

# flextable package

a grammar to produce tabular  
reporting from R

Quentin Fazilleau  
2019-07-10



# Motivations

## Provide an R grammar for tabular reporting

```
library(flextable)
library(magrittr)
ft <- head(iris, n = 3) %>%
  flextable() %>%
  color(color = "#006699", part = "header") %>%
  colformat_num(
    col_keys = c("Sepal.Length", "Sepal.Width",
                 "Petal.Length", "Petal.Width"),
    digits = 1)
```

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa















## Enable its usage in R Markdown documents with outputs to



```
---
title: RMD document with iris as a flextable
---

```r
flextable::flextable(iris)
```
```

## Enable creation of simple and complex tables

|                              | conc  | Quebec | Mississippi  |
|------------------------------|---|--------|--|
| <b>Treatment: nonchilled</b> |   |        |  |
| 95.000                       |  | 15.3   |  11.3 |
| 175.000                      |  | 30.0   |  20.2 |
| 250.000                      |  | 37.4   |  27.5 |
| 350.000                      |  | 40.4   |  29.9 |
| 500.000                      |  | 39.6   |  30.6 |
| 675.000                      |  | 41.5   |  30.5 |
| 1000.000                     |  | 43.2   |  31.6 |

# History

2017-03-28

first release on CRAN, support officer and HTML R Markdown. Idea was to replace `ReporteRs::FlexTable`.

2017-10-30 😊

Merge pull request #37 from mnazarov/master. Added functionality to insert flextable's in R Markdown for docx output.

2017-11-22

R Markdown support for pptx output.

2019-01-29

Refactor internals and add `flextable::compose` (for complex formatting)

# flextable anatomy

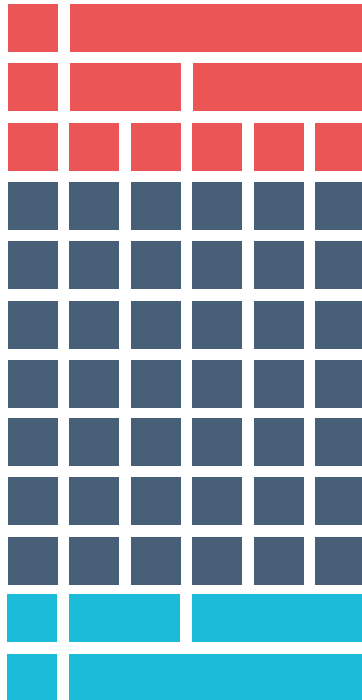
A flextable object is composed by the 3 parts : header / body / footer

*default*

*colnames*

*data*

*empty*



*part*

header

body

footer

Example :

| Sepal.Length             | Sepal.Width |
|--------------------------|-------------|
| 5.100                    | 3.500       |
| 4.900                    | 3.000       |
| 4.700                    | 3.200       |
| 4.600                    | 3.100       |
| only iris[1:4,1:2] shown |             |

# Selectors

You can select row(s), column(s) or cell(s) of any part to modify its :

- content
- layout
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```
cols <- ~ Height + Volume
```

```
flextable(head(trees)) %>%  
  theme_box()
```

| Girth  | Height | Volume |
|--------|--------|--------|
| 8.300  | 70.000 | 10.300 |
| 8.600  | 65.000 | 10.300 |
| 8.800  | 63.000 | 10.200 |
| 10.500 | 72.000 | 16.400 |
| 10.700 | 81.000 | 18.800 |

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```
cols <- ~ Height + Volume  
  
flextable(head(trees)) %>%  
  theme_box() %>%  
  bg(bg = "#475f77", j = cols) %>%  
  color(color = "white", j = cols)
```

| Girth  | Height | Volume |
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| 8.300  | 70.000 | 10.300 |
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Any function contains parameters **j** and **i**. They can be specified with :

- indices
- formula
- character names

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```
rows <- ~ Height > 67 & Volume < 19  
  
flectable(head(trees)) %>%  
  theme_box()
```

| Girth  | Height | Volume |
|--------|--------|--------|
| 8.300  | 70.000 | 10.300 |
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NB: You can use `%>%` to combine multiple statement

# Formats

**Remember that any formatting function can be coupled with selectors !**

```
flextable(x) %>%  
  any_format_function(i = ~ ..., j = ~ ...)
```

# Formats

```
x <- head(quakes) %>% flextable() %>% theme_box()
```

```
x
```

| lat     | long    | depth | mag   | stations |
|---------|---------|-------|-------|----------|
| -20.420 | 181.620 | 562   | 4.800 | 41       |
| -20.620 | 181.030 | 650   | 4.200 | 15       |
| -26.000 | 184.100 | 42    | 5.400 | 43       |
| -17.970 | 181.660 | 626   | 4.100 | 19       |
| -20.420 | 181.960 | 649   | 4.000 | 11       |
| -19.680 | 184.310 | 195   | 4.000 | 12       |

# Formats

```
x <- head(quakes) %>% flextable() %>% theme_box()
```

```
x %>%  
  bold(i = 2)
```

| lat            | long           | depth      | mag          | stations  |
|----------------|----------------|------------|--------------|-----------|
| -20.420        | 181.620        | 562        | 4.800        | 41        |
| <b>-20.620</b> | <b>181.030</b> | <b>650</b> | <b>4.200</b> | <b>15</b> |
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# Formats

```
x <- head(quakes) %>% flextable() %>% theme_box()
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```
x %>%  
  bold(i = 2) %>%  
  italic(i = 2)
```

| lat            | long           | depth      | mag          | stations  |
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| -20.420        | 181.620        | 562        | 4.800        | 41        |
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x <- head(quakes) %>% flextable() %>% theme_box()
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```
x %>%  
  bold(i = 2) %>%  
  italic(i = 2) %>%  
  font(i = 2, fontname = "Times")
```

| lat            | long           | depth      | mag          | stations  |
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| -20.420        | 181.620        | 562        | 4.800        | 41        |
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  bold(i = 2) %>%  
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  color(i = 2, color = "red")
```

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```

```
inside <- fp_border(color = "gray")  
outside <- fp_border(color = "orange",  
  width = 2)
```

| lat            | long           | depth      | mag          | stations  |
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| -20.420        | 181.620        | 562        | 4.800        | 41        |
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inside <- fp_border(color = "gray")  
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```

```
x %>%  
  border_outer(border = outside)
```

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| -20.420        | 181.620        | 562        | 4.800        | 41        |
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x %>%  
  border_outer(border = outside) %>%  
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```

```
x %>%  
  border_outer(border = outside) %>%  
  border_inner(border = inside) %>%  
  bg(i = ~ mag > 5, j = ~ lat + long,  
    bg = "#becde6")
```

| lat            | long           | depth      | mag          | stations  |
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| -20.420        | 181.620        | 562        | 4.800        | 41        |
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Others formatting functions : align, padding, rotate, etc...



# Cell merging

```
dat <- data.frame(  
  letters1 = c("a", "b", "b", "c"),  
  letters2 = c("d", "e", "b", "b"),  
  number = 1:4,  
  stringsAsFactors = FALSE  
)
```

# Cell merging

```
dat <- data.frame(  
  letters1 = c("a", "b", "b", "c"),  
  letters2 = c("d", "e", "b", "b"),  
  number = 1:4,  
  stringsAsFactors = FALSE  
)  
  
x <- flextable(dat) %>%  
  theme_box()  
x
```

| letters1 | letters2 | number |
|----------|----------|--------|
| a        | d        | 1      |
| b        | e        | 2      |
| b        | b        | 3      |
| c        | b        | 4      |

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| a        | d        | 1      |
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| b        | b        | 3      |
| c        | b        | 4      |

```
x %>%  
  merge_v()
```

| letters1 | letters2 | number |
|----------|----------|--------|
| a        | d        | 1      |
| b        | e        | 2      |
|          | b        | 3      |
| c        |          | 4      |

*NB: Selector `j` can be used with `merge_v`*

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)  
  
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x
```

| letters1 | letters2 | number |
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| b        | e        | 2      |
| b        | b        | 3      |
| c        | b        | 4      |

```
x %>%  
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```

| letters1 | letters2 | number |
|----------|----------|--------|
| a        | d        | 1      |
| b        | e        | 2      |
|          | b        | 3      |
| c        |          | b      |

NB: Selector *j* can be used with *merge\_v*

```
x %>%  
  merge_h()
```

| letters1 | letters2 | number |
|----------|----------|--------|
| a        | d        | 1      |
| b        | e        | 2      |
| b        |          | 3      |
| c        | b        | 4      |

NB: Selector *i* can be used with *merge\_h*

# Cell merging

```
study <- data.frame(  
  `id` = 1:12,  
  Age = c(rep("<20 years", 3), rep("21-40 years", 3), rep("41-60 years", 3), rep(">60 years", 3)),  
  Gender = c(rep(c("Male", "Male", "Female", "Male", "Female", "Female"), 2)),  
  `Day 1` = sample(c(0L, 1L), 12, T),  
  `Day 2` = sample(c(0L, 1L), 12, T),  
  `Day 3` = sample(c(0L, 1L), 12, T),  
  `Day 4` = sample(c(0L, 1L), 12, T),  
  stringsAsFactors = FALSE  
)
```

# Cell merging

```
x <- flextable(study)
```

| id | Age         | Gender | Day.1 | Day.2 | Day.3 | Day.4 |
|----|-------------|--------|-------|-------|-------|-------|
| 1  | <20 years   | Male   | 1     | 0     | 0     | 0     |
| 2  | <20 years   | Male   | 0     | 0     | 1     | 1     |
| 3  | <20 years   | Female | 0     | 0     | 1     | 1     |
| 4  | 21-40 years | Male   | 1     | 0     | 1     | 0     |
| 5  | 21-40 years | Female | 1     | 0     | 1     | 0     |
| 6  | 21-40 years | Female | 0     | 0     | 1     | 1     |
| 7  | 41-60 years | Male   | 0     | 1     | 1     | 1     |
| 8  | 41-60 years | Male   | 1     | 1     | 0     | 1     |
| 9  | 41-60 years | Female | 0     | 0     | 0     | 1     |
| 10 | >60 years   | Male   | 0     | 0     | 0     | 1     |
| 11 | >60 years   | Female | 1     | 0     | 1     | 0     |
| 12 | >60 years   | Female | 0     | 0     | 1     | 1     |

# Cell merging

```
x <- flextable(study) %>%  
  theme_merge()
```

| id | Age         | Gender | Day.1 | Day.2 | Day.3 | Day.4 |
|----|-------------|--------|-------|-------|-------|-------|
| 1  | <20 years   | Male   | 1     | 0     | 0     | 0     |
| 2  | <20 years   | Male   | 0     | 0     | 1     | 1     |
| 3  | <20 years   | Female | 0     | 0     | 1     | 1     |
| 4  | 21-40 years | Male   | 1     | 0     | 1     | 0     |
| 5  | 21-40 years | Female | 1     | 0     | 1     | 0     |
| 6  | 21-40 years | Female | 0     | 0     | 1     | 1     |
| 7  | 41-60 years | Male   | 0     | 1     | 1     | 1     |
| 8  | 41-60 years | Male   | 1     | 1     | 0     | 1     |
| 9  | 41-60 years | Female | 0     | 0     | 0     | 1     |
| 10 | >60 years   | Male   | 0     | 0     | 0     | 1     |
| 11 | >60 years   | Female | 1     | 0     | 1     | 0     |
| 12 | >60 years   | Female | 0     | 0     | 1     | 1     |

# Cell merging

```
x <- flextable(study) %>%  
  theme_merge %>%  
  merge_v(j = ~ Age + Gender)
```

| id | Age         | Gender | Day.1 | Day.2 | Day.3 | Day.4 |
|----|-------------|--------|-------|-------|-------|-------|
| 1  | <20 years   | Male   | 1     | 0     | 0     | 0     |
| 2  |             |        | 0     | 0     | 1     | 1     |
| 3  |             | Female | 0     | 0     | 1     | 1     |
| 4  | 21-40 years | Male   | 1     | 0     | 1     | 0     |
| 5  |             | Female | 1     | 0     | 1     | 0     |
| 6  |             |        | 0     | 0     | 1     | 1     |
| 7  | 41-60 years | Male   | 0     | 1     | 1     | 1     |
| 8  |             |        | 1     | 1     | 0     | 1     |
| 9  |             | Female | 0     | 0     | 0     | 1     |
| 10 | >60 years   | Male   | 0     | 0     | 0     | 1     |
| 11 |             | Female | 1     | 0     | 1     | 0     |
| 12 |             |        | 0     | 0     | 1     | 1     |



# Cell merging

```
x <- flextable(study) %>%  
  theme_merge() %>%  
  merge_v(j = ~ Age + Gender) %>%  
  merge_h()
```

| id | Age         | Gender | Day.1 | Day.2 | Day.3 | Day.4 |
|----|-------------|--------|-------|-------|-------|-------|
| 1  | <20 years   | Male   | 1     | 0     |       |       |
| 2  |             |        | 0     |       | 1     |       |
| 3  |             | Female | 0     |       | 1     |       |
| 4  | 21-40 years | Male   | 1     | 0     | 1     | 0     |
| 5  |             | Female | 1     | 0     | 1     | 0     |
| 6  |             |        | 0     |       | 1     |       |
| 7  | 41-60 years | Male   | 0     | 1     |       |       |
| 8  |             |        | 1     |       | 0     | 1     |
| 9  |             | Female | 0     |       |       | 1     |
| 10 | >60 years   | Male   | 0     |       |       | 1     |
| 11 |             | Female | 1     | 0     | 1     | 0     |
| 12 |             |        | 0     |       | 1     |       |

# Header & Footer

On "header" & "footer" part you can :

- Define a whole data.frame
- Add top/bottom lines
- Use format & layout functions

# Header & Footer

Define a data.frame as header

| Sepal  |       | Petal  |       | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width |         |



|     |     |     |     |        |
|-----|-----|-----|-----|--------|
| 5.1 | 3.5 | 1.4 | 0.2 | setosa |
| 4.9 | 3.0 | 1.4 | 0.2 | setosa |
| 4.7 | 3.2 | 1.3 | 0.2 | setosa |
| 4.6 | 3.1 | 1.5 | 0.2 | setosa |
| 5.0 | 3.6 | 1.4 | 0.2 | setosa |
| 5.4 | 3.9 | 1.7 | 0.4 | setosa |



| Sepal  |       | Petal  |       | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width |         |
| 5.1    | 3.5   | 1.4    | 0.2   | setosa  |
| 4.9    | 3.0   | 1.4    | 0.2   | setosa  |
| 4.7    | 3.2   | 1.3    | 0.2   | setosa  |
| 4.6    | 3.1   | 1.5    | 0.2   | setosa  |
| 5.0    | 3.6   | 1.4    | 0.2   | setosa  |
| 5.4    | 3.9   | 1.7    | 0.4   | setosa  |

# Header & Footer

Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

# Header & Footer

## Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

```
flextable(head(iris)) %>%  
  theme_doc()
```

| Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species |
|--------------|-------------|--------------|-------------|---------|
| 5.1          | 3.5         | 1.4          | 0.2         | setosa  |
| 4.9          | 3.0         | 1.4          | 0.2         | setosa  |
| 4.7          | 3.2         | 1.3          | 0.2         | setosa  |
| 4.6          | 3.1         | 1.5          | 0.2         | setosa  |
| 5.0          | 3.6         | 1.4          | 0.2         | setosa  |
| 5.4          | 3.9         | 1.7          | 0.4         | setosa  |

# Header & Footer

## Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

```
flectable(head(iris)) %>%  
  theme_doc() %>%  
  set_header_df(  
    mapping = my_header,  
    key = "col_keys"  
  )
```

| Sepal  | Sepal | Petal  | Petal | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width | Species |
| 5.1    | 3.5   | 1.4    | 0.2   | setosa  |
| 4.9    | 3.0   | 1.4    | 0.2   | setosa  |
| 4.7    | 3.2   | 1.3    | 0.2   | setosa  |
| 4.6    | 3.1   | 1.5    | 0.2   | setosa  |
| 5.0    | 3.6   | 1.4    | 0.2   | setosa  |
| 5.4    | 3.9   | 1.7    | 0.4   | setosa  |

# Header & Footer

## Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

```
flextable(head(iris)) %>%  
  theme_doc() %>%  
  set_header_df(  
    mapping = my_header,  
    key = "col_keys"  
  ) %>%  
  merge_v(part = "header") %>%  
  merge_h(part = "header")
```

| Sepal  |       | Petal  |       | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width |         |
| 5.1    | 3.5   | 1.4    | 0.2   | setosa  |
| 4.9    | 3.0   | 1.4    | 0.2   | setosa  |
| 4.7    | 3.2   | 1.3    | 0.2   | setosa  |
| 4.6    | 3.1   | 1.5    | 0.2   | setosa  |
| 5.0    | 3.6   | 1.4    | 0.2   | setosa  |
| 5.4    | 3.9   | 1.7    | 0.4   | setosa  |

# Header & Footer

## Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

```
flextable(head(iris)) %>%  
  theme_doc() %>%  
  set_header_df(  
    mapping = my_header,  
    key = "col_keys"  
  ) %>%  
  merge_v(part = "header") %>%  
  merge_h(part = "header") %>%  
  set_footer_df(  
    mapping = my_header[, 3:1],  
    key = "col_keys"  
  )
```

| Sepal  |       | Petal  |       | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width |         |
| 5.1    | 3.5   | 1.4    | 0.2   | setosa  |
| 4.9    | 3.0   | 1.4    | 0.2   | setosa  |
| 4.7    | 3.2   | 1.3    | 0.2   | setosa  |
| 4.6    | 3.1   | 1.5    | 0.2   | setosa  |
| 5.0    | 3.6   | 1.4    | 0.2   | setosa  |
| 5.4    | 3.9   | 1.7    | 0.4   | setosa  |
| Length | Width | Length | Width | Species |
| Sepal  | Sepal | Petal  | Petal | Species |



# Header & Footer

## Define a data.frame as header and/or footer

```
my_header <- data.frame(  
  col_keys = colnames(iris),  
  line1 = c('Sepal', 'Sepal', 'Petal', 'Petal', 'Species'),  
  line2 = c('Length', 'Width', 'Length', 'Width', 'Species'),  
  stringsAsFactors = FALSE  
)
```

```
flextable(head(iris)) %>%  
  theme_doc() %>%  
  set_header_df(  
    mapping = my_header,  
    key = "col_keys"  
  ) %>%  
  merge_v(part = "header") %>%  
  merge_h(part = "header") %>%  
  set_footer_df(  
    mapping = my_header[, 3:1],  
    key = "col_keys"  
  ) %>%  
  merge_v(part = "footer") %>%  
  merge_h(part = "footer")
```

| Sepal  |       | Petal  |       | Species |
|--------|-------|--------|-------|---------|
| Length | Width | Length | Width |         |
| 5.1    | 3.5   | 1.4    | 0.2   | setosa  |
| 4.9    | 3.0   | 1.4    | 0.2   | setosa  |
| 4.7    | 3.2   | 1.3    | 0.2   | setosa  |
| 4.6    | 3.1   | 1.5    | 0.2   | setosa  |
| 5.0    | 3.6   | 1.4    | 0.2   | setosa  |
| 5.4    | 3.9   | 1.7    | 0.4   | setosa  |
| Length | Width | Length | Width | Species |
| Sepal  |       | Petal  |       |         |

# Header & Footer

**Add lines on header and footer and apply format functions on them.**

```
flextable(head(airquality))
```

| Ozone | Solar.R | Wind   | Temp | Month | Day |
|-------|---------|--------|------|-------|-----|
| 41    | 190     | 7.400  | 67   | 5     | 1   |
| 36    | 118     | 8.000  | 72   | 5     | 2   |
| 12    | 149     | 12.600 | 74   | 5     | 3   |
| 18    | 313     | 11.500 | 62   | 5     | 4   |
|       |         | 14.300 | 56   | 5     | 5   |
| 28    |         | 14.900 | 66   | 5     | 6   |

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats()
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12"))
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

Wind > 12

Wind < 12

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer")
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

**Wind > 12**

**Wind < 12**

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer")
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

**Wind > 12**

**Wind < 12**

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer")
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

**Wind > 12**

**Wind < 12**

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer") %>%  
  color(i = 1, part = "footer", color = "#17a589")
```

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

*Wind > 12*

**Wind < 12**



# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer") %>%  
  color(i = 1, part = "footer", color = "#17a589") %>%  
  color(i = 2, part = "footer", color = "#ca6f1e")
```

| Ozone | Solar.R | Wind        | Temp | Month | Day |
|-------|---------|-------------|------|-------|-----|
| 41    | 190     | <b>7.4</b>  | 67   | 5     | 1   |
| 36    | 118     | <b>8.0</b>  | 72   | 5     | 2   |
| 12    | 149     | <b>12.6</b> | 74   | 5     | 3   |
| 18    | 313     | <b>11.5</b> | 62   | 5     | 4   |
|       |         | <b>14.3</b> | 56   | 5     | 5   |
| 28    |         | <b>14.9</b> | 66   | 5     | 6   |

*Wind > 12*

*Wind < 12*

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer") %>%  
  color(i = 1, part = "footer", color = "#17a589") %>%  
  color(i = 2, part = "footer", color = "#ca6f1e") %>%  
  add_header_lines(  
    values = c("Daily air quality measurements in New York,  
              May to September 1973."),  
    top = TRUE  
  )
```

Daily air quality measurements in New York, May 1973.

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

*Wind > 12*

*Wind < 12*

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer") %>%  
  color(i = 1, part = "footer", color = "#17a589") %>%  
  color(i = 2, part = "footer", color = "#ca6f1e") %>%  
  add_header_lines(  
    values = c("Daily air quality measurements in New York,  
      May to September 1973."),  
    top = TRUE  
  ) %>%  
  italic(part = "header")
```

Daily air quality measurements in New York, May 1973.

| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

Wind > 12

Wind < 12

# Header & Footer

Add lines on header and footer and apply format functions on them.

```
flextable(head(airquality)) %>%  
  theme_formats() %>%  
  add_footer_lines(c("Wind > 12", "Wind < 12")) %>%  
  bold(part = "footer") %>%  
  italic(part = "footer") %>%  
  align(align = "right", part = "footer") %>%  
  color(i = 1, part = "footer", color = "#17a589") %>%  
  color(i = 2, part = "footer", color = "#ca6f1e") %>%  
  add_header_lines(  
    values = c("Daily air quality measurements in New York,  
      May to September 1973."),  
    top = TRUE  
  ) %>%  
  italic(part = "header") %>%  
  fontsize(i = 1, part = "header", size = 8)
```

Daily air quality measurements in New York, May 1973.

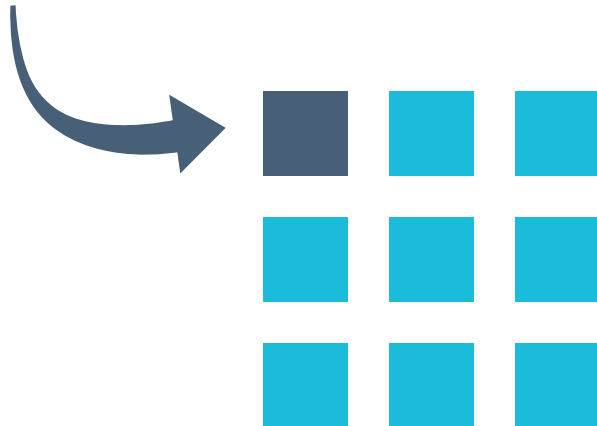
| Ozone | Solar.R | Wind | Temp | Month | Day |
|-------|---------|------|------|-------|-----|
| 41    | 190     | 7.4  | 67   | 5     | 1   |
| 36    | 118     | 8.0  | 72   | 5     | 2   |
| 12    | 149     | 12.6 | 74   | 5     | 3   |
| 18    | 313     | 11.5 | 62   | 5     | 4   |
|       |         | 14.3 | 56   | 5     | 5   |
| 28    |         | 14.9 | 66   | 5     | 6   |

Wind > 12

Wind < 12

# Write poetry with **compose**

`compose(i = 1, j = 1, value = ...)`



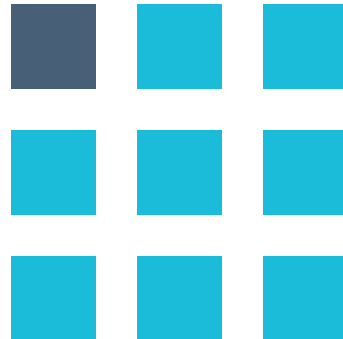
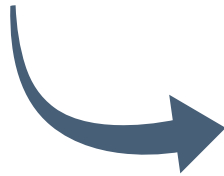
# Write poetry with **compose**

as\_paragraph( ... )

---



compose(i = 1, j = 1, value = ...)



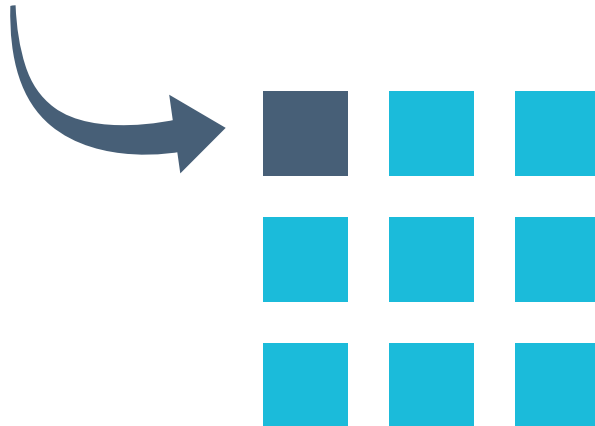
# Write poetry with **compose**

chunk 1

```
as_paragraph( as_chunk(...) )
```

---

compose(i = 1, j = 1, value = ...)



# Write poetry with **compose**

chunk 1

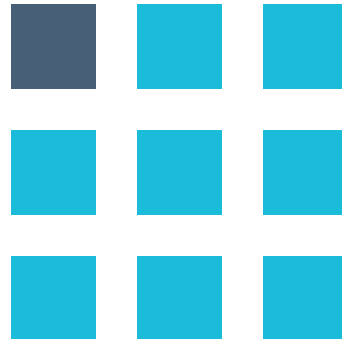
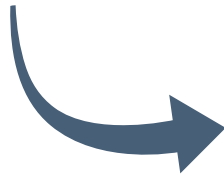
chunk 2

```
as_paragraph( as_chunk(...), as_chunk(...) )
```

---



```
compose(i = 1, j = 1, value = ...)
```





# Write poetry with **compose**

chunk 1

chunk 2

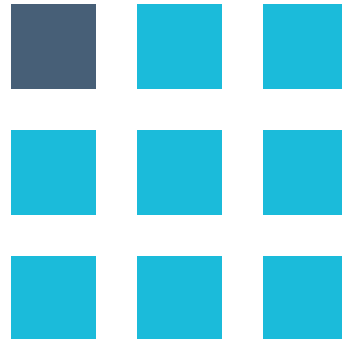
image 1

```
as_paragraph( as_chunk(...), as_chunk(...), as_image(...) )
```

---

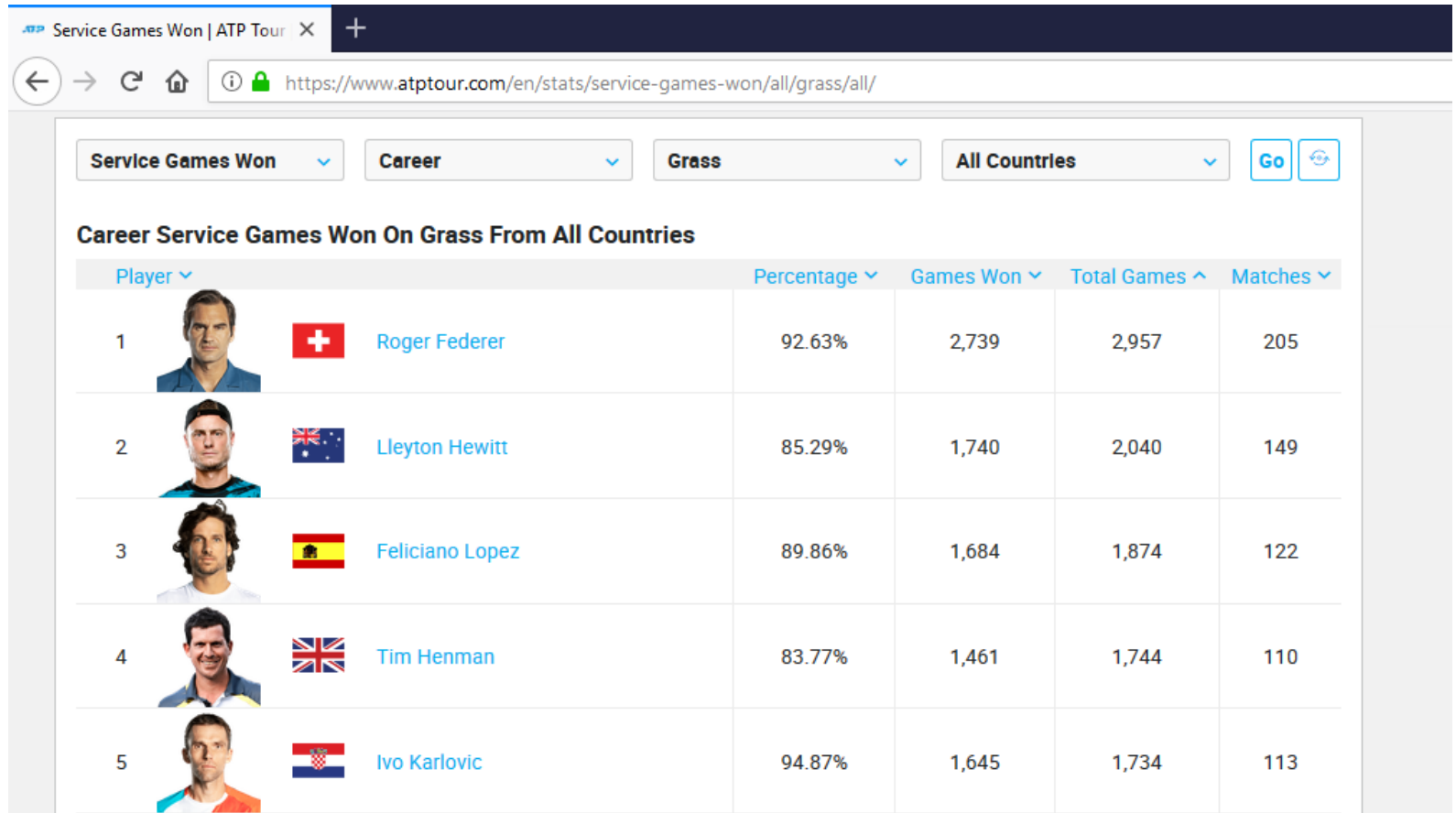


```
compose(i = 1, j = 1, value = ...)
```













# Write poetry with **compose**

For the next example we will reproduce this table :



The screenshot shows a web browser window with the URL <https://www.atptour.com/en/stats/service-games-won/all/grass/all/>. The page displays a table titled "Career Service Games Won On Grass From All Countries". The table has five columns: Player, Percentage, Games Won, Total Games, and Matches. The data is as follows:

| Player   | Percentage | Games Won | Total Games | Matches |
|--|------------|-----------|-------------|---------|
| 1   Roger Federer    | 92.63%     | 2,739     | 2,957       | 205     |
| 2   Lleyton Hewitt   | 85.29%     | 1,740     | 2,040       | 149     |
| 3   Feliciano Lopez | 89.86%     | 1,684     | 1,874       | 122     |
| 4   Tim Henman   | 83.77%     | 1,461     | 1,744       | 110     |
| 5   Ivo Karlovic | 94.87%     | 1,645     | 1,734       | 113     |

Source : <https://www.atptour.com/en/stats/>

# Write poetry with **compose**

The data.frame we start from :

```
##      Rank      Player Percentage Games.Won Total.Games Matches
## 1      1   Roger Federer     92.63      2739       2957      205
## 2      2  Lleyton Hewitt     85.29      1740       2040      149
## 3      3 Feliciano Lopez     89.86      1684       1874      122
## 4      4    Ivo Karlovic     94.87      1645       1734      113
##
##                                     head
## 1  ./static/img/players/federer_head.png
## 2  ./static/img/players/hewitt_head.png
## 3  ./static/img/players/lopez_head.png
## 4  ./static/img/players/karlovic_head.png
##
##                                     link
## 1  https://www.atptour.com/en/players/roger-federer/f324/overview
## 2  https://www.atptour.com/en/players/lleyton-hewitt/h432/overview
## 3  https://www.atptour.com/en/players/feliciano-lopez/l397/overview
## 4  https://www.atptour.com/en/players/ivo-karlovic/k336/overview
##
##                                     flag
## 1  ./static/img/flags/sui.svg
## 2  ./static/img/flags/aus.svg
## 3  ./static/img/flags/esp.svg
## 4  ./static/img/flags/cro.svg
```

# Write poetry with **compose**

```
flectable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
)
```

| Player          | Percentage | Games.Won | Total.Games | Matches |
|-----------------|------------|-----------|-------------|---------|
| Roger Federer   | 92.630     | 2739.000  | 2957.000    | 205.000 |
| Lleyton Hewitt  | 85.290     | 1740.000  | 2040.000    | 149.000 |
| Feliciano Lopez | 89.860     | 1684.000  | 1874.000    | 122.000 |
| Ivo Karlovic    | 94.870     | 1645.000  | 1734.000    | 113.000 |
| Andy Murray     | 88.890     | 1528.000  | 1719.000    | 121.000 |
| Pete Sampras    | 92.660     | 1478.000  | 1595.000    | 105.000 |
| Greg Rusedski   | 90.330     | 1476.000  | 1634.000    | 116.000 |
| Tim Henman      | 83.770     | 1461.000  | 1744.000    | 110.000 |
| Novak Djokovic  | 89.120     | 1442.000  | 1618.000    | 106.000 |
| Andy Roddick    | 92.760     | 1410.000  | 1520.000    | 103.000 |

# Write poetry with **compose**

```
flextable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp()
```

**Career Service Games Won On Grass From All Countries**

| Player          | Percentage | Games.Won | Total.Games | Matches* |
|-----------------|------------|-----------|-------------|----------|
| Roger Federer   | 92.63%     | 2,739     | 2,957       | 205      |
| Lleyton Hewitt  | 85.29%     | 1,740     | 2,040       | 149      |
| Feliciano Lopez | 89.86%     | 1,684     | 1,874       | 122      |
| Ivo Karlovic    | 94.87%     | 1,645     | 1,734       | 113      |
| Andy Murray     | 88.89%     | 1,528     | 1,719       | 121      |
| Pete Sampras    | 92.66%     | 1,478     | 1,595       | 105      |
| Greg Rusedski   | 90.33%     | 1,476     | 1,634       | 116      |
| Tim Henman      | 83.77%     | 1,461     | 1,744       | 110      |
| Novak Djokovic  | 89.12%     | 1,442     | 1,618       | 106      |
| Andy Roddick    | 92.76%     | 1,410     | 1,520       | 103      |

Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts

# Write poetry with **compose**

```
flectable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp() %>%  
compose(  
  j = "Player",  
  value = as_paragraph(  
    ...  
  )  
)
```

**Career Service Games Won On Grass From All Countries**

| Player          | Percentage | Games.Won | Total.Games | Matches* |
|-----------------|------------|-----------|-------------|----------|
| Roger Federer   | 92.63%     | 2,739     | 2,957       | 205      |
| Lleyton Hewitt  | 85.29%     | 1,740     | 2,040       | 149      |
| Feliciano Lopez | 89.86%     | 1,684     | 1,874       | 122      |
| Ivo Karlovic    | 94.87%     | 1,645     | 1,734       | 113      |
| Andy Murray     | 88.89%     | 1,528     | 1,719       | 121      |
| Pete Sampras    | 92.66%     | 1,478     | 1,595       | 105      |
| Greg Rusedski   | 90.33%     | 1,476     | 1,634       | 116      |
| Tim Henman      | 83.77%     | 1,461     | 1,744       | 110      |
| Novak Djokovic  | 89.12%     | 1,442     | 1,618       | 106      |
| Andy Roddick    | 92.76%     | 1,410     | 1,520       | 103      |

Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts

# Write poetry with **compose**

```
flectable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp() %>%  
compose(  
  j = "Player",  
  value = as_paragraph(  
    as_chunk(  
      x = Rank,  
      formater = function(x) paste(x, " ")  
    )  
  )  
)
```

**Career Service Games Won On Grass From All Countries**

| Player | Percentage | Games.Won | Total.Games | Matches* |
|--------|------------|-----------|-------------|----------|
| 1      | 92.63%     | 2,739     | 2,957       | 205      |
| 2      | 85.29%     | 1,740     | 2,040       | 149      |
| 3      | 89.86%     | 1,684     | 1,874       | 122      |
| 4      | 94.87%     | 1,645     | 1,734       | 113      |
| 5      | 88.89%     | 1,528     | 1,719       | 121      |
| 6      | 92.66%     | 1,478     | 1,595       | 105      |
| 7      | 90.33%     | 1,476     | 1,634       | 116      |
| 8      | 83.77%     | 1,461     | 1,744       | 110      |
| 9      | 89.12%     | 1,442     | 1,618       | 106      |
| 10     | 92.76%     | 1,410     | 1,520       | 103      |



Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts

# Write poetry with **compose**

```
flectable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp() %>%  
compose(  
  j = "Player",  
  value = as_paragraph(  
    as_chunk(  
      x = Rank,  
      formater = function(x) paste(x, " ")  
    ),  
    as_image(src = head, height = 0.5)  
  )  
)
```

Career Service Games Won On Grass From All Countries

| Player   | Percentage | Games.Won | Total.Games | Matches* |
|--|------------|-----------|-------------|----------|
| 1     | 92.63%     | 2,739     | 2,957       | 205      |
| 2     | 85.29%     | 1,740     | 2,040       | 149      |
| 3     | 89.86%     | 1,684     | 1,874       | 122      |
| 4     | 94.87%     | 1,645     | 1,734       | 113      |
| 5     | 88.89%     | 1,528     | 1,719       | 121      |
| 6     | 92.66%     | 1,478     | 1,595       | 105      |
| 7     | 90.33%     | 1,476     | 1,634       | 116      |
| 8    | 83.77%     | 1,461     | 1,744       | 110      |
| 9   | 89.12%     | 1,442     | 1,618       | 106      |
| 10  | 92.76%     | 1,410     | 1,520       | 103      |

Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts



# Write poetry with **compose**

```
flextable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp() %>%  
compose(  
  j = "Player",  
  value = as_paragraph(  
    as_chunk(  
      x = Rank,  
      formater = function(x) paste(x, " ")  
    ),  
    as_image(src = head, height = 0.5),  
    as_image(src = flag)  
  )  
)
```

Career Service Games Won On Grass From All Countries

| Player   | Percentage | Games.Won | Total.Games | Matches* |
|--|------------|-----------|-------------|----------|
| 1        | 92.63%     | 2,739     | 2,957       | 205      |
| 2        | 85.29%     | 1,740     | 2,040       | 149      |
| 3        | 89.86%     | 1,684     | 1,874       | 122      |
| 4        | 94.87%     | 1,645     | 1,734       | 113      |
| 5        | 88.89%     | 1,528     | 1,719       | 121      |
| 6        | 92.66%     | 1,478     | 1,595       | 105      |
| 7        | 90.33%     | 1,476     | 1,634       | 116      |
| 8       | 83.77%     | 1,461     | 1,744       | 110      |
| 9    | 89.12%     | 1,442     | 1,618       | 106      |
| 10   | 92.76%     | 1,410     | 1,520       | 103      |


Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts

# Write poetry with **compose**

```
flectable(x,  
  col_keys = c(  
    "Player", "Percentage",  
    "Games.Won", "Total.Games", "Matches"  
  )  
) %>%  
theme_atp() %>%  
compose(  
  j = "Player",  
  value = as_paragraph(  
    as_chunk(  
      x = Rank,  
      formater = function(x) paste(x, " ")  
    ),  
    as_image(src = head, height = 0.5),  
    as_image(src = flag),  
    hyperlink_text(  
      x = Player,  
      url = link,  
      props = fp_text(  
        color = "#00aeef",  
        font.family = "Roboto",  
        font.size = 10  
      )  
    )  
  )  
)  
)
```

Career Service Games Won On Grass From All Countries

| Player   | Percentage | Games.Won | Total.Games | Matches* |
|--|------------|-----------|-------------|----------|
|   Roger Federer      | 92.63%     | 2,739     | 2,957       | 205      |
|   Lleyton Hewitt     | 85.29%     | 1,740     | 2,040       | 149      |
|   Feliciano Lopez    | 89.86%     | 1,684     | 1,874       | 122      |
|   Ivo Karlovic       | 94.87%     | 1,645     | 1,734       | 113      |
|   Andy Murray        | 88.89%     | 1,528     | 1,719       | 121      |
|   Pete Sampras       | 92.66%     | 1,478     | 1,595       | 105      |
|   Greg Rusedski      | 90.33%     | 1,476     | 1,634       | 116      |
|   Tim Henman        | 83.77%     | 1,461     | 1,744       | 110      |
|   Novak Djokovic | 89.12%     | 1,442     | 1,618       | 106      |
|   Andy Roddick   | 92.76%     | 1,410     | 1,520       | 103      |

Source : <https://www.atptour.com/en/stats/>

\*Matches before Wimbledon 2019 starts

# R Markdown output

## R Markdown output

## comment

`rmarkdown::html_*` Any HTML output is supported

```
---  
title: "flextable to HTML"  
output:  
  html_document  
---
```

```
```{r}  
ft <- flextable(mtcars) %>%  
  theme_doc  
ft  
```
```

## flextable to HTML

```
ft <- flextable(head(mtcars, n = 20)) %>%  
  theme_doc  
ft
```

| mpg  | cyl | disp  | hp  | drat | wt  | gsec | vs | am | gear | carb |
|------|-----|-------|-----|------|-----|------|----|----|------|------|
| 21.0 | 6   | 160.0 | 110 | 3.9  | 2.6 | 16.5 | 0  | 1  | 4    | 4    |
| 21.0 | 6   | 160.0 | 110 | 3.9  | 2.9 | 17.0 | 0  | 1  | 4    | 4    |
| 22.8 | 4   | 108.0 | 93  | 3.8  | 2.3 | 18.6 | 1  | 1  | 4    | 1    |
| 21.4 | 6   | 258.0 | 110 | 3.1  | 3.2 | 19.4 | 1  | 0  | 3    | 1    |
| 18.7 | 8   | 360.0 | 175 | 3.1  | 3.4 | 17.0 | 0  | 0  | 3    | 2    |
| 18.1 | 6   | 225.0 | 105 | 2.8  | 3.5 | 20.2 | 1  | 0  | 3    | 1    |
| 14.3 | 8   | 360.0 | 245 | 3.2  | 3.6 | 15.8 | 0  | 0  | 3    | 4    |
| 24.4 | 4   | 146.7 | 62  | 3.7  | 3.2 | 20.0 | 1  | 0  | 4    | 2    |
| 22.8 | 4   | 140.8 | 95  | 3.9  | 3.1 | 22.9 | 1  | 0  | 4    | 2    |
| 19.2 | 6   | 167.6 | 123 | 3.9  | 3.4 | 18.3 | 1  | 0  | 4    | 4    |
| 17.8 | 6   | 167.6 | 123 | 3.9  | 3.4 | 18.9 | 1  | 0  | 4    | 4    |
| 16.4 | 8   | 275.8 | 180 | 3.1  | 4.1 | 17.4 | 0  | 0  | 3    | 3    |
| 17.3 | 8   | 275.8 | 180 | 3.1  | 3.7 | 17.6 | 0  | 0  | 3    | 3    |
| 15.2 | 8   | 275.8 | 180 | 3.1  | 3.8 | 18.0 | 0  | 0  | 3    | 3    |
| 10.4 | 8   | 472.0 | 205 | 2.9  | 5.2 | 18.0 | 0  | 0  | 3    | 4    |
| 10.4 | 8   | 460.0 | 215 | 3.0  | 5.4 | 17.8 | 0  | 0  | 3    | 4    |
| 14.7 | 8   | 440.0 | 230 | 3.2  | 5.3 | 17.4 | 0  | 0  | 3    | 4    |
| 32.4 | 4   | 78.7  | 66  | 4.1  | 2.2 | 19.5 | 1  | 1  | 4    | 1    |
| 30.4 | 4   | 75.7  | 52  | 4.9  | 1.6 | 18.5 | 1  | 1  | 4    | 2    |
| 33.9 | 4   | 71.1  | 65  | 4.2  | 1.8 | 19.9 | 1  | 1  | 4    | 1    |

Example of HTML output

# R Markdown output

R Markdown output

comment

`rmarkdown::word_document` Rendered tables are editable

```
---  
title: "flextable to docx"  
output:  
  word_document  
---  
  
{r}  
ft <- flextable(swiss) %>%  
  theme_tron_legacy() %>%  
  autofit()  
ft  
---
```

flextable to docx

```
ft <- flextable(swiss) %>%  
  theme_tron_legacy() %>%  
  autofit()  
ft
```

| Fertility | Agriculture | Examination | Education | Catholic | Infant.Mortality |
|-----------|-------------|-------------|-----------|----------|------------------|
| 80.200    | 17.000      | 15          | 12        | 9.960    | 22.200           |
| 83.100    | 45.100      | 6           | 9         | 84.840   | 22.200           |
| 92.500    | 39.700      | 5           | 5         | 93.400   | 20.200           |
| 85.800    | 36.500      | 12          | 7         | 33.770   | 20.300           |
| 76.900    | 43.500      | 17          | 15        | 5.160    | 20.600           |
| 76.100    | 35.300      | 9           | 7         | 90.570   | 26.600           |
| 83.800    | 70.200      | 16          | 7         | 92.850   | 23.600           |
| 92.400    | 67.800      | 14          | 8         | 97.160   | 24.900           |
| 82.400    | 53.300      | 12          | 7         | 97.670   | 21.000           |
| 82.900    | 45.200      | 16          | 13        | 91.380   | 24.400           |
| 87.100    | 64.500      | 14          | 6         | 98.610   | 24.500           |
| 64.100    | 62.000      | 21          | 12        | 8.520    | 16.500           |
| 66.900    | 67.500      | 14          | 7         | 2.270    | 19.100           |
| 68.900    | 60.700      | 19          | 12        | 4.430    | 22.700           |
| 61.700    | 69.300      | 22          | 5         | 2.820    | 18.700           |
| 68.300    | 72.600      | 18          | 2         | 24.200   | 21.200           |
| 71.700    | 34.000      | 17          | 8         | 3.300    | 20.000           |
| 55.700    | 19.400      | 26          | 28        | 12.110   | 20.200           |

Page 1 sur 2 299 mots 100%

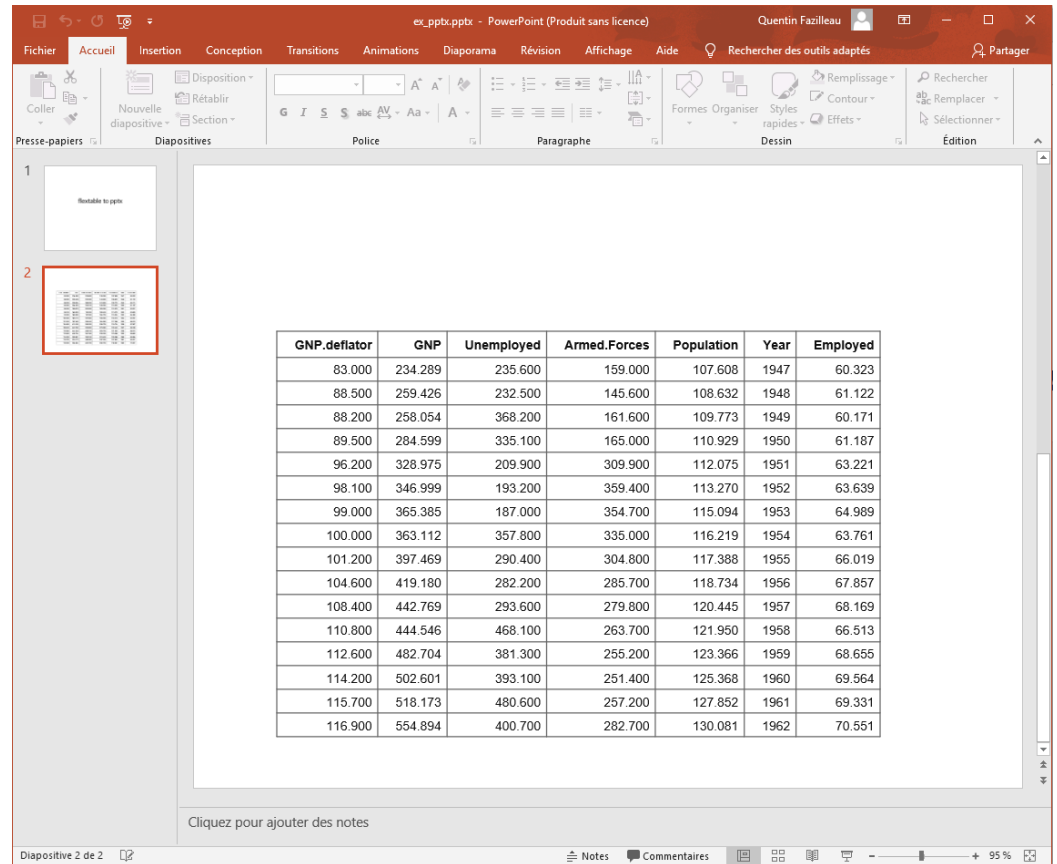
# R Markdown output

R Markdown output

comment

`rmarkdown::powerpoint_presentation` Rendered tables are editable

```
---  
title: "flextable to pptx"  
output:  
  powerpoint_presentation  
---  
  
{r}  
ft <- flextable(longley) %>%  
  theme_box() %>%  
  autofit()  
ft  
---
```



The screenshot shows a PowerPoint presentation window titled "ex\_pptx.pptx - PowerPoint (Produit sans licence)". The interface includes a ribbon with tabs for "Fichier", "Accueil", "Insertion", "Conception", "Transitions", "Animations", "Diaporama", "Révision", "Affichage", "Aide", and "Rechercher des outils adaptés". The "Accueil" tab is active, showing various editing tools. The presentation content is displayed on two slides. Slide 1 is titled "flextable to pptx" and contains a small thumbnail of the table. Slide 2 displays the table data, which is highlighted with a red border, indicating it is editable. The table has 7 columns: GNP.deflator, GNP, Unemployed, Armed.Forces, Population, Year, and Employed. The data rows range from 1947 to 1962.

| GNP.deflator | GNP     | Unemployed | Armed.Forces | Population | Year | Employed |
|--------------|---------|------------|--------------|------------|------|----------|
| 83.000       | 234.289 | 235.600    | 159.000      | 107.608    | 1947 | 60.323   |
| 88.500       | 259.426 | 232.500    | 145.600      | 108.632    | 1948 | 61.122   |
| 88.200       | 258.054 | 368.200    | 161.600      | 109.773    | 1949 | 60.171   |
| 89.500       | 284.599 | 335.100    | 165.000      | 110.929    | 1950 | 61.187   |
| 96.200       | 328.975 | 209.900    | 309.900      | 112.075    | 1951 | 63.221   |
| 98.100       | 346.999 | 193.200    | 359.400      | 113.270    | 1952 | 63.639   |
| 99.000       | 365.385 | 187.000    | 354.700      | 115.094    | 1953 | 64.989   |
| 100.000      | 363.112 | 357.800    | 335.000      | 116.219    | 1954 | 63.761   |
| 101.200      | 397.469 | 290.400    | 304.800      | 117.388    | 1955 | 66.019   |
| 104.600      | 419.180 | 282.200    | 285.700      | 118.734    | 1956 | 67.857   |
| 108.400      | 442.769 | 293.600    | 279.800      | 120.445    | 1957 | 68.169   |
| 110.800      | 444.546 | 468.100    | 263.700      | 121.950    | 1958 | 66.513   |
| 112.600      | 482.704 | 381.300    | 255.200      | 123.366    | 1959 | 68.655   |
| 114.200      | 502.601 | 393.100    | 251.400      | 125.368    | 1960 | 69.564   |
| 115.700      | 518.173 | 480.600    | 257.200      | 127.852    | 1961 | 69.331   |
| 116.900      | 554.894 | 400.700    | 282.700      | 130.081    | 1962 | 70.551   |

# R Markdown output

R Markdown output

comment

`rmarkdown::pdf_document` Rendered as an image

```
---  
title: "flextable to pdf"  
output:  
  pdf_document  
---  
  
{r}  
ft <- flextable(head(infert)) %>%  
  theme_alafoli()  
ft  
{}
```

| education | age    | parity | induced | case  | spontaneous | stratum | pooled.stratum |
|-----------|--------|--------|---------|-------|-------------|---------|----------------|
| 0-5yrs    | 26.000 | 6.000  | 1.000   | 1.000 | 2.000       | 1       | 3.000          |
| 0-5yrs    | 42.000 | 1.000  | 1.000   | 1.000 | 0.000       | 2       | 1.000          |
| 0-5yrs    | 39.000 | 6.000  | 2.000   | 1.000 | 0.000       | 3       | 4.000          |
| 0-5yrs    | 34.000 | 4.000  | 2.000   | 1.000 | 0.000       | 4       | 2.000          |
| 6-11yrs   | 35.000 | 3.000  | 1.000   | 1.000 | 1.000       | 5       | 32.000         |
| 6-11yrs   | 36.000 | 4.000  | 2.000   | 1.000 | 1.000       | 6       | 36.000         |
| 6-11yrs   | 23.000 | 1.000  | 0.000   | 1.000 | 0.000       | 7       | 6.000          |
| 6-11yrs   | 32.000 | 2.000  | 0.000   | 1.000 | 0.000       | 8       | 22.000         |
| 6-11yrs   | 21.000 | 1.000  | 0.000   | 1.000 | 1.000       | 9       | 5.000          |
| 6-11yrs   | 28.000 | 2.000  | 0.000   | 1.000 | 0.000       | 10      | 19.000         |
| 6-11yrs   | 29.000 | 2.000  | 1.000   | 1.000 | 0.000       | 11      | 20.000         |
| 6-11yrs   | 37.000 | 4.000  | 2.000   | 1.000 | 1.000       | 12      | 37.000         |
| 6-11yrs   | 31.000 | 1.000  | 1.000   | 1.000 | 0.000       | 13      | 9.000          |
| 6-11yrs   | 29.000 | 3.000  | 2.000   | 1.000 | 0.000       | 14      | 29.000         |
| 6-11yrs   | 31.000 | 2.000  | 1.000   | 1.000 | 1.000       | 15      | 21.000         |
| 6-11yrs   | 27.000 | 2.000  | 2.000   | 1.000 | 0.000       | 16      | 18.000         |
| 6-11yrs   | 30.000 | 5.000  | 2.000   | 1.000 | 1.000       | 17      | 38.000         |
| 6-11yrs   | 28.000 | 1.000  | 0.000   | 1.000 | 1.000       | 18      | 7.000          |
| 6-11yrs   | 25.000 | 3.000  | 2.000   | 1.000 | 1.000       | 19      | 28.000         |
| 6-11yrs   | 44.000 | 1.000  | 0.000   | 1.000 | 1.000       | 20      | 17.000         |
| 6-11yrs   | 40.000 | 1.000  | 0.000   | 1.000 | 1.000       | 21      | 14.000         |
| 6-11yrs   | 35.000 | 2.000  | 2.000   | 1.000 | 0.000       | 22      | 24.000         |
| 6-11yrs   | 28.000 | 2.000  | 0.000   | 1.000 | 2.000       | 23      | 19.000         |
| 6-11yrs   | 36.000 | 1.000  | 0.000   | 1.000 | 1.000       | 24      | 12.000         |
| 6-11yrs   | 27.000 | 2.000  | 1.000   | 1.000 | 1.000       | 25      | 18.000         |
| 6-11yrs   | 40.000 | 2.000  | 0.000   | 1.000 | 2.000       | 26      | 27.000         |
| 6-11yrs   | 38.000 | 2.000  | 0.000   | 1.000 | 2.000       | 27      | 28.000         |
| 6-11yrs   | 34.000 | 3.000  | 0.000   | 1.000 | 2.000       | 28      | 31.000         |
| 6-11yrs   | 28.000 | 4.000  | 1.000   | 1.000 | 2.000       | 29      | 34.000         |
| 6-11yrs   | 30.000 | 4.000  | 2.000   | 1.000 | 0.000       | 30      | 35.000         |

# R Markdown output

R Markdown output

comment

`pagedown::html_paged` Our preferred solution to produce PDF

```
---  
title: "flextable to a Multi-page HTML Document"  
output:  
  pagedown::html_paged:  
    self_contained: true  
---  
  
flextable 1  
  
```{r}  
ft <- flextable(head(Theoph)) %>%  
  theme_vader()  
ft  
```\n\nflextable 2  
  
```{r}  
ft <- flextable(head(warpbreaks)) %>%  
  theme_vanilla()  
ft  
```\n
```

flextable to a Multi-page HTML Document

flextable 1

```
ft <- flextable(head(Theoph, n = 16)) %>%  
  theme_vader()  
ft
```

Subject	Wt	Dose	Time	cost
1	79.600	4.000	0.000	0.740
1	79.600	4.000	0.250	2.040
1	79.600	4.000	0.570	6.570
1	79.600	4.000	1.120	16.590
1	79.600	4.000	2.000	9.550
1	79.600	4.000	3.000	8.580
1	79.600	4.000	5.100	8.360
1	79.600	4.000	7.000	7.470
1	79.600	4.000	9.050	6.890
1	79.600	4.000	12.120	5.940
1	79.600	4.000	24.370	3.280
2	72.400	4.400	0.000	0.000
2	72.400	4.400	0.270	1.720
2	72.400	4.400	0.820	7.910
2	72.400	4.400	1.000	8.310
2	72.400	4.400	1.920	8.330

flextable 2

```
ft <- flextable(head(warpbreaks)) %>%  
  theme_vanilla()  
ft
```

breaks	wool	tension
26.000	A	L
30.000	A	L
64.000	A	L
28.000	A	L
70.000	A	L
82.000	A	L

# flextable in Shiny

Show a flextable in a Shiny application : too easy !

```
library(shiny)
library(flextable)

datasets <- c("iris", "mtcars", "airquality",
             "quakes", "CO2", "rock", "sleep")

ui <- fluidPage(
  titlePanel("Show a flextable in Shiny application")

  sidebarLayout(
    sidebarPanel(
      selectInput("SI_dataset",
                 label = "Choose dataset", choices = datasets)
    ),
    mainPanel(
      uiOutput("dataset_flextable")
    )
  )
)

server <- function(input, output) {

  output$dataset_flextable <- renderUI({
    req(input$SI_dataset)

    get(input$SI_dataset) %>%
      head(n = 10) %>%
      flextable() %>%
      theme_booktabs() %>%
      htmltools_value()
  })
}

shinyApp(ui = ui, server = server)
```



Show a flextable in a Shiny application

Choose dataset

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.100	3.500	1.400	0.200	setosa
4.900	3.000	1.400	0.200	setosa
4.700	3.200	1.300	0.200	setosa
4.600	3.100	1.500	0.200	setosa
5.000	3.600	1.400	0.200	setosa
5.400	3.900	1.700	0.400	setosa
4.600	3.400	1.400	0.300	setosa
5.000	3.400	1.500	0.200	setosa
4.400	2.900	1.400	0.200	setosa
4.900	3.100	1.500	0.100	setosa
5.400	3.700	1.500	0.200	setosa
4.800	3.400	1.600	0.200	setosa
4.800	3.000	1.400	0.100	setosa
4.300	3.000	1.100	0.100	setosa
5.800	4.000	1.200	0.200	setosa
5.700	4.400	1.500	0.400	setosa
5.400	3.900	1.300	0.400	setosa
5.100	3.500	1.400	0.300	setosa
5.700	3.800	1.700	0.300	setosa
5.100	3.800	1.500	0.300	setosa
5.400	3.400	1.700	0.200	setosa
5.100	3.700	1.500	0.400	setosa
4.600	3.600	1.000	0.200	setosa
5.100	3.300	1.700	0.500	setosa
4.800	3.400	1.900	0.200	setosa
5.000	3.000	1.600	0.200	setosa
5.000	3.400	1.600	0.400	setosa
5.200	3.500	1.500	0.200	setosa
5.200	3.400	1.400	0.200	setosa
4.700	3.200	1.600	0.200	setosa



# flextable in Shiny

Show a flextable in a Shiny application : too easy !

```
library(shiny)
library(flextable)

datasets <- c("iris", "mtcars", "airquality",
             "quakes", "CO2", "rock", "sleep")

ui <- fluidPage(
  titlePanel("Show a flextable in Shiny application")

  sidebarLayout(
    sidebarPanel(
      selectInput("SI_dataset",
                 label = "Choose dataset", choices = datasets)
    ),
    mainPanel(
      uiOutput("dataset_flextable")
    )
  )
)

server <- function(input, output) {

  output$dataset_flextable <- renderUI({
    req(input$SI_dataset)

    get(input$SI_dataset) %>%
      head(n = 10) %>%
      flextable() %>%
      theme_booktabs() %>%
      htmltools_value()
  })
}

shinyApp(ui = ui, server = server)
```

Show a flextable in a Shiny application

Choose dataset

sleep

extra	group	ID
0.700	1	1
-1.600	1	2
-0.200	1	3
-1.200	1	4
-0.100	1	5
3.400	1	6
3.700	1	7
0.800	1	8
0.000	1	9
2.000	1	10
1.900	2	1
0.800	2	2
1.100	2	3
0.100	2	4
-0.100	2	5
4.400	2	6
5.500	2	7
1.600	2	8
4.600	2	9
3.400	2	10

# flextable in Shiny

Show a flextable in a Shiny application : too easy !

```
library(shiny)
library(flextable)

datasets <- c("iris", "mtcars", "airquality",
             "quakes", "CO2", "rock", "sleep")

ui <- fluidPage(
  titlePanel("Show a flextable in Shiny application")

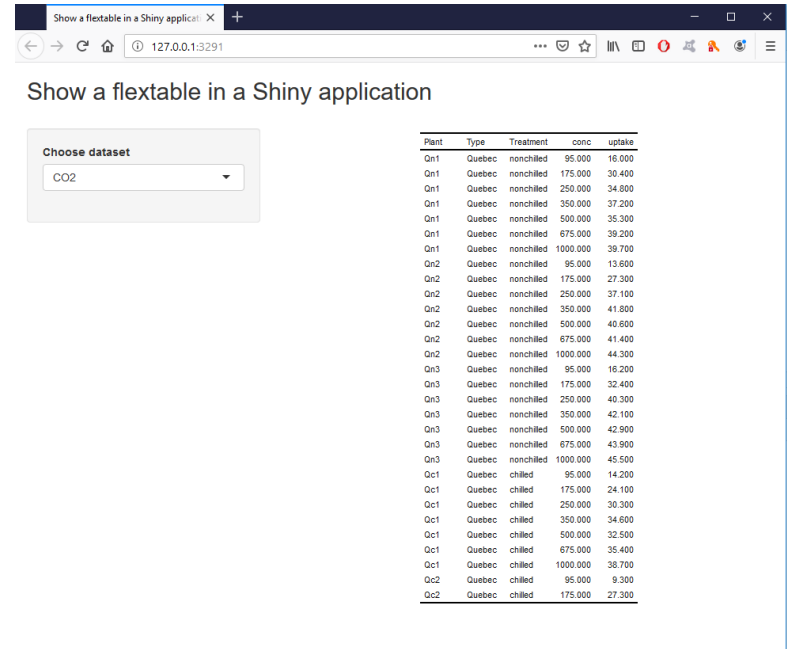
  sidebarLayout(
    sidebarPanel(
      selectInput("SI_dataset",
                 label = "Choose dataset", choices = datasets)
    ),
    mainPanel(
      uiOutput("dataset_flextable")
    )
  )
)

server <- function(input, output) {

  output$dataset_flextable <- renderUI({
    req(input$SI_dataset)

    get(input$SI_dataset) %>%
      head(n = 10) %>%
      flextable() %>%
      theme_booktabs() %>%
      htmltools_value()
  })
}

shinyApp(ui = ui, server = server)
```



The screenshot shows a web browser window titled "Show a flextable in a Shiny application". The browser address bar shows "127.0.0.1:3291". The application content includes a title "Show a flextable in a Shiny application" and a sidebar with a "Choose dataset" dropdown menu. The dropdown menu is open, showing "CO2" selected. To the right of the sidebar is a flextable displaying the first 10 rows of the CO2 dataset. The table has columns: Plant, Type, Treatment, conc, and uptake.

Plant	Type	Treatment	conc	uptake
Qn1	Quebec	nonchilled	95.000	16.000
Qn1	Quebec	nonchilled	175.000	30.400
Qn1	Quebec	nonchilled	250.000	34.800
Qn1	Quebec	nonchilled	350.000	37.200
Qn1	Quebec	nonchilled	500.000	35.300
Qn1	Quebec	nonchilled	675.000	39.200
Qn1	Quebec	nonchilled	1000.000	39.700
Qn2	Quebec	nonchilled	95.000	13.600
Qn2	Quebec	nonchilled	175.000	27.300
Qn2	Quebec	nonchilled	250.000	37.100

**flextableUI**

# flextableUI

127.0.0.1:3120/ x +

127.0.0.1:3120


flextableUI Done

name	start	end	party
Eisenhower	1953-01-20	1961-01-20	Republican
Kennedy	1961-01-20	1963-11-22	Democratic
Johnson	1963-11-22	1969-01-20	Democratic
Nixon	1969-01-20	1974-08-09	Republican
Ford	1974-08-09	1977-01-20	Republican
Carter	1977-01-20	1981-01-20	Democratic
Reagan	1981-01-20	1989-01-20	Republican
Bush	1989-01-20	1993-01-20	Republican

```
flextable(residential)
```

## Choose your dataset

Current dataset : residential

 From environment

 From file



# flextableUI

The screenshot displays the flextableUI web application interface. At the top, a browser window shows the URL 127.0.0.1:3120/. The main interface is titled "flextableUI" and includes a "Cancel" button on the left and a "Done" button on the right.

The central part of the interface features a data table with the following content:

name	party	start	end
Eisenhower	Republican	1953-01-20	1961-01-20
Kennedy	Democratic	1961-01-20	1963-11-22
Johnson	Democratic	1963-11-22	1969-01-20
Nixon	Republican	1969-01-20	1974-08-09
Ford	Republican	1974-08-09	1977-01-20
Carter	Democratic	1977-01-20	1981-01-20
Reagan	Republican	1981-01-20	1989-01-20
Bush	Republican	1989-01-20	1993-01-20

To the right of the table is a code editor containing the following R code:

```
flextable(presidential, col keys = c("name", "party", "sep",  
"start", "end"))
```

Below the table and code editor are two main configuration panels:

- Select/Order variables and create separators:** A text input field containing "name party sep start end".
- Rename variables:** A section with radio buttons for "Manual" (selected) and "R code". It includes a "Search by variable name" search box and a table for renaming variables:

Initial name	New name
name :	name
party :	party
start :	start
- Add line(s) and/or data frame to header:** A section with radio buttons for "Colnames" (selected) and "Typology". It includes a text input field containing "[1] \"name\" \"party\" \"start\" \"end\"". Below this is a link that says "Add lines 0 lines added".

At the bottom of the interface is a navigation bar with icons for Data, Header, Merge, Theme, Layout, and Footer.

# flextableUI

The screenshot displays the flextableUI web application interface. At the top, there is a browser window with the address bar showing "127.0.0.1:3120/". The application title is "flextableUI".

The main content area is divided into two sections:

- Data Table:** A table with columns "name", "party", "start", and "end". The data rows are:

name	party	start	end
Eisenhower	Republican	1953-01-20	1961-01-20
Kennedy		1961-01-20	1963-11-22
Johnson	Democratic	1963-11-22	1969-01-20
Nixon		1969-01-20	1974-08-09
Ford	Republican	1974-08-09	1977-01-20
Carter	Democratic	1977-01-20	1981-01-20
Reagan		1981-01-20	1989-01-20
Bush	Republican	1989-01-20	1993-01-20
- Code Editor:** A text area containing the following R code:

```
flextable(presidential, col_keys = c("name", "party", "sep",  
"start", "end")) %>% merge_v(part = "body", j = "party")
```

Below the main content area, there is a section titled "List of merge(s) applied" which contains a table:

#	Direction	Part	Details	Actions
1	v	body		

Below the "List of merge(s) applied" section, there is a section titled "Add a new merge" with the following options:

- Direction:**  Horizontally,  Vertically
- Part:**  header,  body,  footer
- Column(s) selection:** A text input field containing "party".
- Add !** button

At the bottom of the application, there is a navigation bar with icons for Data, Header, Merge, Theme, Layout, and Footer.

# flextableUI

flextableUI

name	party	start	end
Eisenhower	Republican	1953-01-20	1961-01-20
Kennedy	Democratic	1961-01-20	1963-11-22
Johnson	Democratic	1963-11-22	1969-01-20
Nixon	Republican	1969-01-20	1974-08-09
Ford	Republican	1974-08-09	1977-01-20
Carter	Democratic	1977-01-20	1981-01-20
Reagan	Republican	1981-01-20	1989-01-20
Rush	Republican	1989-01-20	1993-01-20

```
flextable(presidential, col_keys = c("name", "party", "sep",  
"start", "end")) %>% merge_v(part = "body", j = "party") %>%  
  theme_tron_legacy()
```

Theme

- alafoli
- booktabs
- box
- tron
- tron\_legacy**
- vader
- vanilla
- zebra

Data Header Merge Theme Layout Footer

# flextableUI

flextableUI

name	party	start	end
Eisenhower	Republican	1953-01-20	1961-01-20
Kennedy	Democratic	1961-01-20	1963-11-22
Johnson		1963-11-22	1969-01-20
Nixon	Republican	1969-01-20	1974-08-09
Ford		1974-08-09	1977-01-20
Carter	Democratic	1977-01-20	1981-01-20
Reagan		1981-01-20	1989-01-20

```
flextable(presidential, col_keys = c("name", "party", "sep",  
"start", "end")) %>% merge_v(part = "body", j = "party") %>%  
  autofit(add_w = 0.15, add_h = 0.1) %>% theme_tron_legacy()
```

Autofit

Extra width to add (inches)

Extra height to add (inches)

Fix border issues

Data Header Merge Theme Layout Footer



# flextableUI

The screenshot shows the flextableUI web application interface. A modal dialog box is open in the center, displaying the text "Thank you for your attention !" and "1 line(s) added". The dialog has a "Choose" button and a "Cancel" button. The background interface includes a table with columns "name" and "party", and a footer section with options for "Nothing", "Typology", and "Add lines".

name	party	
Eisenhower	Republican	1953-0
Kennedy	Democratic	1961-0
Johnson		1963-0
Nixon	Republican	1969-0
Ford		1974-0
Carter	Democratic	1977-0
Reagan		1981-0

Footer options:

- Nothing
- Typology
- [Add lines](#) 0 lines added

# flextableUI

The screenshot shows a web browser window with the URL 127.0.0.1:3120/. The browser title is "flextableUI". The interface is divided into several sections:

- Table:** A table with 4 columns: Name, Party, Start Date, and End Date. The data is as follows:

Nixon	Republican	1969-01-20	1974-08-09
Ford		1974-08-09	1977-01-20
Carter	Democratic	1977-01-20	1981-01-20
Reagan		1981-01-20	1989-01-20
Bush	Republican	1989-01-20	1993-01-20
Clinton	Democratic	1993-01-20	2001-01-20
Bush	Republican	2001-01-20	2009-01-20
Obama	Democratic	2009-01-20	2017-01-20
- Code Editor:** A text area containing R code for styling the table:

```
flextable(presidential, col_keys = c("name", "party", "sep",  
"start", "end")) %>% add_footer_lines(values = "Thank you for your attention !",  
top = TRUE) %>% merge_v(part = "body", j = "party") %>% autofit(add_w = 0.15,  
add_h = 0.1) %>% theme_tron_legacy()
```
- Footer Configuration Panel:** A panel titled "Add line(s) and/or data.frame to footer" with radio buttons for "Nothing" (selected) and "Typology". Below it, a link says "Add lines 1 lines added".
- Navigation Bar:** A bottom bar with icons for Data, Header, Merge, Theme, Layout, and Footer.

