**Report for Assignment 3 Question 3.2**

1. **Mean vectors of training samples for each class(LDA&QDA) averaged over 10 splits**

avg\_Mu =

4.9925 3.4090 1.4552 0.2412

5.9188 2.7628 4.2555 1.3221

6.5771 2.9760 5.5464 2.0306

1. **Variances of all the 4 dimensions (diagonal terms of covariance matrix) averaged over 10 splits (for QDA)**

var\_matrix =

1.2595 2.4939 3.7941

1.5132 1.0201 1.1168

0.2896 2.1196 2.9002

0.0956 0.3971 0.7638

1. **Overall Variances of all the 4 dimensions averaged over 10 splits (for LDA)**

avg\_Sigmapooled\_LDA =

0.7195 -0.0495 1.3288 0.5378

-0.0495 0.1893 -0.3358 -0.1243

1.3288 -0.3358 3.1752 1.3216

0.5378 -0.1243 1.3216 0.5925

1. **Mean of all 10 test CCRs**

For QDA –

mean\_CCR\_QDA = 0.9760

For LDA –

mean\_CCR\_LDA = 0.8660

1. **Standard Deviation of all 10 test CCRs**

For QDA –

std\_dev\_QDA = 0.0207

For LDA -

std\_dev\_LDA = 0.0389

1. **Confusion matrix for best and worst CCR for LDA**

confusionmat\_LDA\_best =

22 0 0

0 12 1

0 3 12

confusionmat\_LDA\_worst =

18 0 0

0 13 4

0 5 10