Date and Time Manipulation in R: Fundamentals: Takeaways

Syntax

- Dates and times can be created using the following family of functions:

```
date1 <- "20/04/21"
ymd(date1)
[1] "2020-04-21"
```

```
date2 <- "04-21-20"
mdy(date2)
[1] "2020-04-21"
```

```
ymd_hms(date1)
[1] "2020-04-21 13:30:00 UTC"
```

- You can extract different parts of a date using functions named after the component you want to extract:

```
year(date1)
[1] 2020
```

```
month(date2)
[1] 4
```

- You can also extract the day of the week and the day of the year with other functions:

```
day(date1) # Day of the month
[1] 21
```

```
wday(date1, label = TRUE) # Day of the week
[1] Tue
```

```
> yday(date1) # Day of the year
[1] 112
```

- You can represent time spans using either Durations or Periods:

```r
dur <- duration(day = 1, hour = 1, minute = 30)
```
```r
per <- period(years = 1, months = 1, days = 1)
```

- You can convert timezones using the following function:

```r
with_tz(date1, tz = "America/Los_Angeles")
```

Concepts

- Dates and times can be represented in one of two ways in R: 1) through strings, which are human accessible, and 2) through Unix time, which is more computer accessible
- Unix time typically refers to the amount of seconds that have passed since midnight January 1, 1970.
- Unix time allows us to perform mathematical calculations that let us understand how much time has passed between two dates.

Further Reading

- `lubridate` Documentation