MKT382 Project 1

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Descriptive Stats

```
library(ggplot2)
library(reshape2)
library(stringr)


df = read.table(file='Dominicks_scanner_data-orange_juice.txt', header=TRUE, sep='\t')

summary(df[2:6])
```

```
##      sales1          sales2          sales3           sales4
##  Min.   : 4608   Min.   : 6048   Min.   :   704   Min.   :  3072
##  1st Qu.: 7600   1st Qu.: 8736   1st Qu.:  2096   1st Qu.:  5184
##  Median :10880   Median :10704   Median :  3648   Median :  7872
##  Mean   :18879   Mean   :11763   Mean   : 14898   Mean   : 18481
##  3rd Qu.:17040   3rd Qu.:12984   3rd Qu.: 13088   3rd Qu.: 19088
##  Max.   :98624   Max.   :29952   Max.   :171264   Max.   :192128
##      sales5
##  Min.   :  896
##  1st Qu.: 3504
##  Median : 7264
##  Mean   :15359
##  3rd Qu.:18208
##  Max.   :83008
```

```
summary(df[7:11])
```

```
##      price1           price2           price3           price4
##  Min.   :0.02600   Min.   :0.03700   Min.   :0.02300   Min.   :0.02000
##  1st Qu.:0.03900   1st Qu.:0.04800   1st Qu.:0.03100   1st Qu.:0.03100
##  Median :0.04700   Median :0.04900   Median :0.03700   Median :0.03500
##  Mean   :0.04534   Mean   :0.04984   Mean   :0.03588   Mean   :0.03541
##  3rd Qu.:0.05300   3rd Qu.:0.05300   3rd Qu.:0.04000   3rd Qu.:0.03925
##  Max.   :0.05700   Max.   :0.06000   Max.   :0.04500   Max.   :0.04700
##      price5
##  Min.   :0.01500
##  1st Qu.:0.02300
##  Median :0.02600
##  Mean   :0.02681
##  3rd Qu.:0.03100
##  Max.   :0.03900
```

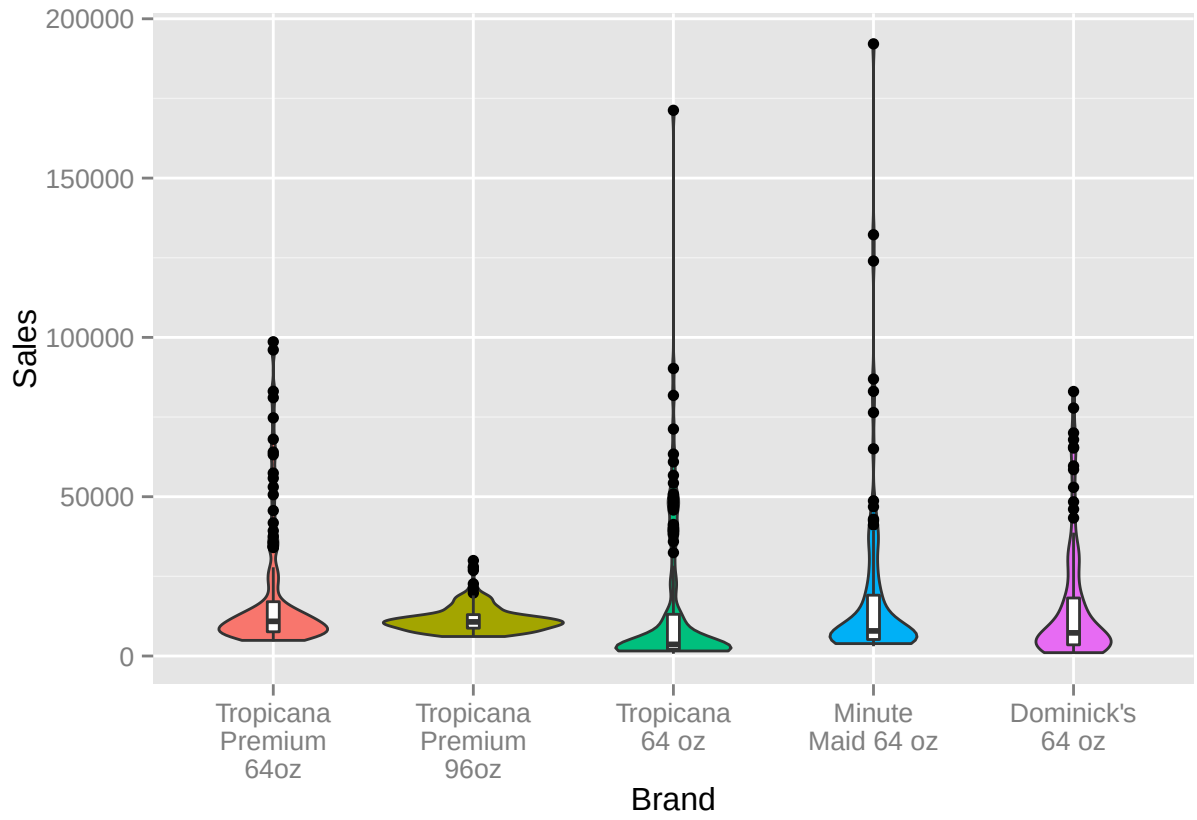
```
xlabs = c("Tropicana Premium 64oz", "Tropicana Premium 96oz",
          "Tropicana 64 oz", "Minute Maid 64 oz","Dominick's 64 oz")

sales_lf = stack(df, select=c(sales1, sales2, sales3, sales4, sales5))

colnames(sales_lf) = c("Sales","Brand")

p1 = ggplot(sales_lf, aes(y=Sales, x=Brand))+
  geom_violin(aes(fill = factor(Brand)))+
  scale_x_discrete(breaks=c("sales1", "sales2", "sales3", "sales4", "sales5"),
                       labels=str_wrap(xlabs, width = 10))+
  theme(legend.position = "none") +
  geom_boxplot(width=.08)

p1
```



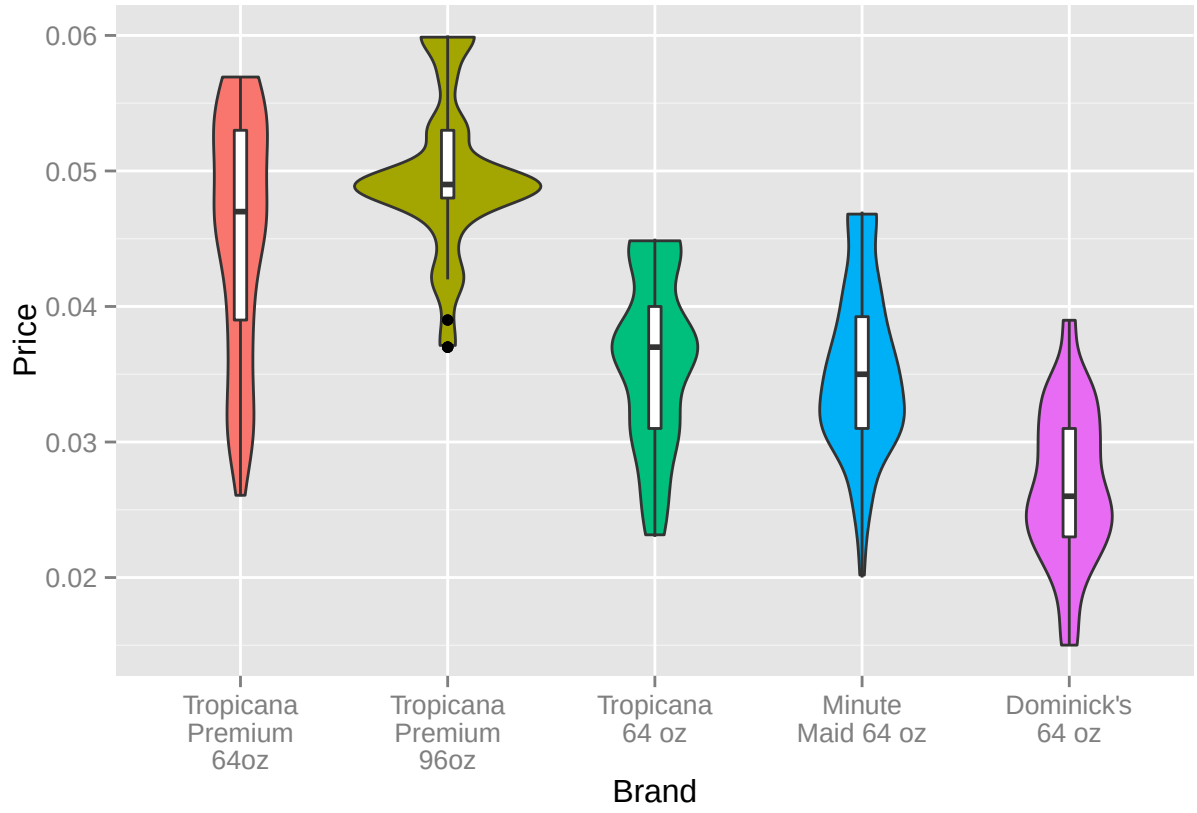

```
price_lf = stack(df, select=c(price1, price2, price3, price4, price5))

colnames(price_lf) = c("Price","Brand")

p2 = ggplot(price_lf, aes(y=Price, x=Brand))+
  geom_violin(aes(fill = factor(Brand)))+
  scale_x_discrete(breaks=c("price1", "price2", "price3", "price4", "price5"),
                       labels=str_wrap(xlabs, width = 10))+
  theme(legend.position = "none") +
```

```
  geom_boxplot(width=.08)

p2
```




```
ms1 = sum(df$sales1*df$price1)/sum(df[2:6]*df[7:11])
ms2 = sum(df$sales2*df$price2)/sum(df[2:6]*df[7:11])
ms3 = sum(df$sales3*df$price3)/sum(df[2:6]*df[7:11])
ms4 = sum(df$sales4*df$price4)/sum(df[2:6]*df[7:11])
ms5 = sum(df$sales5*df$price5)/sum(df[2:6]*df[7:11])
```