> install.packages("dplyr")

Installing package into ‘/cloud/lib/x86\_64-pc-linux-gnu-library/4.1’

(as ‘lib’ is unspecified)

also installing the dependencies ‘ellipsis’, ‘fansi’, ‘pkgconfig’, ‘purrr’, ‘cli’, ‘crayon’, ‘utf8’, ‘generics’, ‘glue’, ‘lifecycle’, ‘magrittr’, ‘R6’, ‘rlang’, ‘tibble’, ‘tidyselect’, ‘vctrs’, ‘pillar’

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/ellipsis\_0.3.2.tar.gz'

Content type 'application/x-gzip' length 40343 bytes (39 KB)

==================================================

downloaded 39 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/fansi\_1.0.3.tar.gz'

Content type 'application/x-gzip' length 413768 bytes (404 KB)

==================================================

downloaded 404 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/pkgconfig\_2.0.3.tar.gz'

Content type 'application/x-gzip' length 17554 bytes (17 KB)

==================================================

downloaded 17 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/purrr\_0.3.4.tar.gz'

Content type 'application/x-gzip' length 427619 bytes (417 KB)

==================================================

downloaded 417 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/cli\_3.2.0.tar.gz'

Content type 'application/x-gzip' length 1164656 bytes (1.1 MB)

==================================================

downloaded 1.1 MB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/crayon\_1.5.1.tar.gz'

Content type 'application/x-gzip' length 156487 bytes (152 KB)

==================================================

downloaded 152 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/utf8\_1.2.2.tar.gz'

Content type 'application/x-gzip' length 236501 bytes (230 KB)

==================================================

downloaded 230 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/generics\_0.1.2.tar.gz'

Content type 'application/x-gzip' length 75797 bytes (74 KB)

==================================================

downloaded 74 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/glue\_1.6.2.tar.gz'

Content type 'application/x-gzip' length 157042 bytes (153 KB)

==================================================

downloaded 153 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/lifecycle\_1.0.1.tar.gz'

Content type 'application/x-gzip' length 105603 bytes (103 KB)

==================================================

downloaded 103 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/magrittr\_2.0.3.tar.gz'

Content type 'application/x-gzip' length 234321 bytes (228 KB)

==================================================

downloaded 228 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/R6\_2.5.1.tar.gz'

Content type 'application/x-gzip' length 82307 bytes (80 KB)

==================================================

downloaded 80 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/rlang\_1.0.2.tar.gz'

Content type 'application/x-gzip' length 1912199 bytes (1.8 MB)

==================================================

downloaded 1.8 MB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/tibble\_3.1.6.tar.gz'

Content type 'application/x-gzip' length 854243 bytes (834 KB)

==================================================

downloaded 834 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/tidyselect\_1.1.2.tar.gz'

Content type 'application/x-gzip' length 201688 bytes (196 KB)

==================================================

downloaded 196 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/vctrs\_0.4.0.tar.gz'

Content type 'application/x-gzip' length 2140158 bytes (2.0 MB)

==================================================

downloaded 2.0 MB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/pillar\_1.7.0.tar.gz'

Content type 'application/x-gzip' length 744998 bytes (727 KB)

==================================================

downloaded 727 KB

trying URL 'http://rspm/default/\_\_linux\_\_/focal/latest/src/contrib/dplyr\_1.0.8.tar.gz'

Content type 'application/x-gzip' length 1288121 bytes (1.2 MB)

==================================================

downloaded 1.2 MB

\* installing \*binary\* package ‘fansi’ ...

\* DONE (fansi)

\* installing \*binary\* package ‘pkgconfig’ ...

\* DONE (pkgconfig)

\* installing \*binary\* package ‘crayon’ ...

\* DONE (crayon)

\* installing \*binary\* package ‘utf8’ ...

\* DONE (utf8)

\* installing \*binary\* package ‘generics’ ...

\* DONE (generics)

\* installing \*binary\* package ‘glue’ ...

\* DONE (glue)

\* installing \*binary\* package ‘magrittr’ ...

\* DONE (magrittr)

\* installing \*binary\* package ‘R6’ ...

\* DONE (R6)

\* installing \*binary\* package ‘rlang’ ...

\* DONE (rlang)

\* installing \*binary\* package ‘ellipsis’ ...

\* DONE (ellipsis)

\* installing \*binary\* package ‘purrr’ ...

\* DONE (purrr)

\* installing \*binary\* package ‘cli’ ...

\* DONE (cli)

\* installing \*binary\* package ‘lifecycle’ ...

\* DONE (lifecycle)

\* installing \*binary\* package ‘vctrs’ ...

\* DONE (vctrs)

\* installing \*binary\* package ‘tidyselect’ ...

\* DONE (tidyselect)

\* installing \*binary\* package ‘pillar’ ...

\* DONE (pillar)

\* installing \*binary\* package ‘tibble’ ...

\* DONE (tibble)

\* installing \*binary\* package ‘dplyr’ ...

\* DONE (dplyr)

The downloaded source packages are in

‘/tmp/RtmpOIvliW/downloaded\_packages’

> 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

> data("mtcars")

> data("iris")

> mydata<-mtcars

> mydata

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

> mynewdata<-

+

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+

+

+

+

+ >mynewdata<-tbl\_df(mydata)

Error: unexpected '>' in:

"

>"

> mynewdata<-tbl\_df(mydata)

Warning message:

`tbl\_df()` was deprecated in dplyr 1.0.0.

Please use `tibble::as\_tibble()` instead.

This warning is displayed once every 8 hours.

Call `lifecycle::last\_lifecycle\_warnings()` to see where this warning was generated.

> mynewdata

# A tibble: 32 × 11

mpg cyl disp hp drat wt qsec vs am gear carb

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>*

1 21 6 160 110 3.9 2.62 16.5 0 1 4 4

2 21 6 160 110 3.9 2.88 17.0 0 1 4 4

3 22.8 4 108 93 3.85 2.32 18.6 1 1 4 1

4 21.4 6 258 110 3.08 3.22 19.4 1 0 3 1

5 18.7 8 360 175 3.15 3.44 17.0 0 0 3 2

6 18.1 6 225 105 2.76 3.46 20.2 1 0 3 1

7 14.3 8 360 245 3.21 3.57 15.8 0 0 3 4

8 24.4 4 147. 62 3.69 3.19 20 1 0 4 2

9 22.8 4 141. 95 3.92 3.15 22.9 1 0 4 2

10 19.2 6 168. 123 3.92 3.44 18.3 1 0 4 4

# … with 22 more rows

> myirisdata<-tbl\_df(iris)

> myirisdata

# A tibble: 150 × 5

Sepal.Length Sepal.Width Petal.Length Petal.Width Species

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<fct>*

1 5.1 3.5 1.4 0.2 setosa

2 4.9 3 1.4 0.2 setosa

3 4.7 3.2 1.3 0.2 setosa

4 4.6 3.1 1.5 0.2 setosa

5 5 3.6 1.4 0.2 setosa

6 5.4 3.9 1.7 0.4 setosa

7 4.6 3.4 1.4 0.3 setosa

8 5 3.4 1.5 0.2 setosa

9 4.4 2.9 1.4 0.2 setosa

10 4.9 3.1 1.5 0.1 setosa

# … with 140 more rows

> filter(mynewdata,cyl>4&gear>4)

# A tibble: 3 × 11

mpg cyl disp hp drat wt qsec vs am gear carb

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>*

1 15.8 8 351 264 4.22 3.17 14.5 0 1 5 4

2 19.7 6 145 175 3.62 2.77 15.5 0 1 5 6

3 15 8 301 335 3.54 3.57 14.6 0 1 5 8

> filter(mynewdata,cyl>4)

# A tibble: 21 × 11

mpg cyl disp hp drat wt qsec vs am gear carb

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>*

1 21 6 160 110 3.9 2.62 16.5 0 1 4 4

2 21 6 160 110 3.9 2.88 17.0 0 1 4 4

3 21.4 6 258 110 3.08 3.22 19.4 1 0 3 1

4 18.7 8 360 175 3.15 3.44 17.0 0 0 3 2

5 18.1 6 225 105 2.76 3.46 20.2 1 0 3 1

6 14.3 8 360 245 3.21 3.57 15.8 0 0 3 4

7 19.2 6 168. 123 3.92 3.44 18.3 1 0 4 4

8 17.8 6 168. 123 3.92 3.44 18.9 1 0 4 4

9 16.4 8 276. 180 3.07 4.07 17.4 0 0 3 3

10 17.3 8 276. 180 3.07 3.73 17.6 0 0 3 3

# … with 11 more rows

> filter(myirisdata,species%in%c('setosa','virginica'))

**Error in `filter()`:**

! Problem while computing `..1 = species %in% c("setosa", "virginica")`.

**Caused by error in `species %in% c("setosa", "virginica")`:**

! object 'species' not found

Run `rlang::last\_error()` to see where the error occurred.

> filter(myirisdata,Species%in%c('setosa','virginica'))

# A tibble: 100 × 5

Sepal.Length Sepal.Width Petal.Length Petal.Width Species

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<fct>*

1 5.1 3.5 1.4 0.2 setosa

2 4.9 3 1.4 0.2 setosa

3 4.7 3.2 1.3 0.2 setosa

4 4.6 3.1 1.5 0.2 setosa

5 5 3.6 1.4 0.2 setosa

6 5.4 3.9 1.7 0.4 setosa

7 4.6 3.4 1.4 0.3 setosa

8 5 3.4 1.5 0.2 setosa

9 4.4 2.9 1.4 0.2 setosa

10 4.9 3.1 1.5 0.1 setosa

# … with 90 more rows

> select(mynewdata,cyl,mpg,hp)

# A tibble: 32 × 3

cyl mpg hp

*<dbl>* *<dbl>* *<dbl>*

1 6 21 110

2 6 21 110

3 4 22.8 93

4 6 21.4 110

5 8 18.7 175

6 6 18.1 105

7 8 14.3 245

8 4 24.4 62

9 4 22.8 95

10 6 19.2 123

# … with 22 more rows

> select(mynewdata,-c(mpg,cyl,disp))

# A tibble: 32 × 8

hp drat wt qsec vs am gear carb

*<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>* *<dbl>*

1 110 3.9 2.62 16.5 0 1 4 4

2 110 3.9 2.88 17.0 0 1 4 4

3 93 3.85 2.32 18.6 1 1 4 1

4 110 3.08 3.22 19.4 1 0 3 1

5 175 3.15 3.44 17.0 0 0 3 2

6 105 2.76 3.46 20.2 1 0 3 1

7 245 3.21 3.57 15.8 0 0 3 4

8 62 3.69 3.19 20 1 0 4 2

9 95 3.92 3.15 22.9 1 0 4 2

10 123 3.92 3.44 18.3 1 0 4 4

# … with 22 more rows

> mynewdata%>%select(cyl,wt,gear)%>%arrange(desc(wt))

# A tibble: 32 × 3

cyl wt gear

*<dbl>* *<dbl>* *<dbl>*

1 8 5.42 3

2 8 5.34 3

3 8 5.25 3

4 8 4.07 3

5 8 3.84 3

6 8 3.84 3

7 8 3.78 3

8 8 3.73 3

9 8 3.57 3

10 8 3.57 5

# … with 22 more rows

> mynewdata%>%select(mpg,cyl)%>%mutate(newvariable=mpg\*cyl)

# A tibble: 32 × 3

mpg cyl newvariable

*<dbl>* *<dbl>* *<dbl>*

1 21 6 126

2 21 6 126

3 22.8 4 91.2

4 21.4 6 128.

5 18.7 8 150.

6 18.1 6 109.

7 14.3 8 114.

8 24.4 4 97.6

9 22.8 4 91.2

10 19.2 6 115.

# … with 22 more rows

> myirisdata%>%group\_by(Species)%>%summarise(average=mean(Sepal.Length,na.rm=TRUE))

# A tibble: 3 × 2

Species average

*<fct>* *<dbl>*

1 setosa 5.01

2 versicolor 5.94

3 virginica 6.59