> (data<-read.delim("file.txt"))

Beer Wine Spirit Country Year

1 5.24 2.86 1.81 Australia 1998

2 5.15 2.87 1.77 Australia 1999

3 5.06 2.94 1.88 NewZealand 2002

4 5.07 2.95 2.07 Australia 2001

5 4.80 2.91 1.81 NewZealand 1999

6 4.97 3.01 1.86 NewZealand 2000

7 4.68 3.07 2.06 Australia 2004

8 4.58 3.13 2.12 NewZealand 2003

9 4.57 3.11 2.15 Australia 2006

10 4.49 2.59 1.77 NewZealand 1998

11 4.26 2.65 1.64 NewZealand 2004

> #a) For each year, display the country with maximum Beer consumption and minimum Wine consumption.

> for (i in unique(data$Year)){

+ subdata <- subset(data, (Year == i))

+ print(paste(i,":"),quote = FALSE)

+ print(paste("Country with maximum Beer consumption =",subset(subdata, Beer == max(subdata$Beer))[4]),quote = FALSE)

+ print(paste("Country with minimum Wine consumption =",subset(subdata, Wine == min(subdata$Wine))[4]),quote = FALSE)

+ }

[1] 1998 :

[1] Country with maximum Beer consumption = Australia

[1] Country with minimum Wine consumption = NewZealand

[1] 1999 :

[1] Country with maximum Beer consumption = Australia

[1] Country with minimum Wine consumption = Australia

[1] 2002 :

[1] Country with maximum Beer consumption = NewZealand

[1] Country with minimum Wine consumption = NewZealand

[1] 2001 :

[1] Country with maximum Beer consumption = Australia

[1] Country with minimum Wine consumption = Australia

[1] 2000 :

[1] Country with maximum Beer consumption = NewZealand

[1] Country with minimum Wine consumption = NewZealand

[1] 2004 :

[1] Country with maximum Beer consumption = Australia

[1] Country with minimum Wine consumption = NewZealand

[1] 2003 :

[1] Country with maximum Beer consumption = NewZealand

[1] Country with minimum Wine consumption = NewZealand

[1] 2006 :

[1] Country with maximum Beer consumption = Australia

[1] Country with minimum Wine consumption = Australia

> #b) Find the average alcohol consumption for each country.

> for (i in unique(data$Country)){

+ subdata <- subset(data, (Country == i))

+ avg\_alcohol\_consumption <- mean(c(mean(subdata$Beer),mean(subdata$Wine),mean(subdata$Spirit)))

+ print(paste("Average alcohol consumption of",i,"=",avg\_alcohol\_consumption),quote = FALSE)

+ }

[1] Average alcohol consumption of Australia = 3.29533333333333

[1] Average alcohol consumption of NewZealand = 3.13722222222222

> #c) Find the Beer consumption for New Zealand for the year(s) when its spirit consumption was more than the mean spirit consumption.

> nzdata <- subset(data, (Country == "NewZealand"))

> nzspirit <- subset(nzdata, (Spirit>mean(nzdata$Spirit)))

> print(paste(nzspirit$Year,"=",nzspirit$Beer))

[1] "2002 = 5.06" "2000 = 4.97" "2003 = 4.58"

> #d) Find the average Beer consumption/Wine Consumption/Spirit consumption for each year.

> for (i in unique(data$Year)){

+ subdata <- subset(data, (Year == i))

+ print(paste(i,":"),quote = FALSE)

+ print(paste("Avg Beer Consumption =",mean(subdata$Beer)),quote = FALSE)

+ print(paste("Avg Wine Consumption =",mean(subdata$Wine)),quote = FALSE)

+ print(paste("Avg Spirit Consumption =",mean(subdata$Spirit)),quote = FALSE)

+ }

[1] 1998 :

[1] Avg Beer Consumption = 4.865

[1] Avg Wine Consumption = 2.725

[1] Avg Spirit Consumption = 1.79

[1] 1999 :

[1] Avg Beer Consumption = 4.975

[1] Avg Wine Consumption = 2.89

[1] Avg Spirit Consumption = 1.79

[1] 2002 :

[1] Avg Beer Consumption = 5.06

[1] Avg Wine Consumption = 2.94

[1] Avg Spirit Consumption = 1.88

[1] 2001 :

[1] Avg Beer Consumption = 5.07

[1] Avg Wine Consumption = 2.95

[1] Avg Spirit Consumption = 2.07

[1] 2000 :

[1] Avg Beer Consumption = 4.97

[1] Avg Wine Consumption = 3.01

[1] Avg Spirit Consumption = 1.86

[1] 2004 :

[1] Avg Beer Consumption = 4.47

[1] Avg Wine Consumption = 2.86

[1] Avg Spirit Consumption = 1.85

[1] 2003 :

[1] Avg Beer Consumption = 4.58

[1] Avg Wine Consumption = 3.13

[1] Avg Spirit Consumption = 2.12

[1] 2006 :

[1] Avg Beer Consumption = 4.57

[1] Avg Wine Consumption = 3.11

[1] Avg Spirit Consumption = 2.15

> par(mar=c(1,1,1,1))

> #e) Plot the mean Beer consumption/mean Wine consumption/mean Spirit consumption for each country using a suitable plot.

> for (i in unique(data$Country)){

+ subdata <- subset(data, (Country == i))

+ print(paste(i,":"),quote = FALSE)

+ barplot(c(mean(subdata$Beer),mean(subdata$Wine),mean(subdata$Spirit)), names.arg = c("Beer","Wine","Spirit"), xlab = "Alcohol", ylab = "Mean Consumption", main = "Country-wise Mean Alcohol Consumption", ylim = c(0,5.0))

+ }

[1] Australia :

[1] NewZealand :