wk_5_hw

Mrinal Vashisth

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```
## Please ignore this, just checking if R has required packages

list.of.packages <- c("magritter", "dplyr")
new.packages <- list.of.packages[!(list.of.packages %in% installed.packages()[,"Package"])]
if(length(new.packages)) install.packages(new.packages)
```

```
## Installing package into '/home/manu/R/x86_64-pc-linux-gnu-library/3.5'
## (as 'lib' is unspecified)
```

```
## Warning: package 'magritter' is not available (for R version 3.5.3)
```

```
################################################################

library(magrittr)
library(dplyr)
```

```
##
## 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
```

```
chop_it_using_pipes <- function(new_data, rows, cols){

  stat_new_data <- function(inp_vector){
    if (is.numeric(inp_vector)){
      return(mean(inp_vector))
    } else{
      return(table(inp_vector))
    }
  }

  data <- new_data[rows, cols]
  new_data %<>% lapply(stat_new_data) %<>% list()

  list(data, new_data)
}

# Testing the functions
data <- mtcars
df_1 <- chop_it_using_pipes(mtcars)

df_1
```

```
## [[1]]
##                      mpg cyl  disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4           21.0   6 160.0 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag       21.0   6 160.0 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710          22.8   4 108.0  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive      21.4   6 258.0 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout   18.7   8 360.0 175 3.15 3.440 17.02  0  0    3    2
## Valiant             18.1   6 225.0 105 2.76 3.460 20.22  1  0    3    1
## Duster 360          14.3   8 360.0 245 3.21 3.570 15.84  0  0    3    4
## Merc 240D           24.4   4 146.7  62 3.69 3.190 20.00  1  0    4    2
## Merc 230            22.8   4 140.8  95 3.92 3.150 22.90  1  0    4    2
## Merc 280            19.2   6 167.6 123 3.92 3.440 18.30  1  0    4    4
## Merc 280C           17.8   6 167.6 123 3.92 3.440 18.90  1  0    4    4
## Merc 450SE          16.4   8 275.8 180 3.07 4.070 17.40  0  0    3    3
## Merc 450SL          17.3   8 275.8 180 3.07 3.730 17.60  0  0    3    3
## Merc 450SLC         15.2   8 275.8 180 3.07 3.780 18.00  0  0    3    3
## Cadillac Fleetwood  10.4   8 472.0 205 2.93 5.250 17.98  0  0    3    4
## Lincoln Continental 10.4   8 460.0 215 3.00 5.424 17.82  0  0    3    4
## Chrysler Imperial   14.7   8 440.0 230 3.23 5.345 17.42  0  0    3    4
## Fiat 128            32.4   4  78.7  66 4.08 2.200 19.47  1  1    4    1
## Honda Civic         30.4   4  75.7  52 4.93 1.615 18.52  1  1    4    2
## Toyota Corolla      33.9   4  71.1  65 4.22 1.835 19.90  1  1    4    1
## Toyota Corona       21.5   4 120.1  97 3.70 2.465 20.01  1  0    3    1
## Dodge Challenger    15.5   8 318.0 150 2.76 3.520 16.87  0  0    3    2
## AMC Javelin         15.2   8 304.0 150 3.15 3.435 17.30  0  0    3    2
## Camaro Z28          13.3   8 350.0 245 3.73 3.840 15.41  0  0    3    4
## Pontiac Firebird    19.2   8 400.0 175 3.08 3.845 17.05  0  0    3    2
## Fiat X1-9           27.3   4  79.0  66 4.08 1.935 18.90  1  1    4    1
## Porsche 914-2       26.0   4 120.3  91 4.43 2.140 16.70  0  1    5    2
## Lotus Europa        30.4   4  95.1 113 3.77 1.513 16.90  1  1    5    2
## Ford Pantera L      15.8   8 351.0 264 4.22 3.170 14.50  0  1    5    4
## Ferrari Dino        19.7   6 145.0 175 3.62 2.770 15.50  0  1    5    6
## Maserati Bora       15.0   8 301.0 335 3.54 3.570 14.60  0  1    5    8
## Volvo 142E          21.4   4 121.0 109 4.11 2.780 18.60  1  1    4    2
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]]$mpg
## [1] 20.09062
##
## [[2]][[1]]$cyl
## [1] 6.1875
##
## [[2]][[1]]$disp
## [1] 230.7219
##
## [[2]][[1]]$hp
## [1] 146.6875
##
## [[2]][[1]]$drat
## [1] 3.596563
##
## [[2]][[1]]$wt
## [1] 3.21725
##
## [[2]][[1]]$qsec
## [1] 17.84875
##
## [[2]][[1]]$vs
## [1] 0.4375
##
## [[2]][[1]]$am
## [1] 0.40625
##
## [[2]][[1]]$gear
## [1] 3.6875
##
## [[2]][[1]]$carb
## [1] 2.8125
```

```
# chop it from 9 to 5
df_2 <- chop_it_using_pipes(mtcars, rows = 9: nrow(mtcars), cols = 1: 5)

df_2
```

```
## [[1]]
##                      mpg cyl  disp  hp drat
## Merc 230            22.8   4 140.8  95 3.92
## Merc 280            19.2   6 167.6 123 3.92
## Merc 280C           17.8   6 167.6 123 3.92
## Merc 450SE          16.4   8 275.8 180 3.07
## Merc 450SL          17.3   8 275.8 180 3.07
## Merc 450SLC         15.2   8 275.8 180 3.07
## Cadillac Fleetwood  10.4   8 472.0 205 2.93
## Lincoln Continental 10.4   8 460.0 215 3.00
## Chrysler Imperial   14.7   8 440.0 230 3.23
## Fiat 128            32.4   4  78.7  66 4.08
## Honda Civic         30.4   4  75.7  52 4.93
## Toyota Corolla      33.9   4  71.1  65 4.22
## Toyota Corona       21.5   4 120.1  97 3.70
## Dodge Challenger    15.5   8 318.0 150 2.76
## AMC Javelin         15.2   8 304.0 150 3.15
## Camaro Z28          13.3   8 350.0 245 3.73
## Pontiac Firebird    19.2   8 400.0 175 3.08
## Fiat X1-9           27.3   4  79.0  66 4.08
## Porsche 914-2       26.0   4 120.3  91 4.43
## Lotus Europa        30.4   4  95.1 113 3.77
## Ford Pantera L      15.8   8 351.0 264 4.22
## Ferrari Dino        19.7   6 145.0 175 3.62
## Maserati Bora       15.0   8 301.0 335 3.54
## Volvo 142E          21.4   4 121.0 109 4.11
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]]$mpg
## [1] 20.09062
##
## [[2]][[1]]$cyl
## [1] 6.1875
##
## [[2]][[1]]$disp
## [1] 230.7219
##
## [[2]][[1]]$hp
## [1] 146.6875
##
## [[2]][[1]]$drat
## [1] 3.596563
##
## [[2]][[1]]$wt
## [1] 3.21725
##
## [[2]][[1]]$qsec
## [1] 17.84875
##
## [[2]][[1]]$vs
## [1] 0.4375
##
## [[2]][[1]]$am
## [1] 0.40625
##
## [[2]][[1]]$gear
## [1] 3.6875
##
## [[2]][[1]]$carb
## [1] 2.8125
```

```
# chop it 24 7
df_3 <- chop_it_using_pipes(mtcars, rows = 24: nrow(mtcars), cols = 7: ncol(mtcars))

df_3
```

```
## [[1]]
##                  qsec vs am gear carb
## Camaro Z28       15.41  0  0    3    4
## Pontiac Firebird 17.05  0  0    3    2
## Fiat X1-9        18.90  1  1    4    1
## Porsche 914-2    16.70  0  1    5    2
## Lotus Europa     16.90  1  1    5    2
## Ford Pantera L   14.50  0  1    5    4
## Ferrari Dino     15.50  0  1    5    6
## Maserati Bora    14.60  0  1    5    8
## Volvo 142E       18.60  1  1    4    2
##
## [[2]]
## [[2]][[1]]
## [[2]][[1]]$mpg
## [1] 20.09062
##
## [[2]][[1]]$cyl
## [1] 6.1875
##
## [[2]][[1]]$disp
## [1] 230.7219
##
## [[2]][[1]]$hp
## [1] 146.6875
##
## [[2]][[1]]$drat
## [1] 3.596563
##
## [[2]][[1]]$wt
## [1] 3.21725
##
## [[2]][[1]]$qsec
## [1] 17.84875
##
## [[2]][[1]]$vs
## [1] 0.4375
##
## [[2]][[1]]$am
## [1] 0.40625
##
## [[2]][[1]]$gear
## [1] 3.6875
##
## [[2]][[1]]$carb
## [1] 2.8125
```