ASSEMENT 3

1.

dim(mtcars)

2.

summary(mtcars)

3.

str(mtcars)

4.

aggregate(wt ~ vs,data = mtcars,mean)

5.

library(dplyr)

mtcars %>%

group\_by(vs) %>%

summarise(min\_wt = min(wt), max\_wt = max(wt))

6.

library(ggplot2)

data=mtcars

7.

horsepower vs mileage scatter plot factor by Engine Shape

ggplot(data, aes(x=mpg, y=hp, color=vs)) +

geom\_point() + ggtitle("Mileage vs Horsepower by Engine Shape")

8.

histogram plot of horsepower with bin-width of 5

ggplot(data, aes(x=hp)) +

geom\_histogram(binwidth=5) +

ggtitle("Horsepower Histogram with Bin Width of 5")

OUTPUTS

dim(mtcars)

[1] 32 11

> summary(mtcars)

mpg cyl

Min. :10.40 Min. :4.000

1st Qu.:15.43 1st Qu.:4.000

Median :19.20 Median :6.000

Mean :20.09 Mean :6.188

3rd Qu.:22.80 3rd Qu.:8.000

Max. :33.90 Max. :8.000

disp hp

Min. : 71.1 Min. : 52.0

1st Qu.:120.8 1st Qu.: 96.5

Median :196.3 Median :123.0

Mean :230.7 Mean :146.7

3rd Qu.:326.0 3rd Qu.:180.0

Max. :472.0 Max. :335.0

drat wt

Min. :2.760 Min. :1.513

1st Qu.:3.080 1st Qu.:2.581

Median :3.695 Median :3.325

Mean :3.597 Mean :3.217

3rd Qu.:3.920 3rd Qu.:3.610

Max. :4.930 Max. :5.424

qsec vs

Min. :14.50 Min. :0.0000

1st Qu.:16.89 1st Qu.:0.0000

Median :17.71 Median :0.0000

Mean :17.85 Mean :0.4375

3rd Qu.:18.90 3rd Qu.:1.0000

Max. :22.90 Max. :1.0000

am gear

Min. :0.0000 Min. :3.000

1st Qu.:0.0000 1st Qu.:3.000

Median :0.0000 Median :4.000

Mean :0.4062 Mean :3.688

3rd Qu.:1.0000 3rd Qu.:4.000

Max. :1.0000 Max. :5.000

carb

Min. :1.000

1st Qu.:2.000

Median :2.000

Mean :2.812

3rd Qu.:4.000

Max. :8.000

> str(mtcars)

'data.frame': 32 obs. of 11 variables:

$ mpg : num 21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...

$ cyl : num 6 6 4 6 8 6 8 4 4 6 ...

$ disp: num 160 160 108 258 360 ...

$ hp : num 110 110 93 110 175 105 245 62 95 123 ...

$ drat: num 3.9 3.9 3.85 3.08 3.15 2.76 3.21 3.69 3.92 3.92 ...

$ wt : num 2.62 2.88 2.32 3.21 3.44 ...

$ qsec: num 16.5 17 18.6 19.4 17 ...

$ vs : num 0 0 1 1 0 1 0 1 1 1 ...

$ am : num 1 1 1 0 0 0 0 0 0 0 ...

$ gear: num 4 4 4 3 3 3 3 4 4 4 ...

$ carb: num 4 4 1 1 2 1 4 2 2 4 ...

> aggregate(wt ~ vs,data = mtcars,mean)

vs wt

1 0 3.688556

2 1 2.611286

> mtcars %>%

+ group\_by(vs) %>%

+ summarise(min\_wt = min(wt), max\_wt = max(wt))

Error in mtcars %>% group\_by(vs) %>% summarise(min\_wt = min(wt), max\_wt = max(wt)) :

could not find function "%>%"

> 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

> mtcars %>%

+ group\_by(vs) %>%

+ summarise(min\_wt = min(wt), max\_wt = max(wt))

# A tibble: 2 × 3

vs min\_wt max\_wt

<dbl> <dbl> <dbl>

1 0 2.14 5.42

2 1 1.51 3.46

> library(ggplot2)

Need help getting started? Try the R

Graphics Cookbook:

https://r-graphics.org

> data=mtcars

> horsepower vs mileage scatter plot factor by Engine Shape

Error: unexpected symbol in "horsepower vs"

> histogram plot of horsepower with bin-width of 5

Error: unexpected symbol in "histogram plot