

R Notebook

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Load Loblaries

```
library(tidyverse)
```

1 Overview

- `tibbles()`
- `select()`, `filter()`, `arrange()`, `mutate()`, `summarize()`, `group_by()`
- combine data from different tables
- Pipe `%>%`
- `library("tidyverse")`

2 Tibbles

Tibbles are similar to `df`, but have slightly better printing behaviour.

```
#iris  
class(iris)
```

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

2.1 Create tibble() from data.frame

```
# ?as_tibble # NOTE Get Help of as_tibble from tidyverse package
# ?select # NOTE Get help from select() function
as_tibble(iris)
```

```
## # A tibble: 150 x 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
```

```
as_tibble(iris) %>% str()
```

```
## tibble [150 x 5] (S3: tbl_df/tbl/data.frame)
##  $ Sepal.Length: num [1:150] 5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
##  $ Sepal.Width : num [1:150] 3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
##  $ Petal.Length: num [1:150] 1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
##  $ Petal.Width : num [1:150] 0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
##  $ Species      : Factor w/ 3 levels "setosa","versicolor",...: 1 1 1 1 1 1 1 1 1 1 ...
```

- converts a data.frame to a tibble
- still is also a class data.frame

2.2 Make tibble from vector

```
tibble(Name = c("Tom", "Sepp", "Max"), Student = c(TRUE, FALSE, TRUE))
```

```
## # A tibble: 3 x 2
##   Name Student
##   <chr> <lgl>
## 1 Tom   TRUE
## 2 Sepp  FALSE
## 3 Max   TRUE
```

2.3 Make tibble from rows

```
# ?tribble ' Get help ....
tribble( ~ Name, ~ Student, "Tom", TRUE, "Stefan", FALSE)
```

```
## # A tibble: 2 x 2
##   Name   Student
##   <chr>  <lgl>
## 1 Tom    TRUE
## 2 Stefan FALSE
```

3 Select data variables

- Insert Pipe Shortcut -> Strg + Shift + M

```
iris %>%as_tibble() %>% select(Species, Sepal.Length, Petal.Length) # NOTE Change Variable Order
```

```
## # A tibble: 150 x 3
##   Species Sepal.Length Petal.Length
##   <fct>      <dbl>      <dbl>
## 1 setosa      5.1        1.4
## 2 setosa      4.9        1.4
## 3 setosa      4.7        1.3
## 4 setosa      4.6        1.5
## 5 setosa      5          1.4
## 6 setosa      5.4        1.7
## 7 setosa      4.6        1.4
## 8 setosa      5          1.5
## 9 setosa      4.4        1.4
## 10 setosa     4.9        1.5
## # ... with 140 more rows
```

```
select(as_tibble(iris), Species, Sepal.Length, Petal.Length)
```

```
## # A tibble: 150 x 3
##   Species Sepal.Length Petal.Length
##   <fct>      <dbl>      <dbl>
## 1 setosa      5.1        1.4
## 2 setosa      4.9        1.4
## 3 setosa      4.7        1.3
## 4 setosa      4.6        1.5
## 5 setosa      5          1.4
## 6 setosa      5.4        1.7
## 7 setosa      4.6        1.4
## 8 setosa      5          1.5
## 9 setosa      4.4        1.4
## 10 setosa     4.9        1.5
## # ... with 140 more rows
```