Working with: dates

Data Tidying

http://lubridate.tidyverse.org/

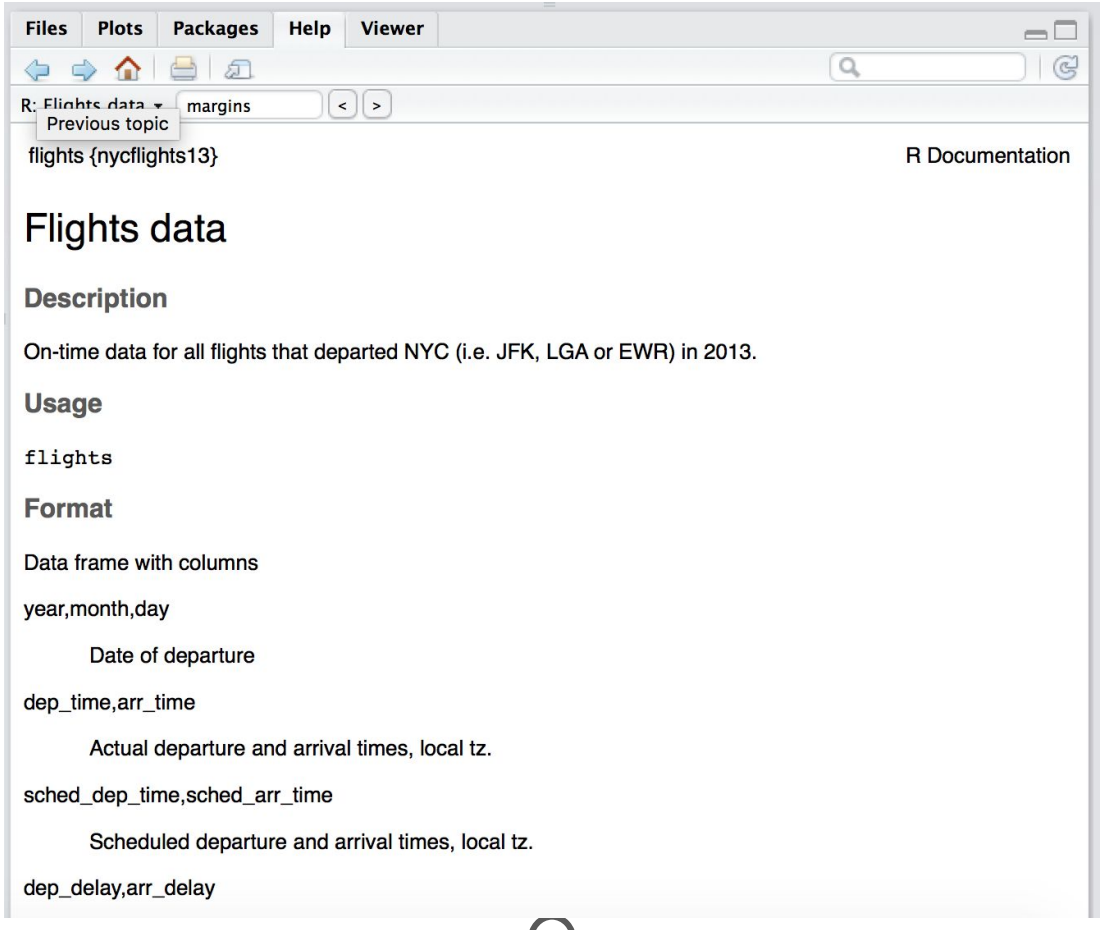
date objects

```
> ymd("1988-09-29")
[1] "1988-09-29"
>
> mdy("September 29th, 1988")
[1] "1988-09-29"
>
> dmy("29-Sep-1988")
[1] "1988-09-29"
```

date-time object

```
> ymd_hms("1988-09-29 20:11:59")
[1] "1988-09-29 20:11:59 UTC"
```

```
install.packages('nycflights13')
library(nycflights13)
```



```
> ## make_date() creates a date object
> ## from information in separate columns
> flights %>%
+   select(year, month, day) %>%
+   mutate(departure = make_date(year, month, day))
# A tibble: 336,776 x 4
    year month   day departure
   <int> <int> <int> <date>
 1  2013     1     1 2013-01-01
 2  2013     1     1 2013-01-01
 3  2013     1     1 2013-01-01
 4  2013     1     1 2013-01-01
 5  2013     1     1 2013-01-01
 6  2013     1     1 2013-01-01
 7  2013     1     1 2013-01-01
 8  2013     1     1 2013-01-01
 9  2013     1     1 2013-01-01
10  2013     1     1 2013-01-01
# ... with 336,766 more rows
```

date object

```
> ## make_datetime() creates a date-time object
> ## from information in separate columns
> flights %>%
+   select(year, month, day, hour, minute) %>%
+   mutate(departure = make_datetime(year, month, day, hour, minute))
# A tibble: 336,776 x 6
    year month   day  hour minute departure
   <int> <int> <int> <dbl>  <dbl> <dttm>
 1  2013     1     1  5.00   15.0 2013-01-01 05:15:00
 2  2013     1     1  5.00   29.0 2013-01-01 05:29:00
 3  2013     1     1  5.00   40.0 2013-01-01 05:40:00
 4  2013     1     1  5.00   45.0 2013-01-01 05:45:00
 5  2013     1     1  6.00    0   2013-01-01 06:00:00
 6  2013     1     1  5.00   58.0 2013-01-01 05:58:00
 7  2013     1     1  6.00    0   2013-01-01 06:00:00
 8  2013     1     1  6.00    0   2013-01-01 06:00:00
 9  2013     1     1  6.00    0   2013-01-01 06:00:00
10  2013     1     1  6.00    0   2013-01-01 06:00:00
# ... with 336,766 more rows
```

date-time object

```
> mydate <- ymd("1988-09-29")
>
> ## extract year information
> year(mydate)
[1] 1988
>
> ## extract day of the month
> mday(mydate)
[1] 29
>
> ## extract weekday information
> wday(mydate)
[1] 5
>
> ## label with actual day of the week
> wday(mydate, label = TRUE)
[1] Thu
Levels: Sun < Mon < Tue < Wed < Thu < Fri < Sat
```

```
> ## how old is someone born on Sept 29, 1988
> mydate <- ymd("1988-09-29")
>
> ## subtract birthday from todays date
> age <- today() - mydate
> age
Time difference of 10808 days
>
> ## a duration object can get this information in years
> as.duration(age)
[1] "933811200s (~29.59 years)"
```

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