```
     readr haven      readr     tidyverse
```

```
#
pacman::p_load(
  here,
  readr,   # csv     tidyverse
  haven   # sav, dta, sas
  )
```

csv

read.csv

```
# read.csv csv
d_csv_1 <- read.csv("data/raw/u001.csv")
#
head(d_csv_1)
```

```
  caseid sex ybirth mbirth ZQ03 JC_1 JC_41 ZQ08A ZQ08B ZQ08C ZQ08D ZQ08E ZQ08F
1  10001   1   1976     10    1    2    12     4     1     3     4     4     4
2  10002   1   1972      1    1    2     9     6     2     2     4     6     6
3  10003   1   1975      4    1    2     9     6     6     6     3     6     6
4  10004   2   1974     11    1    2     7     6     1     1     5     1     1
5  10005   1   1978      1    2   10    88     6     2     2     4     1     2
6  10006   1   1984      2    2   10    88     6     1     2     6     3     6
  ZQ08G ZQ08H ZQ11_A ZQ11_B ZQ11_C ZQ11_D ZQ11_E ZQ11_F ZQ11_G ZQ11_H ZQ11_I
1     5     3      2      2      2      2      2      2      2      2      2
2     6     5      2      2      2      2      2      1      2      2      2
3     4     6      2      2      2      2      1      1      1      2      2
4     4     2      2      2      2      2      2      2      2      2      2
5     5     1      2      2      2      2      1      2      2      2      2
```

```
6     6     6      2      2      2      2      2      2      2      2      2
  ZQ11_J ZQ11_K ZQ11_L ZQ11_M ZQ11_N ZQ11_O ZQ12 ZQ14_1A ZQ14_1B ZQ14_1C
1      2      2      2      2      2      2    2       0       0       1
2      2      2      2      2      2      2    2       0       0       0
3      2      2      2      2      2      2    4       0       0       0
4      2      2      2      2      2      2    3       1       1       0
5      1      2      1      2      2      2    4       2       0       0
6      1      2      2      2      1      2    2       0       0       1
  ZQ14_1D ZQ23A ZQ23B ZQ23C ZQ23D ZQ24 ZQ25 ZQ26A ZQ26B ZQ26C ZQ26D ZQ26E ZQ26F
1       0     5     5     5     4    1    1     4     5     3     5     3     4
2       1     3     5     2     2    1    3     5     5     2     5     1     5
3       0     3     2     2     2    1    3     5     5     4     5     3     5
4       0     3     5     2     2    1    2     3     5     2     4     2     4
5       0     5     8     5     5    1    2     3     3     4     3     3     4
6       0     4     8     3     2    1    4     3     4     3     4     3     5
  ZQ30D ZQ35 ZQ39A ZQ42 ZQ43 ZQ47A ZQ47B ZQ47C ZQ50 ZQ52A ZQ52Y ZQ54A ZQ54B
1     2    4     4    9    2     6     5     8    2     2    51     1     2
2     1    5     3    1    1     9     5    10    2     2    51     1     2
3     1    4     5    9    4     6     3     6    2     2    56     3     5
4     2    5     3    3    3     6     8     9    2     2    48     6     1
5     4    5     4    2    2     1    99    99    1     8   888     8     8
6     4    7     4    2    3     2    15    10    1     8   888     8     8
  ZQ54C ZQ54D ZQ61_A ZQ61_B ZQ61_C ZQ61_D ZQ61_E ZQ61_F ZQ61_G ZQ61_H ZQ61_I
1     9     9      1      2      2      2      2      2      2      2      2
2     2     4      1      2      2      2      2      2      2      2      2
3     3     2      1      2      2      2      2      2      2      2      2
4     5     4      1      2      2      2      2      2      2      2      2
5     8     8      2      2      2      1      2      2      2      2      2
6     8     8      1      2      2      2      2      2      2      2      2
  ZQ62
1    3
2    2
3    2
4    4
5    1
6    2
```

```
#
class(d_csv_1)
```

```
[1] "data.frame"
```

read_csv

```
# read_csv csv
d_csv_2 <- read_csv("data/raw/u001.csv")
```

```
Rows: 1000 Columns: 72
-- Column specification --------------------------------------------------------
Delimiter: ","
dbl (72): caseid, sex, ybirth, mbirth, ZQ03, JC_1, JC_41, ZQ08A, ZQ08B, ZQ08...

i Use `spec()` to retrieve the full column specification for this data.
i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
#
head(d_csv_2)
```

```
# A tibble: 6 x 72
  caseid   sex ybirth mbirth  ZQ03  JC_1 JC_41 ZQ08A ZQ08B ZQ08C ZQ08D ZQ08E
   <dbl> <dbl>  <dbl>  <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1  10001     1   1976     10     1     2    12     4     1     3     4     4
2  10002     1   1972      1     1     2     9     6     2     2     4     6
3  10003     1   1975      4     1     2     9     6     6     6     3     6
4  10004     2   1974     11     1     2     7     6     1     1     5     1
5  10005     1   1978      1     2    10    88     6     2     2     4     1
6  10006     1   1984      2     2    10    88     6     1     2     6     3
# i 60 more variables: ZQ08F <dbl>, ZQ08G <dbl>, ZQ08H <dbl>, ZQ11_A <dbl>,
#   ZQ11_B <dbl>, ZQ11_C <dbl>, ZQ11_D <dbl>, ZQ11_E <dbl>, ZQ11_F <dbl>,
#   ZQ11_G <dbl>, ZQ11_H <dbl>, ZQ11_I <dbl>, ZQ11_J <dbl>, ZQ11_K <dbl>,
#   ZQ11_L <dbl>, ZQ11_M <dbl>, ZQ11_N <dbl>, ZQ11_O <dbl>, ZQ12 <dbl>,
#   ZQ14_1A <dbl>, ZQ14_1B <dbl>, ZQ14_1C <dbl>, ZQ14_1D <dbl>, ZQ23A <dbl>,
#   ZQ23B <dbl>, ZQ23C <dbl>, ZQ23D <dbl>, ZQ24 <dbl>, ZQ25 <dbl>, ZQ26A <dbl>,
#   ZQ26B <dbl>, ZQ26C <dbl>, ZQ26D <dbl>, ZQ26E <dbl>, ZQ26F <dbl>, ...
```

```
#
class(d_csv_2)
```

```
[1] "spec_tbl_df" "tbl_df"      "tbl"         "data.frame"
```

dta (Stata)

```
# read_dta dta
d_dta <- read_dta("data/raw/u001.dta")
#
head(d_dta)
```

```
# A tibble: 6 x 72
  caseid sex     ybirth mbirth ZQ03    JC_1     JC_41    ZQ08A   ZQ08B   ZQ08C
   <dbl> <dbl+l>  <dbl>  <dbl> <dbl+l> <dbl+lb> <dbl+lb> <dbl+l> <dbl+l> <dbl+l>
1  10001 1 [mal~   1976     10 1 [ ~  2 [ ~ 12     ~ 4 [ ~ 1 [ ~ 3 [ ~
2  10002 1 [mal~   1972      1 1 [ ~  2 [ ~  9     ~ 6 [ ~ 2 [ ~ 2 [ ~
3  10003 1 [mal~   1975      4 1 [ ~  2 [ ~  9     ~ 6 [ ~ 6 [ ~ 6 [ ~
4  10004 2 [fem~   1974     11 1 [ ~  2 [ ~  7     ~ 6 [ ~ 1 [ ~ 1 [ ~
5  10005 1 [mal~   1978      1 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 2 [ ~ 2 [ ~
6  10006 1 [mal~   1984      2 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 1 [ ~ 2 [ ~
# i 62 more variables: ZQ08D <dbl+lbl>, ZQ08E <dbl+lbl>, ZQ08F <dbl+lbl>,
#   ZQ08G <dbl+lbl>, ZQ08H <dbl+lbl>, ZQ11_A <dbl+lbl>, ZQ11_B <dbl+lbl>,
#   ZQ11_C <dbl+lbl>, ZQ11_D <dbl+lbl>, ZQ11_E <dbl+lbl>, ZQ11_F <dbl+lbl>,
#   ZQ11_G <dbl+lbl>, ZQ11_H <dbl+lbl>, ZQ11_I <dbl+lbl>, ZQ11_J <dbl+lbl>,
#   ZQ11_K <dbl+lbl>, ZQ11_L <dbl+lbl>, ZQ11_M <dbl+lbl>, ZQ11_N <dbl+lbl>,
#   ZQ11_O <dbl+lbl>, ZQ12 <dbl+lbl>, ZQ14_1A <dbl+lbl>, ZQ14_1B <dbl+lbl>,
#   ZQ14_1C <dbl+lbl>, ZQ14_1D <dbl+lbl>, ZQ23A <dbl+lbl>, ZQ23B <dbl+lbl>, ...
```

```
#
class(d_dta)
```

```
[1] "tbl_df"     "tbl"        "data.frame"
```

sav (SPSS)

```
# read_sav sav
d_sav <- read_sav("data/raw/u001.sav")
#
head(d_sav)
```

```
# A tibble: 6 x 72
  caseid sex     ybirth mbirth ZQ03    JC_1     JC_41    ZQ08A   ZQ08B   ZQ08C
   <dbl> <dbl+l>  <dbl>  <dbl> <dbl+l> <dbl+lb> <dbl+lb> <dbl+l> <dbl+l> <dbl+l>
1  10001 1 [mal~   1976     10 1 [ ~  2 [ ~ 12     ~ 4 [ ~ 1 [ ~ 3 [ ~
2  10002 1 [mal~   1972      1 1 [ ~  2 [ ~  9     ~ 6 [ ~ 2 [ ~ 2 [ ~
3  10003 1 [mal~   1975      4 1 [ ~  2 [ ~  9     ~ 6 [ ~ 6 [ ~ 6 [ ~
4  10004 2 [fem~   1974     11 1 [ ~  2 [ ~  7     ~ 6 [ ~ 1 [ ~ 1 [ ~
5  10005 1 [mal~   1978      1 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 2 [ ~ 2 [ ~
6  10006 1 [mal~   1984      2 2 [ ~ 10 [ ~ 88 [ ~ 6 [ ~ 1 [ ~ 2 [ ~
# i 62 more variables: ZQ08D <dbl+lbl>, ZQ08E <dbl+lbl>, ZQ08F <dbl+lbl>,
#   ZQ08G <dbl+lbl>, ZQ08H <dbl+lbl>, ZQ11_A <dbl+lbl>, ZQ11_B <dbl+lbl>,
#   ZQ11_C <dbl+lbl>, ZQ11_D <dbl+lbl>, ZQ11_E <dbl+lbl>, ZQ11_F <dbl+lbl>,
#   ZQ11_G <dbl+lbl>, ZQ11_H <dbl+lbl>, ZQ11_I <dbl+lbl>, ZQ11_J <dbl+lbl>,
#   ZQ11_K <dbl+lbl>, ZQ11_L <dbl+lbl>, ZQ11_M <dbl+lbl>, ZQ11_N <dbl+lbl>,
#   ZQ11_O <dbl+lbl>, ZQ12 <dbl+lbl>, ZQ14_1A <dbl+lbl>, ZQ14_1B <dbl+lbl>,
#   ZQ14_1C <dbl+lbl>, ZQ14_1D <dbl+lbl>, ZQ23A <dbl+lbl>, ZQ23B <dbl+lbl>, ...
```

```r
#
class(d_sav)
```

```
[1] "tbl_df"     "tbl"        "data.frame"
```