Tejesh Varma Maddana_MSBA_64060_Assignment -1

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```
knitr::opts_chunk$set(echo = TRUE)
```

#1.I have downloaded a dataset that has the data a mix of quantitative and qualitative(categorical) variables from the kaggle website and the source link is furnished below for your ready reference : Dataset Source reference Link : https://www.kaggle.com/datasets/michau96/restaurant-business-rankings-2020

```
#2. Importing the Data Set from the above referred souce
Food_Business <-  read.csv("~/Downloads/archive (3)/Restaurent.csv")
head(Food_Business)
```

```
##   Rank  Restaurant                Location Sales YOY_Sales Units YOY_Units
## 1    1  Evergreens           Seattle, Wash.    24    130.5%    26    116.7%
## 2    2 Clean Juice          Charlotte, N.C.    44    121.9%   105     94.4%
## 3    3    Slapfish Huntington Beach, Calif.    21     81.0%    21     90.9%
## 4    4  Clean Eatz         Wilmington, N.C.    25     79.7%    46     58.6%
## 5    5   Pokeworks           Irvine, Calif.    49     77.1%    50     56.3%
## 6    6 Playa Bowls            Belmar,  N.J.    39     62.9%    76     28.8%
##   Unit_Volume Franchising
## 1        1150          No
## 2         560         Yes
## 3        1370         Yes
## 4         685         Yes
## 5        1210         Yes
## 6         580         Yes
```

#3(i) Printing the Descriptive Statistics of Quantitative Variables

```
summary(Food_Business$Unit_Volume)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   465.0   867.5  1260.0  1592.6  2020.0  4300.0
```

#3(ii) Printing the Descriptive Statistics of Categorical Variables

```
summary(Food_Business$Restaurant, Food_Business$Location)
```

```
##    Length     Class      Mode
##        50 character character
```

#4. Transformation of a Quantitative Variable

```
log_Unit_Volume = log(Food_Business$Unit_Volume)
log_Unit_Volume
```

```
##  [1] 7.047517 6.327937 7.222566 6.529419 7.098376 6.363028 6.652863 7.138867
##  [9] 6.142037 7.565275 6.756932 7.090077 6.791221 7.069023 7.565275 6.659294
## [17] 6.551080 6.282267 8.242756 7.138867 8.366370 6.272877 7.709757 6.633318
```

```
## [25] 7.937375 7.944492 7.192934 6.877296 7.226209 7.029973 6.665684 7.122867
## [33] 6.956545 8.357024 6.892642 7.114769 7.339538 8.045588 7.921173 7.319865
## [41] 8.160518 6.282267 7.901007 7.390181 7.138867 7.625595 7.207860 7.874739
## [49] 7.843849 7.377759
```

```
Food_Business$log_Unit_Volume <- c(log_Unit_Volume)
Food_Business$log_Unit_Volume
```

```
##  [1] 7.047517 6.327937 7.222566 6.529419 7.098376 6.363028 6.652863 7.138867
##  [9] 6.142037 7.565275 6.756932 7.090077 6.791221 7.069023 7.565275 6.659294
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## [41] 8.160518 6.282267 7.901007 7.390181 7.138867 7.625595 7.207860 7.874739
## [49] 7.843849 7.377759
```
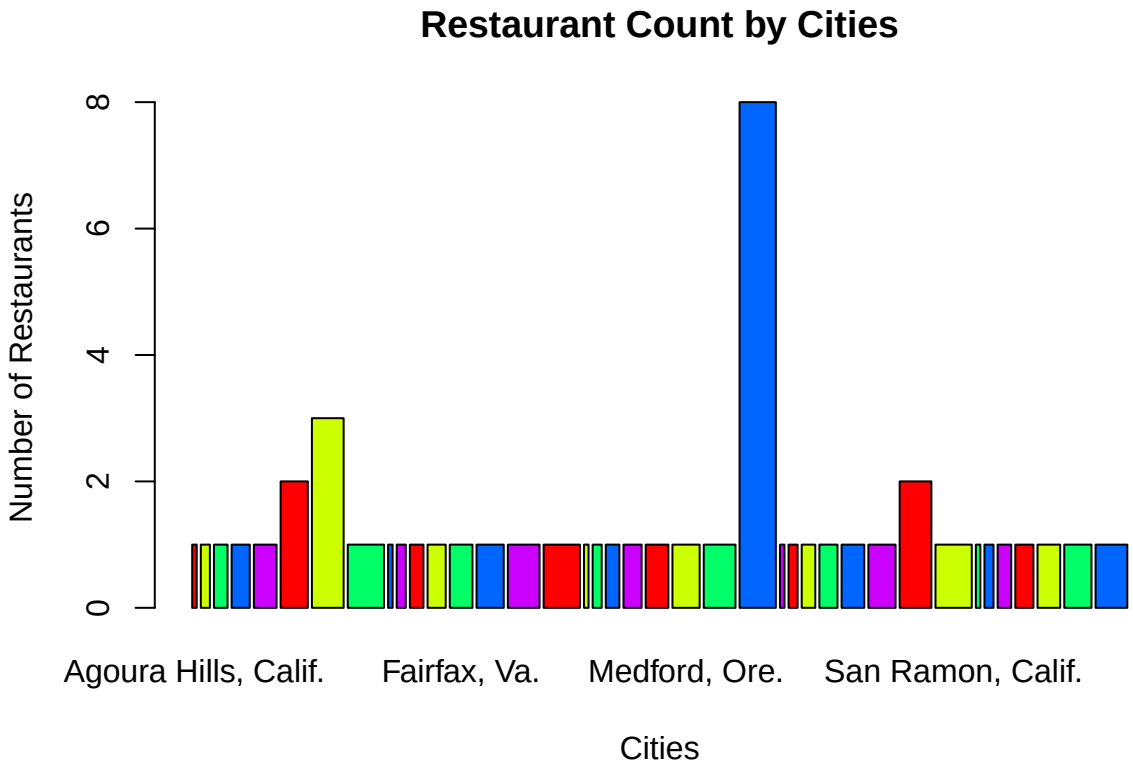
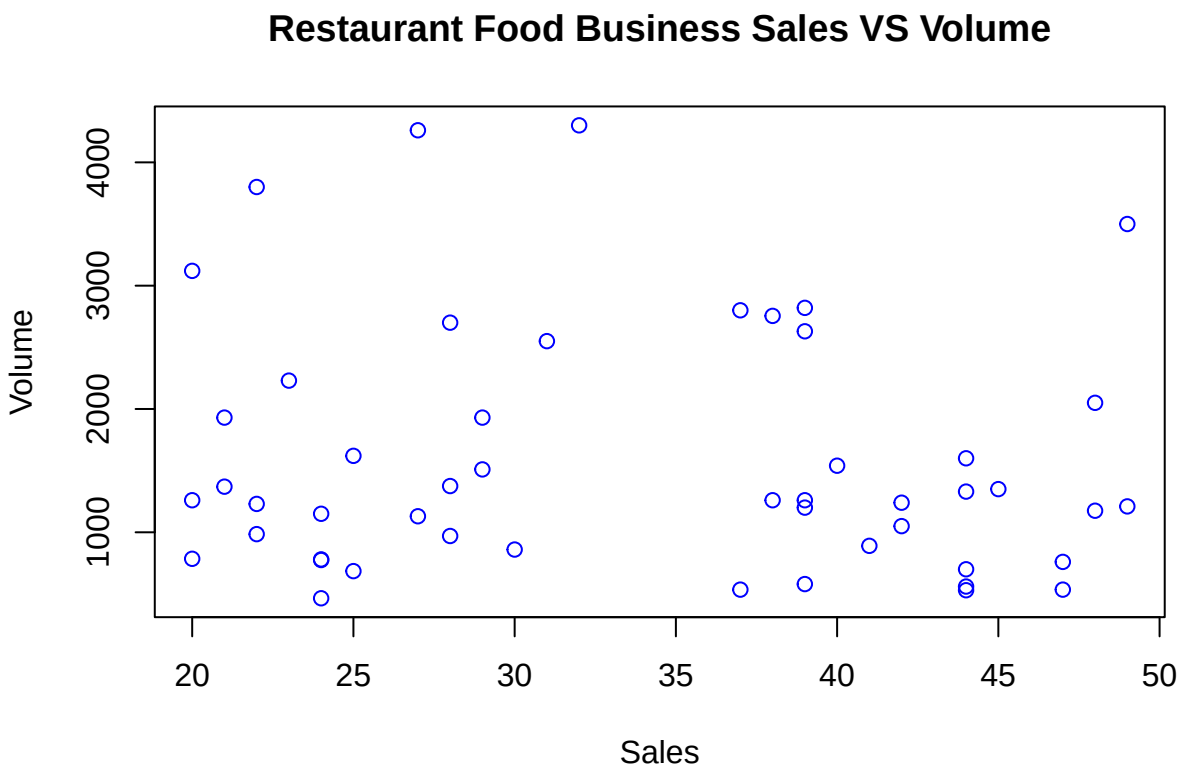

#5(i)Plot of one Quantitative Variable by considering the plot between number of restaurants in a particular city

```
location_table = table(Food_Business$Location)

barplot(location_table,1:8 ,xlab = "Cities", ylab = "Number of Restaurants", main="Restaurant Count by C
```



#5(ii) Plot of ScatterPlot indicating number of restaurants in a particular city

```
x = Food_Business$Sales
y = Food_Business$Unit_Volume

plot(x,y, xlab = "Sales", ylab = "Volume", main = "Restaurant Food Business Sales VS Volume", col = "blu
```


Restaurant Food Business Sales VS Volume
Volume
1000
2000
3000
4000
20
25
30
35
40
45
50
Sales