library(ggplot2)

PoliceCaughts=read.csv("PoliceCaughts.csv")

PoliceCaughtsMornBrooklyn=subset(PoliceCaughts, PoliceCaughts$timestop>=600&PoliceCaughts$timestop<1200&PoliceCaughts$city==2)

#hist(PoliceCaughtsMornBrooklyn$timestop)

PoliceCaughtsNightBrooklyn=subset(PoliceCaughts, PoliceCaughts$timestop>=0&PoliceCaughts$timestop<600&PoliceCaughts$city==2)

#hist(PoliceCaughtsNightBrooklyn$timestop)

PoliceCaughtsEveningBrooklyn=subset(PoliceCaughts, PoliceCaughts$timestop>=1800&PoliceCaughts$timestop<=2359&PoliceCaughts$city==2)

#hist(PoliceCaughtsEveningBrooklyn$timestop)

PoliceCaughtsAfterNoonBrooklyn=subset(PoliceCaughts, PoliceCaughts$timestop>=1200&PoliceCaughts$timestop<1800&PoliceCaughts$city==2)

#hist(PoliceCaughtsAfterNoonBrooklyn$timestop)

PoliceCaughtsMornManhattan=subset(PoliceCaughts, PoliceCaughts$timestop>=600&PoliceCaughts$timestop<1200&PoliceCaughts$city==1)

morning=rbind(PoliceCaughtsMornBrooklyn$timestop,PoliceCaughtsMornManhattan, na.rm=TRUE)

par(mfrow=c(2,2))

hist(PoliceCaughtsMornBrooklyn$timestop, xlab = "Time", ylab="Frequency", main="Brooklyn Morning Statistics")

hist(PoliceCaughtsAfterNoonBrooklyn$timestop, xlab = "Time", ylab="Frequency", main="Brooklyn Afternoon Statistics")

hist(PoliceCaughtsEveningBrooklyn$timestop, xlab = "Time", ylab="Frequency", main="Brooklyn Evening Statistics")

hist(PoliceCaughtsNightBrooklyn$timestop, xlab = "Time", ylab="Frequency", main="Brooklyn Night Statistics")

male=c(nrow(PoliceCaughtsMaleManhattan),nrow(PoliceCaughtsMaleBrooklyn),nrow(PoliceCaughtsMaleBronx),nrow(PoliceCaughtsMaleQueens),nrow(PoliceCaughtsMaleStaten))

female=c(nrow(PoliceCaughtsFemaleManhattan),nrow(PoliceCaughtsFemaleBrooklyn),nrow(PoliceCaughtsFemaleBronx),nrow(PoliceCaughtsFemaleQueens),nrow(PoliceCaughtsFemaleStaten))

plot(region, male, xlab="region", ylab="",type="l", col="black", main="Gender Statistics for each region")

## Allow a second plot on the same graph

box()

par(new=TRUE)

## Plot the second plot and put axis scale on right

plot(region, female, axes="F", xlab="region", ylab="", type="l", col="red")

axis(4, ylim=c(4000,13000), col="red",col.axis="red",las=1)

mtext("Cell Density",side=4,col="red",line=4)

## Add Legend

legend("topleft",legend=c("Male","Female"), text.col=c("black","red"),pch=c(16,15),col=c("black","red"))

young=subset(PoliceCaughts,PoliceCaughts$age<30)

middleAged=subset(PoliceCaughts,PoliceCaughts$age>=30&PoliceCaughts$age<60)

old=subset(PoliceCaughts,PoliceCaughts$age>=60&PoliceCaughts$age<100)

superold=subset(PoliceCaughts,PoliceCaughts$age>=100)

par(mfrow=c(2,2))

hist(young$age)

hist(middleAged$age)

hist(old$age)

hist(superold$age)