**Rcode for creating pie chart and bar chart visuals for Top 10 Products by Unit Volume**

library(ggplot2)

library(stringr)

bar1 <- ggplot(UnitVolume, aes(fill=Name, y=UnitVolume, x=Name)) + geom\_bar(Name='stack', stat='identity')

+ scale\_x\_discrete(labels = function(x) str\_wrap(x, width = 10))

bar1 + theme(axis.text.x = element\_text(angle = 110))

+ labs(x='Name', y='Unit Volume', title = 'Top 10 Products by Unit Volume')

pie1 <- ggplot(UnitVolume, aes(x="", y=UnitVolume, fill=Name)) + geom\_bar(stat="identity", width = 1) + coord\_polar("y", start=0)

> pie1

pie1 + theme\_void() + ggtitle("Top 10 Products by Unit Volume")

**Rcode for creating pie chart and bar chart visuals for Top 10 Products by Sales Revenue**

bar2 <- ggplot(SalesRevenue, aes(fill=Name, y=Revenue, x=Name)) + geom\_bar(Name='stack', stat='identity') + scale\_x\_discrete(labels = function(x) str\_wrap(x, width = 10))

+ theme(axis.text.x = element\_text(angle = 110))

+ labs(x='Name', y='Sales Revenue', title = 'Top 10 Products by Sales Revenue')

pie2 <- ggplot(SalesRevenue, aes(x="", y=Revenue, fill=Name)) + geom\_bar(stat="identity", width = 1)

+ coord\_polar("y", start=0) + theme\_void() + ggtitle("Top 10 Products by Sales Revenue")

**Rcode for creating a line chart visual for Product #1 Monthly sales**

library(lubridate)

SalesRevenue3$month <- month(SalesRevenue3$Date, label = TRUE)

Line1 <- ggplot(subset(SalesRevenue3, Name = "Road-250 Red,48"), aes(x=month, y=Revenue))

+ geom\_line(color="red") + labs(title = "2013 Monthly Sales for #1 Product", x="Order Month", y="Monthly Sales")

**Rcode for creating a line chart visual for Product #2 Monthly sales**

Line2 <- ggplot(subset(SalesRevenue3, Name = "Road-250 Red,58"), aes(x=month, y=Revenue))

+ geom\_line(color="red") + labs(title = "2013 Monthly Sales for #2 Product", x="Order Month", y="Monthly Sales")

**Rcode for creating a line chart visual for Product #3 Monthly sales**

Line3 <- ggplot(subset(SalesRevenue3, Name = "Road-250 Black,48"), aes(x=month, y=Revenue))

+ geom\_line(color="red") + labs(title = "2013 Monthly Sales for #3 Product", x="Order Month", y="Monthly Sales")

**Component Questions**

Thinking about sales of exercise equipment. What sort of trends might you expect to see? For instance, any periods of increased/decreased sales?

Depending on the geographical location, most of the equipment could sell lesser during the winter than in the summer because a lot of cyclists drastically decrease the number of times they ride in cold weather.

Comment on the month-to-month variability of sales for each of the three products.

All three products show the same analysis. There’s no visual trend in monthly sales because, for all 3 products, sales happened only in the month of January.

Do you visually see any trends for the three product monthly sales?

No, I don’t see any visual trends for the monthly sales of the three products because the line chart shows that the products were sold only in the month of January and therefore, we don’t have extra information about what happened with the products for the rest of the year.