url <- 'http://www.biz.uiowa.edu/faculty/jledolter/DataMining/admission.csv'

admit <- read.csv(url)

library(MASS)

plot(admit$GMAT,admit$GPA,col=admit$De) #

summary(admit)

numSummary(admit[,c("GMAT", "GPA")], groups=admit$De,

statistics=c("mean","sd", "IQR", "quantiles"), quantiles=c(0,.25,.5,.75,1))

adm.lda <- lda(De~.,admit)

adm.predict <- predict(adm.lda)

adm.class <- adm.predict$class

ldahist(data=adm.predict$x[,1], g=admit$De)

ldahist(data=adm.predict$x[,2], g=admit$De)

# Confusion Matrix:

table(admit$De,adm.class)

# Accuracy rate

correct <- diag(table(adm.class, admit$De))

sum(correct)/NROW(admit$De) # or use length(admit$De)

plot(adm.predict$x[,1],adm.predict$x[,2],col=admit$De) # make a scatterplot

newadmit=rbind(c(3.0, 2.5, 3.6, 3.5, 2), c(300, 600, 550, 480, 670)) # New admission data

predict(adm.lda, data.frame(GPA=newadmit[1,],GMAT=newadmit[2,]))$class

library(klaR)

partimat(De~.,data=admit,method="lda",prec=500)

# QDA

adm.qda <- qda(De~.,admit)

table(admit$De, predict(adm.qda)$class)

partimat(De~.,data=admit,method="qda",prec=500)