

R PRACTICAL

Q1 analyze the dataset

My dataset is cereal in which I analyze the cereals on the basis of their body requirement like protein calories and how much quantity of cereals we should intake in our diet and how much manufacture in different countries

Handwritten code

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Course - MCA-IB

R - Code

① Cereals Dataset

```
getwd()
```

```
setwd("C://Users/Dell/Desktop")
```

```
mydata1 <- read.csv("cereal.csv")
```

```
mydata1
```

```
install.packages("ggplot2")
```

```
library(ggplot2)
```

```
ggplot(mydata1, aes(y = mfr, x = name)) + geom_bar
```

```
(stat = "identity")
```

```
ggplot(mydata1, aes(y = mfr, x = name)) + geom_bar
```

```
(stat = "identity")
```

Analyze the dataset

```
min(mydata1$calories)
```

```
max(mydata1$protein)
```

```
mean(mydata1$sating)
```

```
quantile(mydata1$calories...)
```

```
sd(mydata1$fiber)
```

OUTPUT:-

```

> setwd("C:/Users/Dell/Desktop")
> mydata1 <- read.csv("cereals.csv")
> mydata1

```

		name	mfr	type	calories	protein	fat	sodium	fiber	carbo	sugars	potass
1		100% Bran	N	C	70	4	1	130	10.0	5.0	6	280
2		100% Natural Bran	Q	C	120	3	5	15	2.0	8.0	8	135
3		All-Bran	K	C	70	4	1	260	9.0	7.0	5	320
4		All-Bran with Extra Fiber	K	C	50	4	0	140	14.0	8.0	0	330
5		Almond Delight	R	C	110	2	2	200	1.0	14.0	8	-1
6		Apple Cinnamon Cheerios	G	C	110	2	2	180	1.5	10.5	10	70
7		Apple Jacks	K	C	110	2	0	125	1.0	11.0	14	30
8		Basic 4	G	C	130	3	2	210	2.0	18.0	8	100
9		Bran Chex	R	C	90	2	1	200	4.0	15.0	6	125
	vitamins	shelf	weight	cups								rating
1	25	3	1.00	0.33	68.40297							
2	0	3	1.00	1.00	33.98368							
3	25	3	1.00	0.33	59.42551							
4	25	3	1.00	0.50	93.70491							
5	25	3	1.00	0.75	34.38484							
6	25	1	1.00	0.75	29.50954							
7	25	2	1.00	1.00	33.17409							
8	25	3	1.33	0.75	37.03856							
9	25	1	1.00	0.67	49.12025							

R CODE

```

getwd()

setwd("C:/Users/Dell/Desktop")

mydata1 <- read.csv("cereals.csv")

mydata1

install.packages("ggplot2")

library(ggplot2)

ggplot(mydata1,aes(y=mfr,x=name))+geom_bar(stat="identity")

ggplot(mydata1,aes(y=mfr,x=name))+geom_bar(stat="identity")

ggplot(mydata1,aes(y=ratings,x=name))+geom_bar(stat="identity")

ggplot(mydata1,aes(y=rating,x=name))+geom_bar(stat="identity")

ggplot(mydata1,aes(x=name,y=mfr))+geom_boxplot()

ggplot(mydata1,aes(y="",fill=mfr,x=name))+geom_bar(width=5,stat="identity")+coord_polar("x",start=0)

ggplot(mydata1,aes(x=name,y=mfr))+geom_boxplot()

ggplot(mydata1,aes(x=name,y=rating))+geom_boxplot()

ggplot(mydata1,aes(x=name,y=mfr))+geom_point()

ggplot(mydata1,aes(x=name,y=vitamins))+geom_point()

ggplot(mydata1,aes(y=mfr,x=name,groups=rating,colour=rating))+geom_line()+geom_point()

min(mydata1$calories)

max(mydata1$protein)

mean(mydata1$rating)

quantile(mydata1$calories..)

sd(mydata1$fiber)

var(mydata1$shelf)

```

```

ggplot(mydata1,aes(y=rating,x=name))+geom_bar(stat="identity")

ggplot(mydata1,aes(y="",fill=mfr,x=name))+geom_bar(width=5,stat="identity")+coord_polar("x",start=0)

ggplot(mydata1,aes(x=name,y=rating))+geom_boxplot()

ggplot(mydata1,aes(x=name,y=vitamins))+geom_point()

mydata1 <- read.csv("cereals.csv")

ggplot(mydata1,aes(x=name,y=vitamins))+geom_point()

mydata1

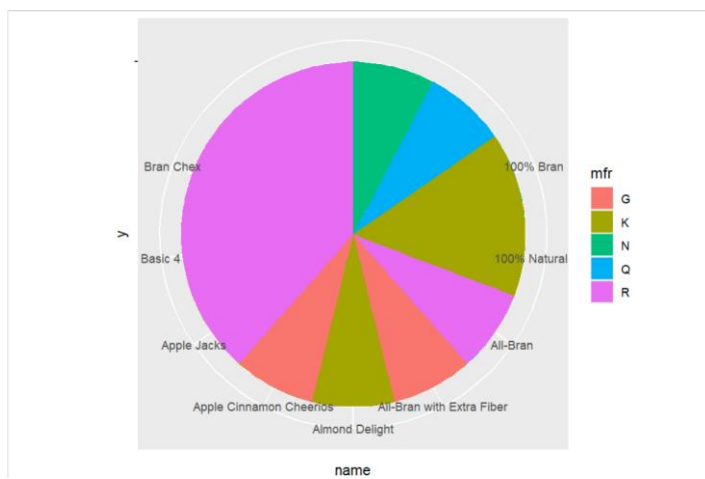
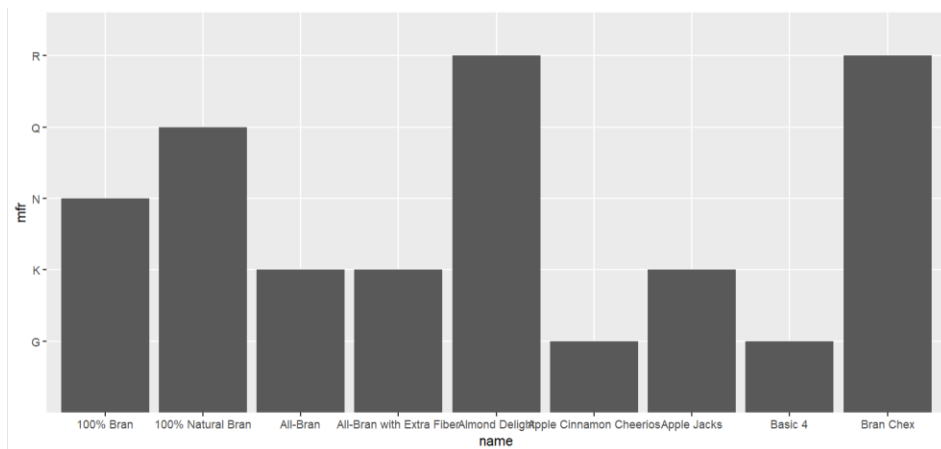
summary(mydata1)

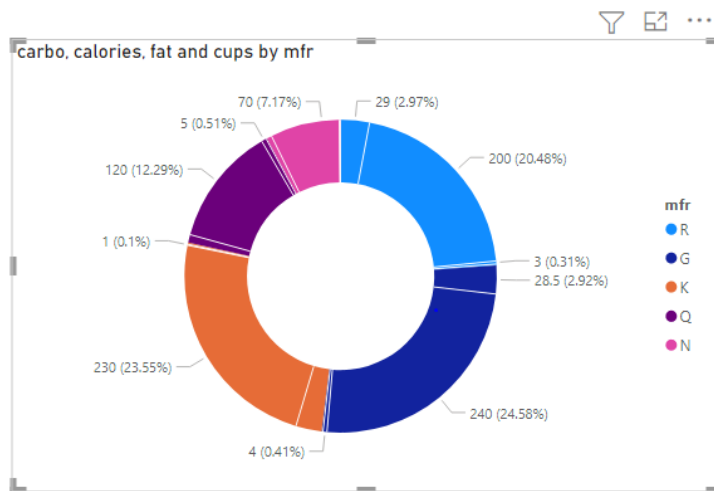
```

OUTPUT

Q2 DESCRIPTIVE STASTICS

In descriptive stastics I conclude the graphs and table of above dataset





2 INFERENCE STATISTICS

```
> min(mydata$calories)
[1] 50
> max(mydata$protein)
[1] 4
> mean(mydata$rating)
[1] 48.74937
> quantile(mydata$calories..)
 0%  25%  50%  75% 100%
NA   NA   NA   NA   NA
> sd(mydata$fiber)
[1] 4.811733
> var(mydata$shelf)
[1] 0.7777778
>
```

SUMMARY

sodium	fiber	carbo	sugars	potass	vitamins
Min. : 15.0	Min. : 1.000	Min. : 5.00	Min. : 0.000	Min. : -1.0	Min. : 0.00
1st Qu.:130.0	1st Qu.: 1.500	1st Qu.: 8.00	1st Qu.: 6.000	1st Qu.: 70.0	1st Qu.:25.00
Median :180.0	Median : 2.000	Median :10.50	Median : 8.000	Median :125.0	Median :25.00
Mean :162.2	Mean : 4.944	Mean :10.72	Mean : 7.222	Mean :154.3	Mean :22.22
3rd Qu.:200.0	3rd Qu.: 9.000	3rd Qu.:14.00	3rd Qu.: 8.000	3rd Qu.:280.0	3rd Qu.:25.00
Max. :260.0	Max. :14.000	Max. :18.00	Max. :14.000	Max. :330.0	Max. :25.00
shelf	weight	cups	rating		
Min. :1.000	Min. :1.000	Min. :0.3300	Min. :29.51		
1st Qu.:2.000	1st Qu.:1.000	1st Qu.:0.5000	1st Qu.:33.98		
Median :3.000	Median :1.000	Median :0.7500	Median :37.04		
Mean :2.444	Mean :1.037	Mean :0.6756	Mean :48.75		
3rd Qu.:3.000	3rd Qu.:1.000	3rd Qu.:0.7500	3rd Qu.:59.43		
Max. :3.000	Max. :1.330	Max. :1.0000	Max. :93.70		