FML ASSIGNMENT 1-811290653

2023-09-08

#part 1 **- importing the data

#The Source of the Data set :https://www.kaggle.com/datasets/fiq423ubf/cbse-result-statistics-class-xii-2023 (https://www.kaggle.com/datasets/fiq423ubf/cbse-result-statistics-class-xii-2023)

```
a<-read.csv("C:/Users/geeth/OneDrive/Desktop/class12-2023 (1).csv")

a
```

Class <int>	Year <int>	Region <chr>	Status <chr>	C… <int>	GOVT <int>	GOVT.AIDED <int>	INDEPENDENT <int>	JNV <int>	KV <int>
12	2023	Ajmer	Regd	0	4533	0	86178	3741	7736
12	2023	Ajmer	Appd	0	4524	0	85839	3730	7725
12	2023	Bhubaneswar	Regd	103	7746	0	69835	3823	11465
12	2023	Bhubaneswar	Appd	101	7688	0	69506	3809	11431
12	2023	Chandigarh	Regd	0	13060	55	89637	2549	5861
12	2023	Chandigarh	Appd	0	13025	55	89317	2537	5844
12	2023	Delhi East	Regd	0	100216	6420	64953	81	6669
12	2023	Delhi East	Appd	0	99566	6393	64774	81	6661
12	2023	Pune	Regd	0	1535	0	22801	1673	4859
12	2023	Pune	Appd	0	1534	0	22742	1662	4849

1-10 of 32 rows Previous **1** 2 3 4 Next

#part 2 **-descriptive statistics for quantitative variables

```
summary(a)
```

```
##      Class          Year         Region             Status
##  Min.   :12   Min.   :2023   Length:32          Length:32
##  1st Qu.:12   1st Qu.:2023   Class :character   Class :character
##  Median :12   Median :2023   Mode  :character   Mode  :character
##  Mean   :12   Mean   :2023
##  3rd Qu.:12   3rd Qu.:2023
##  Max.   :12   Max.   :2023
##       CTSA             GOVT            GOVT.AIDED      INDEPENDENT
##  Min.   :  0.00   Min.   :    70.0   Min.   :   0.0   Min.   : 12214
##  1st Qu.:  0.00   1st Qu.:   337.2   1st Qu.:   0.0   1st Qu.: 38593
##  Median :  0.00   Median :  2346.5   Median :   0.0   Median : 66327
##  Mean   : 24.72   Mean   : 14191.1   Mean   : 954.0   Mean   : 66485
##  3rd Qu.:  9.50   3rd Qu.:  9065.8   3rd Qu.:  66.5   3rd Qu.: 86963
##  Max.   :164.00   Max.   :100216.0   Max.   :7775.0   Max.   :131729
##       JNV             KV
##  Min.   :  65   Min.   : 2361
##  1st Qu.:1105   1st Qu.: 4147
##  Median :2063   Median : 5626
##  Mean   :2240   Mean   : 5780
##  3rd Qu.:3647   3rd Qu.: 6966
##  Max.   :4536   Max.   :11465
```

```
mean(a$KV)
```

```
## [1] 5780.406
```

```
median(a$KV)
```

```
## [1] 5626.5
```

```
sum(a$KV)
```

```
## [1] 184973
```

```
sd(a$KV)
```

```
## [1] 2332.043
```

```
var(a$KV)
```

```
## [1] 5438427
```

```
max(a$KV)
```

```
## [1] 11465
```

```
min(a$KV)
```

```
## [1] 2361
```

```
str(a$KV)
```

```
##  int [1:32] 7736 7725 11465 11431 5861 5844 6669 6661 4859 4849 ...
```

#part 3 **- descriptive statistics for categorical variables

```
table(a$Status)
```

```
##
## Appd Regd
##   16   16
```

```
a$Status
```

```
##  [1] "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd"
## [11] "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd"
## [21] "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd"
## [31] "Regd" "Appd"
```

```
table(a$Region)
```

```
##
##       Ajmer   Bengaluru      Bhopal Bhubaneswar  Chandigarh     Chennai
##           2           2           2           2           2           2
##    Dehradun  Delhi East  Delhi West    Guwahati       Noida   Panchkula
##           2           2           2           2           2           2
##       Patna   Prayagraj        Pune  Trivandrum
##           2           2           2           2
```

```
str(a$Status)
```

```
##  chr [1:32] "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" "Appd" "Regd" ...
```

#part 4 - transforming the variables

```
log(a$KV)
```

```
##  [1] 8.953640 8.952217 9.347054 9.344084 8.676076 8.673171 8.805225 8.804025
##  [9] 8.488588 8.486528 8.711279 8.707318 8.192847 8.190632 7.767687 7.766841
## [17] 8.962776 8.961109 8.811801 8.810012 8.407378 8.405367 8.595820 8.593784
## [25] 9.068777 9.067163 8.206856 8.205492 8.369157 8.367997 7.962764 7.962764
```

```
log(a$CTSA)
```

```
##  [1]     -Inf     -Inf 4.634729 4.615121     -Inf     -Inf     -Inf     -Inf
##  [9]     -Inf     -Inf     -Inf     -Inf 3.637586 3.637586 4.532599 4.521789
## [17]     -Inf     -Inf     -Inf     -Inf     -Inf     -Inf     -Inf     -Inf
## [25]     -Inf     -Inf     -Inf     -Inf 5.099866 5.087596     -Inf     -Inf
```

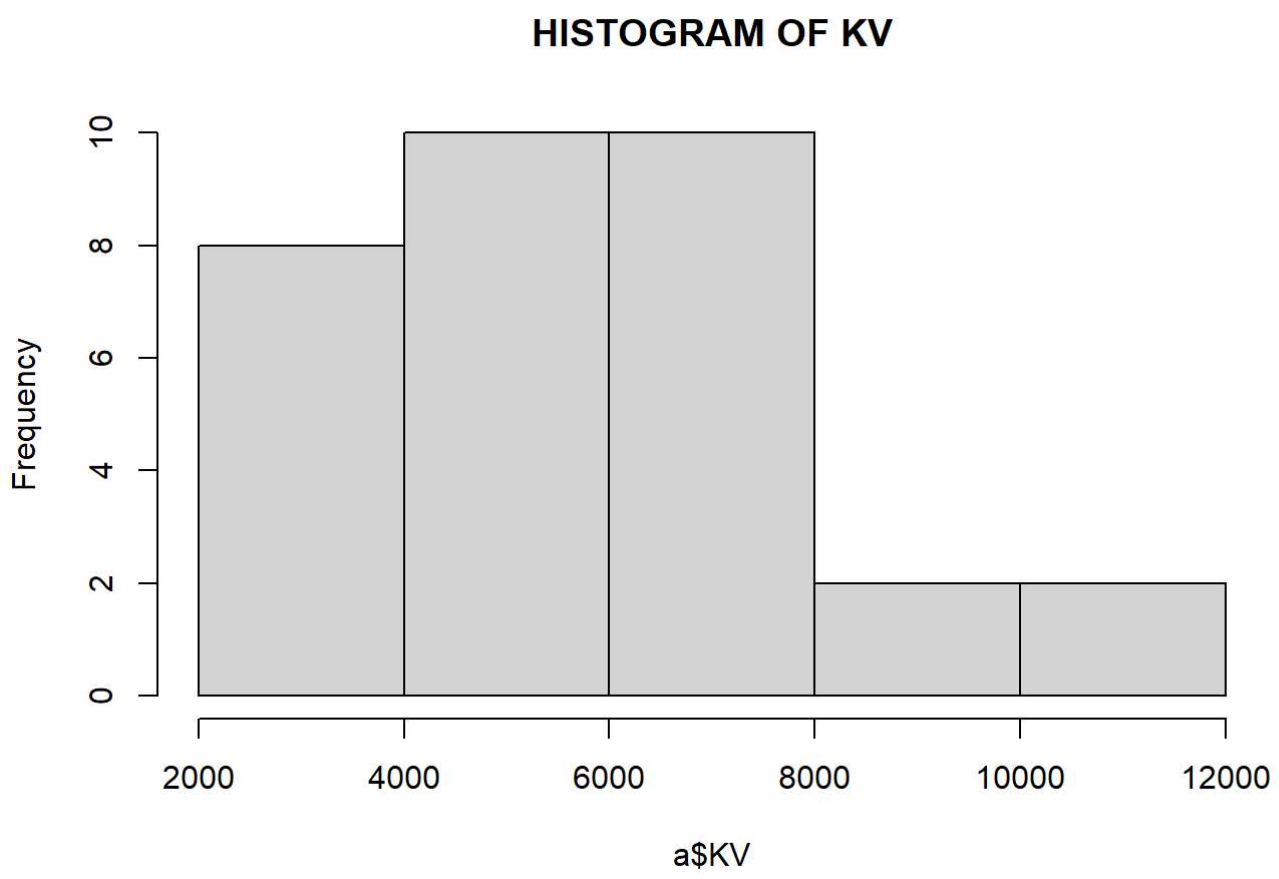
```
 b<-a$INDEPENDENT-mean(a$INDEPENDENT)/sd(a$INDEPENDENT)

 b
```

```
##  [1]  86176.05  85837.05  69833.05  69504.05  89635.05  89315.05  64951.05
##  [8]  64772.05  22799.05  22740.05  20766.05  20599.05 118673.05 118044.05
## [15]  12260.05  12212.05  60350.05  60134.05  67797.05  67698.05 100686.05
## [22]  99744.05  84714.05  83960.05 131727.05 130261.05  33498.05  33460.05
## [29]  62471.05  62092.05  40459.05  40289.05
```

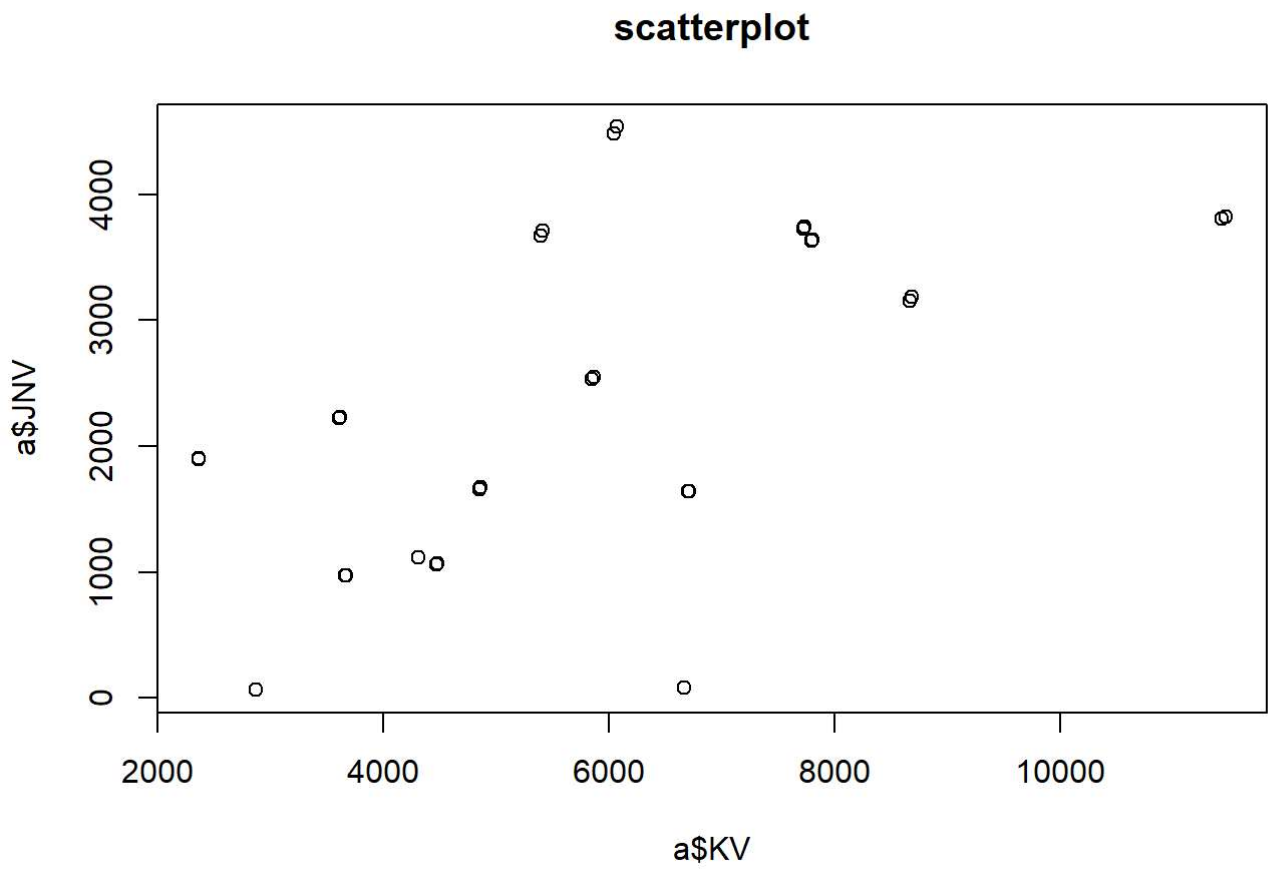
#part 5 - plotting the one variables

```
hist(a$KV,main="HISTOGRAM OF KV")
```



#part 6- scatterplot

```
plot(a$KV,a$JNV,main="scatterplot")
```


scatterplot
a$JNV
0
1000
2000
3000
4000
2000
4000
6000
8000
10000
a$KV

``