Exercise set 3. Introduction to R

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```
setwd("F:/INTERMATH/intermath 2021-2023/spain/DV/Ex3")

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#ex-3.1
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v ggplot2 3.3.6      v purrr   0.3.5
## v tibble  3.1.8      v dplyr   1.0.10
## v tidyr   1.2.1      v stringr 1.4.1
## v readr   2.1.3      v forcats 0.5.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

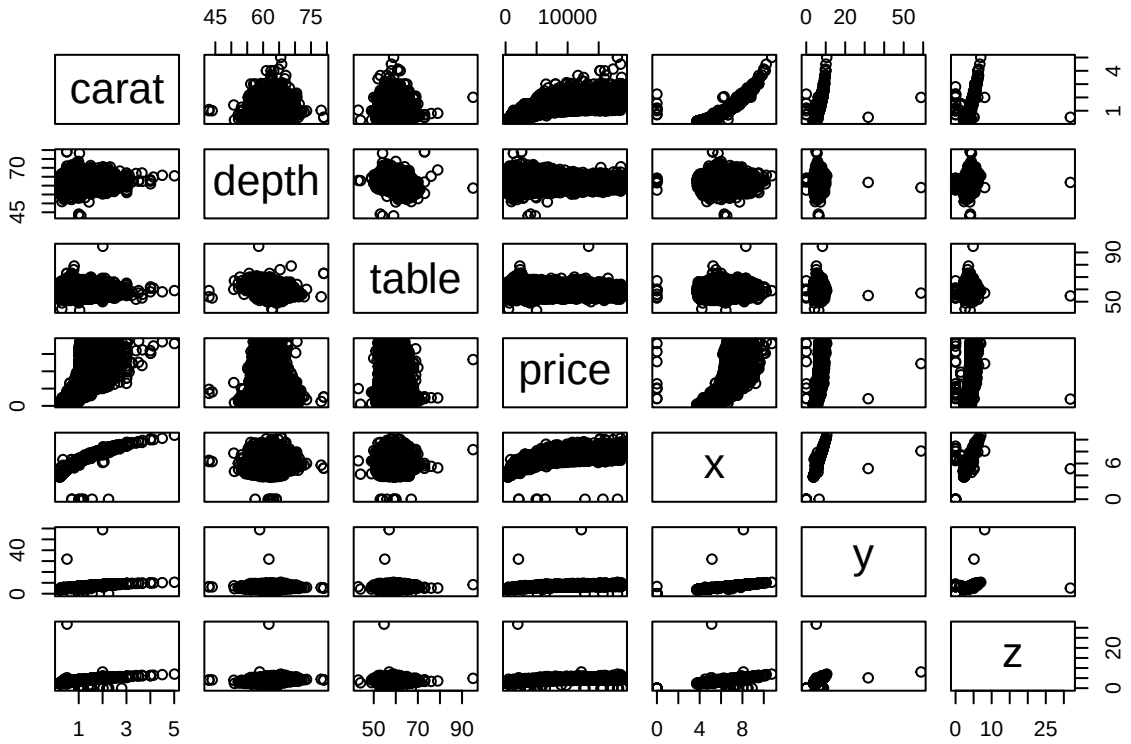
```
diamonds
```

```
## # A tibble: 53,940 x 10
##    carat cut       color clarity depth table price     x     y     z
##    <dbl> <ord>     <ord> <ord>   <dbl> <dbl> <int> <dbl> <dbl> <dbl>
##  1  0.23 Ideal     E     SI2      61.5    55   326  3.95  3.98  2.43
##  2  0.21 Premium   E     SI1      59.8    61   326  3.89  3.84  2.31
##  3  0.23 Good      E     VS1      56.9    65   327  4.05  4.07  2.31
##  4  0.29 Premium   I     VS2      62.4    58   334  4.2   4.23  2.63
##  5  0.31 Good      J     SI2      63.3    58   335  4.34  4.35  2.75
##  6  0.24 Very Good J     VVS2     62.8    57   336  3.94  3.96  2.48
##  7  0.24 Very Good I     VVS1     62.3    57   336  3.95  3.98  2.47
##  8  0.26 Very Good H     SI1      61.9    55   337  4.07  4.11  2.53
##  9  0.22 Fair      E     VS2      65.1    61   337  3.87  3.78  2.49
## 10  0.23 Very Good H     VS1      59.4    61   338  4     4.05  2.39
## # ... with 53,930 more rows
```

```
print(is.factor(diamonds$color))
```

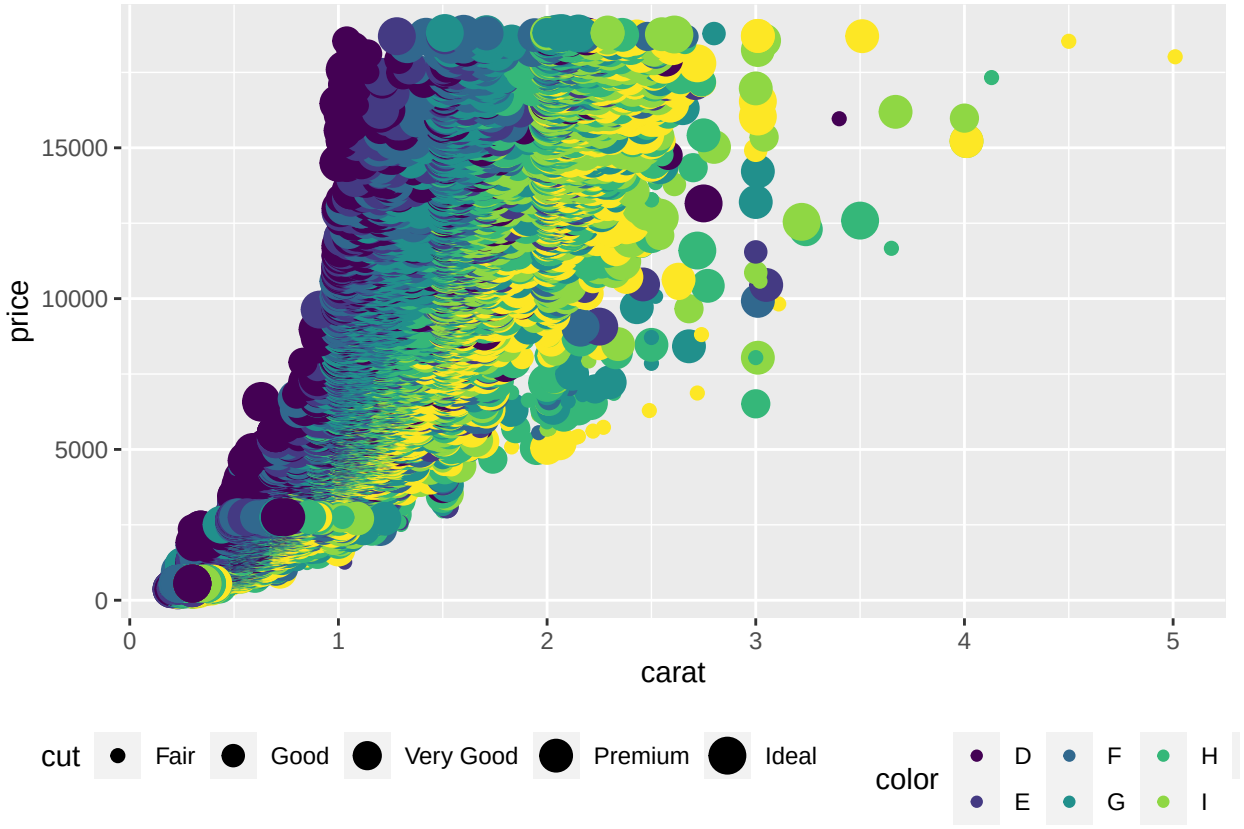
```
## [1] TRUE
```

```
pairs(diamonds[,c(1,5,6,7,8,9,10)]) #pairs function gives a
```

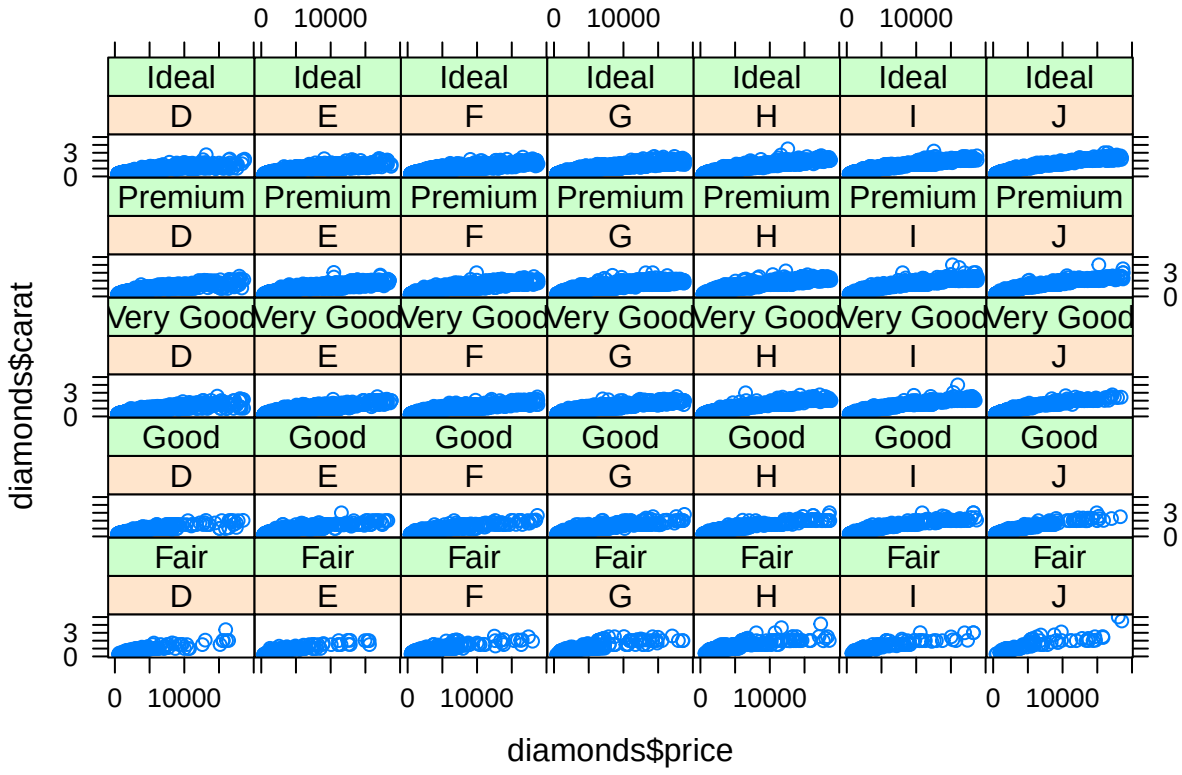



```
#matrix of scatterplots to show the pairwise
#relationship between different variables in a dataset
#price and carat, carat and x,y,z etc are more correlated

library(ggplot2)
ggplot(data = diamonds,
       aes(x=carat, y=price, color=color, size=cut))+
  geom_point()+
  theme(legend.position="bottom")
```




```
library(lattice)
xyplot(diamonds$carat~diamonds$price|diamonds$color*diamonds$cut)
```


Ideal
Premium
Very Good
Good
Fair
D
E
F
G
H
I
J
0
10000
3
0
diamonds$carat
diamonds$price