=-1. The decision boundary corresponds to the contour level 0.

Interestingly, the misclassifying rate is higher than linear classification, which assume the covariance matrixes are the same.

Q2_d quadratic discriminant analysis