MtCars

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PART 0: SETUP

echo settings for embedding code

Setting Directory

```
getwd()
```

```
## [1] "C:/Dhruv/Applying/3_interviewing/2021/4_April/wk1/Morning Consult/Assessment/DATA_ANALYST_EXERCI
```

```
setwd("C:/Dhruv/Applying/3_interviewing/2021/4_April/wk1/Morning Consult/Assessment/DATA_ANALYST_EXERCIS

# loading packages
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.0.5
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyr)
```

```
## Warning: package 'tidyr' was built under R version 4.0.5
```

```
library(ggplot2)
```

PART I: PREPROCESSING DATA

Reading in mtcars data:

```
data("mtcars")
head(mtcars)
```

```
##                    mpg cyl disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4         21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag     21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710        22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive    21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout 18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
## Valiant           18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

String extraction: make column

```
# converting row names to column
mtcars$make_model <- row.names(mtcars)

# extracting car make from make_model
mtcars$make <- gsub("([A-Za-z]+).*", "\\1", mtcars$make_model)
```

PART II: TABULATING

Summarizing mpg using tapply:

```
# creating summarizing by each make
tapply(mtcars$mpg, mtcars$make, mean)
```

```
##      AMC Cadillac   Camaro Chrysler   Datsun    Dodge   Duster  Ferrari
## 15.20000 10.40000 13.30000 14.70000 22.80000 15.50000 14.30000 19.70000
##     Fiat     Ford    Honda   Hornet  Lincoln    Lotus Maserati    Mazda
## 29.85000 15.80000 30.40000 20.05000 10.40000 30.40000 15.00000 21.00000
##     Merc  Pontiac  Porsche   Toyota  Valiant    Volvo
## 19.01429 19.20000 26.00000 27.70000 18.10000 21.40000
```

PART III: CONCLUSION

```
# knitting results to pdf
install.packages('tinytex', repos='http://cran.us.r-project.org')
```

```
## Installing package into 'C:/Users/drewn/OneDrive/Documents/R/win-library/4.0'
## (as 'lib' is unspecified)
```

```
## package 'tinytex' successfully unpacked and MD5 sums checked
##
## The downloaded binary packages are in
##  C:\Users\drewn\AppData\Local\Temp\RtmpIPdnHR\downloaded_packages
```

```
tinytex::install_tinytex()

tinytex:::is_tinytex()
```

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