**Problem 1**

**DATA**

The data set consists of information of 77 alcohol with different chemical properties such as MEOH, ACET, BU1, MEPR, ACAL, LNPRO1 as covariates.

**TASK**

The task was to perform Linear Discriminant analysis for the above dataset and predict the group for the new data given.

**RESULT**

After the analysis, it was found that the new data was from **KIRSCH** group. The code for the same is given in the appendix.

**Appendix**

The code for the problem solved above.

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setwd("//home.org.aalto.fi/gadichs1/data/Desktop/P3\_4/MSA/EX 9")

alcohol <- read.table("ALCOHOL.txt",header = T,sep = '\t')

#install.packages('MASS')

alcohol[,1] <- factor(alcohol[,1])

data = alcohol

data.lda <- lda(TYPE~.,data=data)

# new data

newdata<- data.frame(MEOH=500,ACET = 400,BU1=3,MEPR=30,ACAL=20,LNPRO1=10)

predict(data.lda,newdata=newdata)$class

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