coursera
project network

Application of Data Analysis in Business with R Programming

SOLUTIONS

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PRACTICE TASK 1

PRACTICE TASK FOR DATA MANIPULATION

SOLUTION

```
####PRE-WORKS
####LOAD THE DPLYR PACKAGE
require(dplyr)

##LET'S LOAD THE DATASET

store <- read.csv("FINAL DEPARTMENTAL STORE.csv")

###PART 1 : DATA TRANSFORMATION

###i.GET THE INFORMATION OF THE COLUMNS 4-10
###ii.WHERE PRODUCT_CATEGORY IS 'household'
###iii.ARRANGED IN ASCENDING ORDER OF QUANTITY_DEMANDED.
```

PRACTICE TASK 1

PRACTICE TASK FOR DATA MANIPULATION

SOLUTION

```
store1 <- select(store, 2:10)
store2 <- filter(store1, PRODUCT_TYPE=='household')
store3<- arrange(store2, QUANTITY_DEMANDED)
```

###PART 2 : STATISTICAL INTERPRETATION

```
###i. FIND THE AVERAGE AND SUMMATION OF QUANTITY_DEMANDED
###ii. GROUPED BY PRODUCT CATEGORY

store4 <- group_by(store3, PRODUCT_CATEGORY)
summarise(store3, AVERAGE=mean(QUANTITY_DEMANDED),SUM=sum(QUANTITY_DEMANDED))
```

PRACTICE TASK 2

PRACTICE TASK FOR DATA VISUALIZATION

SOLUTION

```
####PRE-WORKS
####LOAD THE DPLYR PACKAGE
require(dplyr)
require(ggplot2)

##LET'S LOAD THE DATASET
store <- read.csv("FINAL DEPARTMENTAL STORE.csv")

### DATA VISUALIZATION

#1. LINE PLOT FOR AVERAGE_PROFIT & COMPANY
store %>% group_by(COMPANY) %>%
  summarise(AVERAGE_PROFIT=mean(PROFIT)) %>%
  ggplot(aes(x=COMPANY, y=AVERAGE_PROFIT, group=1))+geom_line(color="GREEN")
```

PRACTICE TASK 2

PRACTICE TASK FOR DATA VISUALIZATION

SOLUTION

#2. COXCOMB CHART FOR EACH OF PRODUCT THE "Organic food" TYPE'S QUANTITY DEMANDED.

```
store1 <-  filter(store, PRODUCT_TYPE=="Organic food")%>%
  group_by(PRODUCT_CATEGORY)%>%
  summarise(QUANTITY_DEMANDED=sum(QUANTITY_DEMANDED))

store2 <- store1 %>%
  arrange(desc(PRODUCT_CATEGORY))
%>%mutate(percentage=round(QUANTITY_DEMANDED*100/sum(QUANTITY_DEMANDED)),1) %>% mutate(y_pos =
cumsum(percentage)-0.5*percentage)

store2 %>% ggplot(aes(PRODUCT_CATEGORY,QUANTITY_DEMANDED, fill=PRODUCT_CATEGORY)) +
  geom_bar(stat="identity") +
  coord_polar("x", start=0,direction = -1)+
  xlab("DIFFERENT PRODUCTS") +
  ylab("QUANTITY")
```

Thank you!